# **Artificial Intelligent in Congkak Game**

By

Adnan Bin Osman (1005)

Dissertation submitted in partial fulfillment of
The requirements for the Degree of
Bachelor of Technology (Hons)
(Information Technology)

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A project dissertation submitted to the
Information System Program
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BACHELOR OF TECHNOLOGY (Hons)
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Approved by,

(Mr. Shuib Basri)

UNIVERSITI TEKNOLOGI PETRONAS

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May 2003

# **CERTIFICATION OF ORIGINALITY**

This is to certify that I am responsible for the work submitted in this project, that the original work is my own except as specified in the references and acknowledgements, and that the original work contain herein have not been undertaken or done by unspecified sources or persons.

(ADNAN BIN OSMAN)

#### **ABSTRACT**

Computer games provide a challenge for mankind. A way to demonstrate the mastery over the concept of intelligence. It is through a continual need to improve the artificial intelligence in computer games that man also finds a way to examine the creativity. Developments in the artificial intelligence of computer games have shown remarkable improvement as new genres of games have been created with new advances in the technology. Newer more complex and adaptable games demonstrate an increased understanding of intelligence and furnish entertaining benchmarks of our own ability. Congkak is a traditional game that is unique and famous in the early days. The game has certain properties that make ideal subjects for the research of AI technologies. It has a structured rules and tactics which are appropriate to generate the search space and liberated the research from the uncertainty and complexities inherent in less structured problems. With the science that is concerned with the automation of intelligent behavior, though, this game has some advantages that hopefully can introduce artificial intelligent system. For traditional game such as congkak, there is actually lack of understanding the Al concept or methods used in the game. To be specific there is also lack of traditional game in computer gaming market. The used of heuristic techniques is required for determining what alternatives to explore in the problem space. Heuristic technique is a major area of AI research and it is useful for checking the best way to win or to protect from losing. Most of us have some experience with this game and it is possible to devise and test the effectiveness of our own heuristics. For this reasons, congkak will provide a rich domain for the study of heuristic search.

The study will also include research on interface development and performance wise. Basically, the intention of this study is to create a general and basic concept of an artificial intelligent technique that can be applied in traditional Malaysian games

# TABLE OF CONTENTS

CONTENT			•				,			P	AGE
ACKNOWL ABSTRACT		MENT	•		•	•		•			i ii
TABLE OF		ENT			•	•			•	ii	ii .
CHAPTER 1	:INTR	ODUC	EION	•	•	• *	•	. •	•		ł ·
•	1.1	Backg	round	of study	•			•	•		l
	1.2	Proble		_		•			•		3 .
	1.5	1.2.1		lem Iden	tificatio	n			•		3
•	•	1.2.2		ificant of			•		•		4
					•	•					
	1.3	Object	ives a	nd Scop	e. ·	• .	•			. 4	4
		1.3.1		Relevano		Projec	t.		•		5
		1.3.2		ibility of							
				cope and							5 ;
											- 1
CHAPTER 2	LITE	RATUE	RERI	EVIEW.				•			7
CIMI IZA								*			
	2.1	Comp	iter G	ames	•				4		7
	2.2	Interfa							•		7
	2.3			elligent	in Game	S	•	•			9
•	2.4	Game		-			•			1	1
4,	2.5			n Conce	ot that S	Support	Intera	ctivity.	•	1	1
	2.6	The Ba								1	2
	2.7	Critica						•		1.	3
	2, ,				•	•					
CHAPTER 3	B.MET	HODO	LOG	Υ.	•	•	•	•	•	1	4
											4
	3.1			dentificat		•	•	•	• • • • • • • • • • • • • • • • • • • •	1	
	3.2			elopmen		•	•	•	٠	1	
				ect Plann		. •	•	•	•	. 1	
	•	3.2.2		ect Analy		•	•	•	•		5
		3.2.3		ect Proto		•	•	•	•		6
		3.2.4	•	ect Desig			•	•	•.		6
		3.2.5	_	ect Docu	mentation	on	•	•	.▼.		6
	3.3	Tools	Requ	irement	• '	•	•	•	• .	. 1	6
CHAPTER 4	t:RESU	LT AN	D DI	SCUSSI	ON.	•			•	1	7
	4 3	Santa di di	ті				- نصار			1	7
	4.1			entification	on aurin	g me ar	iaiysis	•	. •		8
	4.0	4.1.1 Discus	Surv	ey	•	• .	•	•	•		9
	12	1 110/2110	CIAN		_					1	1

4.3	4.2.1 Graph Th The partial object		e achie	ve.	•	•	20 23
CHAPTER 5:	CONCLUSION	•	•	•	•	• .	24
5.1	Relevancy to the			•	• .		24
5.2	Suggested Future						
	And Continuation	n .	.•	•*	•	•	- 25
REFERENCES	•	•		•		•	26
APPENDIX			. •				27

## LIST OF FIGURES

Figure 2: Relating Interface Design Models

Figure 3: Activities Diagram

Figure 4: Survey graph

Figure 1: Congkak's Basic Concept

Figure 2: A rooted tree, the family relationships.

Figure 3: Sample of in play Congkak

Figure 3: The selected move is a to c to g

Figure 4.5: The label name for each hole

Appendix 7: Gant chart: Project Timeline

Appendix 7.1: Screenshot – Congkak for windows board game

Appendix 7.2 Visual Basic coding

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Finally, I would like to extend a special note to thanks my family and friends for the patience and support.

## **CHAPTER 1**

#### INTRODUCTION

## 1.1 Background of Study

The idea of artificial intelligence is a daunting notion. That the very thing that distinguishes humanity from all other living beings, intelligence, is reproducible even improved upon presents a certain challenge to mankind is artificial intelligence superior to human intelligence? To avoid the philosophical, man has created an ingenious way to test AI games. What were once mere entertaining diversions, computer games has become a forum for man to pit his intelligence against an artificially intelligent computer program in an attempt to validate his own self worth. Such challenges provide not only a means of entertainment but also a path to self-improvement.

Game playing program offer the challenges including an opponent moves may not be predictable. The Congkak program always tries to win and in the same time it also tries to maximize the points by stealing from opponent or moving the nodes away. It also tries to manipulate or defend the nodes from being seizing and minimize the opponent points if the program is losing. The heuristic techniques are used to search the best move first.

Ever since the introduction of the arcade game, Pong, written by Noland Bushnell 1972, video and computer games have become an integral part of our culture and entertainment. With better and faster hardware being churned out by computer industry every day, the gaming industry is constantly growing and game titles are becoming more and more complex and immersive, not to mention visually stunning.

For Congkak that used artificial intelligent, the game may not have the exact solution because the program is depending on opponent moves. The congkak may have the symmetry reduction decrease for the moves but not drastically. This is what makes the AI is unique and complicated compare to other games such as tic tac toe games.

Games provide safe ways to experience reality. (Chris Crawford, 1996)

Contrary to the popular belief that video games and computer games only serve to dull the minds of youngsters playing them, studies conducted by Professor Angela McFarlane, a professor of education, show otherwise. According to her, "children learn a range of strategic thinking and planning skills" (McFarlane, 2002) when playing the games.

Where it was once popularly thought that playing games would induce children to become solitary and introverted, a study headed by McFarlane established that children are more likely to play video games and computer games in pair or groups (BBC, 2002)

Edward Chiao (2003) found that "avid computer gamers showed higher levels of visual attention and spatial representation" and "had faster response times" than non-players. This observation is very true for a lot of gamers, since the form of the strategic planning is required in completing many games. Strategic games in the market are prime examples of games that require the player to plan to defend or attack if they wish to proceed to the next level. These games are artificial intelligent oriented.

#### 1.2 Problem Statement

Games actually provide the strategic thinking and planning skills. Plenty of games can be found in the market and most of them provides with intelligent support rather than based on luck to win. From very complex games to the simplest game in the market, there is no Malaysian game programmers involved. This is because the industry is not yet come to this state. There is no current traditional artificial intelligent game in computer gaming market. The traditional games may be existed but not for commercialize and only few have experienced in playing the games. Congkak actually can be found in the net but the game only allowed a player played with other player on the net. Or in other words, the game only supports to be played over network with other player. This is clearly explained that no artificial intelligent involved in the game.

Current available and similar to congkak game in the market is called bantumi. The game is actually copy the congkak principles but eliminated the major rules of congkak. So it makes the game simple and the used of artificial intelligent in the game is also became straightforward. Eliminating the major rules is actually spoiling the excitement of the game and also sacrificing the intelligent of the game. The bantumi game also can be found and played in upgrade Nokia 3310 phone. But the general drawback of the game is the lack of quality of its interactivity, interface and intelligent. The game also endows with slow performance on computer moves and it makes a player tired of watching for the moves to be completed.

#### 1.2.1 Problem Identification

- 1. A visible lack of decent quality of current traditional artificial intelligent board games that can be played in personal computer.
- 2. Poor performance of the game that similar to our traditional games. Performance that considered in interactivity, interface and intelligent.

3. Existing congkak game do not support artificial intelligent

## 1.2.2 Significant of the Project

The benefit of the project is to create a game that represent the Malaysian traditional game which rich with artificial intelligent studies. The game is considered unique compare to other board games that usually are reference to artificial intelligent areas. Games such as tic tac toe, puzzles, checkers and chess are major reference for artificial intelligent games. Congkak may considered as complicated rather that tic tac toe, checker and puzzle but less complex than chess. So, the congkak is an intermediate game of artificial intelligent that needs to be study. It has its own unique strength considered in the artificial intelligent.

Everything must have a beginning, and the beginning must be linked to something that went before. Invention, it must be humbly admitted, does not consist in creating out of void, but out of chaos; the materials must, in the first place be afforded.

- Mary Shelly, Frankenstein.

#### 1.3 Objectives and Scope

The objectives of the game tend to study the artificial intelligent system by introducing congkak as one of the experiment. The techniques use in this game maybe originated from heuristic modeling, development of logic and semantic logic. The main objectives are:

- To enrich the traditional game with the quality and advantages of artificial intelligent.
- To develop an interactive, easy to play and intelligent Congkak game
- To do research for the appropriate methods of artificial intelligent in the Congkak game.

Developing a major game title would be a daunting task requiring time and effort that would not far exceed the constraints of this project. Therefore, the scope has been corresponding reduced to ensure the feasibility of this project:

- The game will resemble a Congkak game that integrates a simple engine and algorithm used in determining the outcome of the game.
- Simple 2D graphics will be used for the graphical front end of the game with basic and limited animation.

In essence, the scope of the project entails the review and understanding of the Visual Basic programming language. Some emphasis will also be put into the comprehensive of the list or tables for the purpose of making the game intelligent.

#### 1.3.1 The Relevancy of the Project

The game will endure some aspects of alternatives for developers or students to develop the overall processing of the game. The rationale behind the project is to provide the knowledge and understanding of artificial intelligent and also the exclusiveness of the congkak game itself. The methodologies provide in artificial intelligent subject will be guideline for developing the game. The project will combine several ideas of artificial intelligent with human computer interaction and programming skills.

## 1.3.2 Feasibility of the Project within the Scope and Time Frame

The initial scope in the proposal stage was very broad, which includes the overall project management constraints, which is scope, cost and time. The first few months with the advisor have determine that the scope should be limited to selecting the appropriate product life cycle, which is the game development model paradigm and producing a basic concept of congkak game based on a developed or selected product life cycle. Within the shrunken scope, the project seemed feasible at the moment. However, time progresses and it is founded that developing the game, which include coding and testing consume a lot of time. Developing the application using Visual Basic proved to be demanding task. Learning to use the language is a task to be reckoning with. Developing a game by using Visual Basic is consider huge different from developing a system. However, the resources available for Visual Basic codes are abundant in the internet. The scope has to be narrowed further. This decision enables to create a functional congkak game along with artificial intelligent capabilities.

# CHAPTER 2 LITERATURE REVIEW

#### 2.1 Computer games

Early computer games required mere physical reaction and not much intelligence as game programmers struggled to develop more realistic games that would provide an environment for more complex interaction. With this aside, the advent of modern computer games required game designers to develop programs that would simulate human behavior. Simulation, thus, while not representative of original thought, is a necessary place to start in order to examine the development of computer game intelligence.

As the prevalence of computer games continues to increase, the demand for more sophistication in the artificial intelligence found in them also increases. This process continually provides interesting challenges for man as he attempts to best his own creations. It is through challenges that man has evolved to this point and this is as true in the information age as it was in the ice age.

Computer games are not only a forum for mankind to assert his intelligence on an oblivious world, but also an exploration of human creativity. The adaptability of human intelligence and potential for creative solutions always provides opportunities for improvement. And, the improvement in one of the intelligences, human or artificial, leads to a symbiotic improvement in the other.

#### 2.2 The Interface Design

Interface is a structure. At a detailed level means the selection screens where choices are given to the user, the style with which the selections are denote, how options are linked or cross-referenced, and the method of input for any data the user needs to give.

A good MIS is depends on its interfaces. Without proper design of the interfaces, the user may find the interfaces that are difficult to learn, difficult to use, confusing, unforgiving, and in many cases, totally frustrating. That will be surely the reasons why Ben Shneiderman (SHN87) stated this: "Frustration and anxiety are part of daily life for many users of computerized information systems. They struggle to learn command language or menu selection systems that are supposed to help them do their job. Some people encounter such serious cases of computer shock, terminal terror, or network neurosis that they void using computerized systems".

In Human Computer Interface Design (HCI), there are four (4) different models come into play. Design Model, User Model (System Perception) and System Image (RUB88). A design model of the entire system incorporates data, architectural, interface and procedurals representations of the games. The requirements specifications may establish certain constraints that help to define the user of the game, but the interfaces design is often only incidental to the design model. The user model depicts the profile of end users of the game. To build an effective user interface, "all design should begin with an understanding of the intended users, including profiles of their age, sex, physical abilities, education, cultural or ethnic background, motivation, goals and personality" (SHN87). The game perception (user's model) is the image of the game that an end user carries in his or her head. The accuracy of the description will depend upon the user's profile and overall familiarity with software in the application domain. The system image couples the outward manifestation of the computer-based system (the look and feel of the interface), with all supporting information that describes game syntax and semantics. When the game image and the game perception are coincident, users generally feel comfortable with the game and use it effectively. The relationship of these models is briefly described in Figure 2.

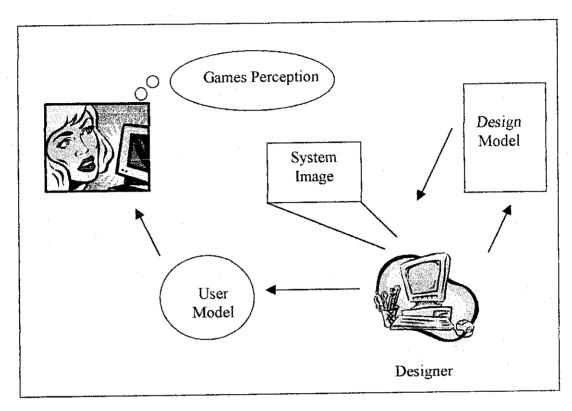


Figure 2: Relating Interface Design Models

## 2.3 The Artificial Intelligent in Games

Much of the early research in state space search was done using common board games such as checkers, chess and the 15-puzzle. In addition to their inherent intellectual appeal, board games have certain properties that made them ideal subjects for this early work. Games can generate extremely large search space. These are large and complex enough to require powerful techniques for determining what alternatives to explore in the problem space. These techniques are called heuristics and constitute a major area of AI research. A heuristic is a useful but fallible problem solving strategy, such as checking to make sure that an unresponsive appliance is plugged in before assuming that it is broken or to castle in order to try and protect your king from capture in a chess game. Much of what we commonly call intelligence seems to reside in the heuristics used by humans to solve problems.

Present the philosophical, mathematical, sociological roots of artificial intelligence. It is important to realize that modern AI is not just a product of this rich intellectual tradition but also contributes to it (Turin test 1950)

In the scientific sense, AI programs can be viewed as experiments. A design is made concrete in a program and the program is run as an experiment. The program designer observes the results and then redesign and rerun the experiment. In this manner, weather the presentations and algorithms are sufficient model of intelligent behavior. A study by Haugeland, 1985.

The artificial intelligence (AI) that drove electronic games only used information and outcomes generated and "programmed in" ahead of time by people. True intelligence is distinguished by characteristic capacities to have goals, make decisions, and adapt behaviors in original ways. AI inherently was limited to what human beings already knew. It merely was a repository for the products of human intelligence. It could not discover anything new.

In the late 90s, evolutionary computing scientists, David Fogel, Ph.D. and Kumar Chellapilla, masterminded an advanced "open-ended" software technology involving sophisticated evolutionary algorithms and artificial neural networks. Their technology relied on the principles of evolution and human biological neural networks, and emulated the learning process Charles Darwin called "natural selection." Fogel and Chellapilla technology applied the processes of random variation and selection to alternative strategies? And thought and learned? Much the same way we do. All by itself, it was literally intelligent.

### 2.4 Game Theory

Game theory could be formally defined as a theory of rational decision in conflict situations. It addresses the mathematics of determining strategies for optimal play in a game, where a "game" is any situation involving multiple players and choice-dependent outcomes. Game theoretic models assume that each player is trying to maximize utility, and usually that the options and outcome utilities are knowledge common to all players. Each player's strategy determines one's course of action from a given position. The derivation of the "optimal" strategy is based on the minimax concept, where each player maximizes the minimum values obtainable. It is also possible to try to anticipate the adversary's play and to select actions accordingly

## 2.5 Game Design Concepts That Support Interactivity

What make a game a good game is the design that put into it. The design can be the view of the interfaces of the intelligent of the game. A proper design game is generally more likely to garner a following than compared to a game that is developed without any semblance of systematic design.

There are five main elements that need to be considered. According to Geoff Howland, a game theorist a game must consider graphics, sound, interface, game play and story.

The graphics will be the "first thing that strike a player (or potential player) when they see the game" (Geoff Howland). In other words, better graphics don't always make the game better, but proper use of the eye candy to enhance the mood of the game is a sure fire way to attract players. Another crucial element in making game is its sound. Geoff Howland emphasizes his point with humorous example, "in Jaws a shark swims around indiscriminately feeding on low budget actors. If you watch the Jaws without any music you would have a series of long shots of an ocean with a boat in it. Suddenly a

shark would pop out and eat someone. Ash, ash, scary." This tell us is that the sound plays a central part of making a game looks more interesting.

The interaction that a player can have with the game is the third element of a good game comes in. A good game interface design should allow players easily send their commands to a game without them having spent hours finding the correct ways to switch or press or get annoyed by late responsiveness. Geoff Howland insists that a game should allow users to configure options and setting to suit their needs and style of play.

The fourth element is the game play. According to Geoff Howland, a good game should have a style or level of game play makes a player want to keep on playing it no matter how many times he has complete the game. Variety in game play should also be evident for maximum playability. A game should vary enough to provide different challenges every time it is played.

The last element is the storyline of the game. Without a storyline a game looks nothing more than graphical without a goal. A game should have a goal or objective. Refer to Geoff Howland, "player's like to feel like their (sic) accomplishing something". With that said, proper planning should be done to the actual development of the game.

#### 2.6 The Bantumi

Bantumi is originated from African traditional game and it is similar to Congkak but has different set of rules. In other words, the game is simple compare to Congkak. The bantumi game also can be found and played in upgrade Nokia 3310 phone. The quality of the game is considered as low in interactivity and intelligent. Other major drawback of the game is the slow performance on computer moves and it makes a player tired of watching for the moves to be completed.

### 2.7 Critical Review

The purpose of literature reviewing is to provide reviews of written materials on hand and area of research. It gives the background of the current studies on the problem are chosen from various written sources. In addition, it can provide some research and discussion to evaluate the works reviewed in order to search for any strength or weaknesses which can be either implemented or avoided in the project.

On the surface of the Congkak game goals are to provide the intelligent that best the project can offer. It is claimed to be highly adaptable to gamers especially board gamers. However, several weaknesses were exposed when finding more information about the game. The game is considered very complex. This is due to lack of traditional game in the market and many of traditional games are now to be left by Malaysian.

#### **CHAPTER 3**

### **METHODOLOGY**

In order to develop this system, there will be some methodology that should be followed so that it will be well structured and properly planned. This methodology is also important because the system can be completed and implemented within the suggested timeline. Some popular model of a systems development life cycle includes the waterfall model, the spiral model, the incremental release model, the Rapid Application (RAD) model, and the prototyping model.

Subject to the research, user requirement will be identified and focus on the status of the end-user whether he or she is an experienced or naïve in Information Technology (IT). According to the feedback, the process of designing interface will be naturally simply guided.

#### 3.1 Procedure Identification

Below are list of activities that will be carried out during the development of the system:

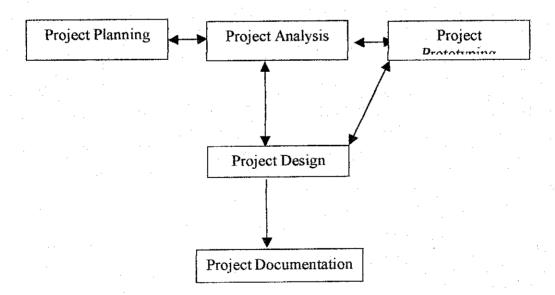


Figure 3: Activities Diagram

## 1) Project Planning

- Defining Game's Objectives
- Project Planning
- Identify Problem Statement

## 2) Project Analysis

- Analysis Requirements
- Gathered info regarding to project
- · Analysis Info
- Formal Project Specification
- · Defining the tools to use

## 3) Project Prototyping

- Design
- Screen and Report Design
- 4) Project Design and Coding
- 5) Preparing the documentation and presentation for reference.

### 3.2 Project Development Phases

The following is a brief description of the steps taken in the development of the project.

#### 3.2.1 Project Planning

In this stage, the project actually tries to define the objective of overall Congkak game and set the appropriate timeline. The analysis also tries to emphasize on the problems detected.

### 3.2.2 Project Analysis

To study the requirement and gathered all info regarding to the project and to do some research on the strategies of the AI. The use of several medium of resources such as

internet, textbooks, journals and people is taken in this phase. This phase will result in an initial product specification that the end product will revolve open.

## 3.2.3 Project Prototyping

Design the basic concept of the game as a testing procedure to the complete project.

## 3.2.4 Project Design and Coding

This part actually to develop the real project and make sure the product or game runs as expected. This phase require longer time than other phases.

# 3.2.5 Preparing the documentation and presentation for reference.

This phase exist when the development phase or project design and coding phase is finished. Prepare the documentation for report and oral presentation.

## 3.3 Tools Requirement

This system will be a standalone based only. The following are lists of tools required in developing the system:

- Visual Basics 6.0 Enterprise Edition
   Used to design and develop the interfaces.
- 2. A suitable desktop PC

### **CHAPTER 4**

## RESULT AND DISCUSSION

## 4.1 Problem Identification during the analysis

- Difficult to calculate the exact number of moves. Each move has a unique identification and generates different possibilities.
- Unique rules such as player can steal opponent nodes if the nodes played stop at empty holes and the opposite side of the holes containing the nodes.
- There are no information or references about congkak's tactics or strategies and the techniques used in programming the AI of the game. The project is considered start from zero.
- This game may need to use the formalization of graph theory but it required a large graph and expressing the time considered for processing the search.
- Complicated program design by adding an element of unpredictability and the need to consider psychological as well as tactical factors in game strategy.
- Little or no learning from experience. The program will not improve without further modification.
- It will be a very large project if the game can be played by both computer and player start the game. If computer move first, the possibilities are different from the possibilities of player who start the game. So the game will only consider a player move first and computer is considered player number two.

#### **4.1.1** Survey

Survey conducted on week 7 among UTP students and resulted that none of them has experiencing any traditional games in computers. More than 90% of students play games during their leisure time and they believed that games have improved their strategic thinking and planning skills. This survey involved by fifty students from all courses. The graphs below summarized the analysis from the survey.

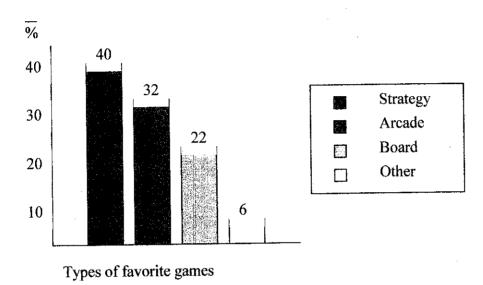


Figure 4: Survey graph

Compared to boys, girls are preferred to play board games on their computers. About 80% of girls choose to play board games rather than any other types of games. Board games such as chess, Othello, puzzles, freecell, and solitare are famous among board gamers.

The next step of the survey is to find out what work has been done on relating intelligent agents to games, what techniques are employed in cooperative problem solving and adversarial problem solving, and how intelligent agents make optimal strategies in the distributed environment.

#### 4.2 Discussion

The basic concept of the Congkak's board

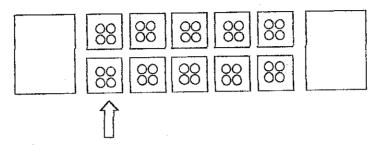


Figure 4.1: Congkak's Basic Concept

From the basic structure of the interface, the Congkak game actually creates a very simple interface to make it interactive. But interactive lone will not makes an interface the best to apply. But the design should meet the user requirement, means that it should be design in a way that the user can use. "The real challenge is to raise designers sensitivities so that we can design things that people can use". Said Donald Norman, research fellow at apple Cupertino Inc. It means that it is hard to specify the level of the sensitivities in every designer to create a system that the end user can use.

Set of rules need to be define first. For the project, it is appropriate to use only five holes for each player and twelve holes on board (two big holes for saving the points) and each hole containing four nodes.

The methods used to define the AI for congkak game may be heuristics, expert system, knowledge based or set of fix moves. The game is considered different from any well known AI games such as chess, tic tac toe and 8-puzzle. But most board game used the same techniques such as heuristic techniques.

Although it is difficult to calculate the exact number of moves, but it can be compute by assuming a maximum of five moves for the first move and also five moves or children per moves or in every moves.

The program may moves to the possible routes for winning because all moves are stored as tree diagram. Each opponent moves has maximum five possibilities for computer and each computer moves has also maximum five possibilities.

## 4.2.1 Graph Theory

A graph is a set of nodes and arc that connect them. A labeled graph has one or more descriptors (labels) attached to each node that distinguishes that node from any other node in the graph. In a state space graph, these descriptors identify states in a problem-solving process. The arc between two nodes is indicated by the labels of the connected nodes.

The arcs of a graph may also be labeled. Arc labels are used to indicate that an arc represents a name relationship. Is there are different arcs between the same two nodes, this also can be distinguished through labeling.

A tree is a graph in which two nodes have at most one path between them. Trees often have roots, in which case they are usually drawn with the roots at the top, like a rooted graph. Each node in a tree has only one path of access from any other node, it is impossible for a path to loop or cycle continuously through a sequence of nodes.

For rooted trees or graphs, relationships between nodes include parent, child and sibling. These are used in the usual familial fashion with the parent preceding its child along a direct arc. The children of node are call siblings. Similarly, an ancestor comes before a descendant in some path of a directed graph. In figure 2, b is a parent nodes e and f. Nodes a and c are ancestors of states g, h and i, g, h, and i are descendants of a and c.

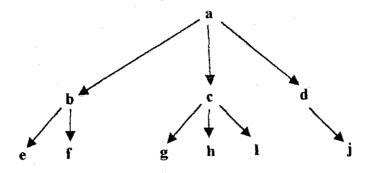


Figure 4.2: A rooted tree, the family relationships.

For Congkak, each path or relationship has to be named in order to present the uniqueness of each move. One method has been discovered such as when a player stop at certain point or path, the numbers remaining in each hole is taken as a unique ID for the move. So, computer read all nodes remaining and stored as ID. Unique identifier for each moves were developed by using the Congkak board itself. For example, figure 3 shows the basic idea how computer read an ID.

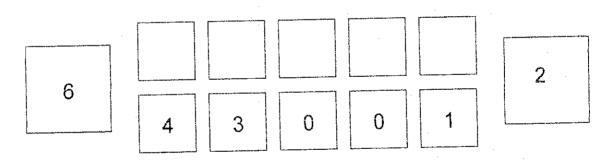


Figure 4.3: Sample of in play Congkak

This method has proved that every single move contained different identifier. So the ID for the move is 6430012

In coding the moves, a list is created in order to represent the graph. Then the game selects the best list or the nearest possible move to win in order to make a move. For examples,

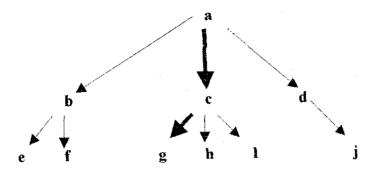


Figure 4.4: The selected move is a to c to g

So the move is **a-c-g.** There are actually several moves that can be made. For instance, a list such as "**a-c-g-k-l**" has a final result of the player win the game and "**a-c-g-p-w**" is a list that has a final result of the computer wins the game. So the AI of the game may force the player to make an "**a-c-g-p-w**" move.

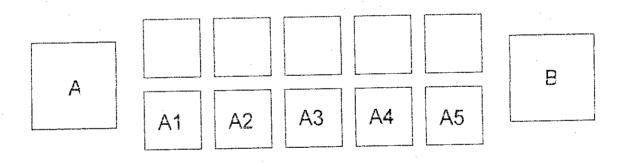


Figure 4.5: The label name for each hole

The move is recorded or guided by the position of the hole that clicked by the user. For example the first move a user clicked on hole which has a label of A2 then the second move made by the user was A1, the third move was A4 and so on. This means that the program is followed the list which has the list of A1-A2-A4.

## 4.3 The partial objectives to be achieve.

- To use of computers to do reasoning, pattern recognition or some other form of inference.
- To focus on problems that does not respond to algorithmic solutions. This underlies on heuristic search as an AI problem solving technique
- To use of large amounts of domain specific knowledge in solving problems.
- To create the architectures that can support the interaction

#### **CHAPTER 5**

## CONCLUSION AND RECOMMENDATION

## 5.1 Relevancy to the Objectives

As mentioned earlier, the objectives may not be completed fully at the time of writing. However, it may be safe to assume that the other objectives would be completed at the end of the time frame. The objective of the project is to develop an interactive, easy to play and intelligent Congkak game and also enrich the game with the quality and advantages of artificial intelligent techniques. From the research conducted, it was founded that several methods of artificial intelligent offer different types of solutions. The insight and knowledge obtained from the research were very valuable. The other objectives are directly focusing on the study of Artificial Intelligent. The challenging field of AI also reflects to the complexity of programming. This research of AI is considered as young in Malaysia, and it is primary concern in finding an effective way to understand and apply intelligent problem solving and planning to a wide range of practical problems. The game considers whose state space is small enough to be in-depth search. The problem is systematically searching the space of possible moves and counter moves by the opponent. There is only a portion of the state space can be generated and search. The AI must use heuristics to guide play along a path to a winning state. Finally, heuristic search of graphs is an important area of concern, as the state spaces for expert systems are often of this form. Because all 'children' must be searched to find a goal, the heuristic estimate of the cost of searching and node is the sum of the estimates of searching the 'children'.

# 5.2 Suggested Future Work for Expansion and Continuation

There are many aspects of this project that have the potential to be improved on. Mentioned here are some aspects.

Research on the other possibilities concerning the methods used for developing artificial intelligent games. The project only covers the heuristics method of artificial intelligent that might be suitable. The artificial intelligent itself has variety of options in developing the intelligent of the games. The appropriate research may discover other methods that suitable for congkak or other games.

Artificial Intelligent congkak that support for network play. This project or game is a standalone game. To play over the network may consider the performance of the artificial intelligent processing. The AI need to process faster and the interactivity of the game need to be enhanced suited to the requirement.

Combining 3D and artificial intelligent. Combining both 3D and artificial intelligent may consider the performance of overall game processing. Major area of study may consider on faster AI processing and interactivity of the game.

In conclusion, this project can be considered as successful, although there are minor setbacks. Developing a major game title would be a daunting task requiring time and effort that would not far exceed the constraints of this project. But the project expected to encounter problems and ability to handle the problems. The knowledge and experience that was gained during the project would be valuable especially in dealing with the real world problem.

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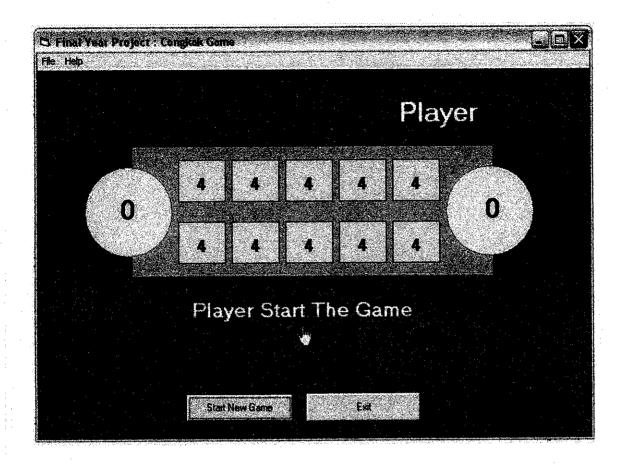
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## **APPENDIX**

Gant chart: Project Timeline

No	Detail/week	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Preliminary			<del> </del>											
	Research						-								
2	Preliminary														
	Report														
	Research														
	Project Work							<u> </u>							
	Progress Report														
	Project Work									·				:	
	Final Draft														
	Oral		1			1	1								
	Presentation		-			***************************************									
	Project														
	Dissertation														



Dim time As Integer

Dim time2 As Integer

Dim add As Integer

Dim last As Integer

Dim tikamA1 As Integer

Dim tikamA2 As Integer

Dim tikamA3 As Integer

Dim tikamA4 As Integer

Dim tikamA5 As Integer

Dim tikamB1 As Integer

Dim tikamB2 As Integer

Dim tikamB3 As Integer

Dim tikamB4 As Integer

Dim tikamB5 As Integer

Private Sub A\_Change()

hand. Top = 3360 - 2280

End Sub

Private Sub A1\_Click()

Label3. Visible = False

add = A1 Caption

If Al.Caption = 0 Then

MsgBox "Takleh"

frmCongkak.SetFocus

If A1.Caption = 0 And A2.Caption = 0

And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 0

And A.Caption < 19 Then

MsgBox "Computer Wins!!"

End If

Else

If add = 1 Then

A1,Caption = 0

tikamA2 = A2.Caption + 1

time = 0

time2 = time

hand.Top = 3360

hand.Left = 3720

A2.Caption = A2.Caption + 1

If tikamA2 = 1 Then

tikam

End If

If hand. Top = 3360 And hand. Left = 3720

And A2.Caption > 0 Then

If A2.Caption = 1 Then

Timer1.Enabled = False

Labell Visible = True

Label2.Visible = False

Timer2.Enabled = True

Else

time - A2.Caption

A2.Caption = -1

Timer I. Enabled = True

End If

End If

Elself add = 2 Then

A1.Caption = 0

Timer1 Enabled = True

time = 1

time2 = time

hand.Top = 3360

hand.Left = 3720

Elself add = 3 Then

A1.Caption = 0

Timer1.Enabled = True

time = 2

time2 = time

hand.Top = 3360

hand.Left = 3720

Elself add = 4 Then

A1.Caption = 0

Timer1.Enabled = True

time - 3

time2 = time

hand. Top = 3360

hand.Left = 3720

Timer2.Enabled = True

Elself add = 5 Then

A1.Caption = 0

Timerl.Enabled = True

time = 4

time2 = time

hand.Top = 3360

hand.Left = 3720

Elself add = 6 Then

A1. Caption = 0

Timer1.Enabled = True

time = 5

time2 = time

hand.Top = 3360

hand.Left = 3720

ElseIf add = 7 Then

A1.Caption = 0

Timer1.Enabled = True

time = 6

time2 = time

hand.Top = 3360

hand.Left = 3720

ElseIf add = 8 Then

Al.Caption = 0

Timer L.Enabled = True

time = 7

time2 = time

hand.Top = 3360

hand.Left = 3720

Elself add = 9 Then

A1.Caption = 0

Timer1 Enabled = True

time = 8

time2 = time

hand. Fop = 3360

hand.Left = 3720

Elself add = 10 Then

A1.Caption = 0

Timer1.Enabled = True

time = 9

time2 = time

hand.Top = 3360

hand.Left = 3720

Énd If

End If

End Sub

Private Sub A1\_MouseMove(Button As Integer, Shift As Integer, X As Single, Y As Single)

If A1.Caption = "" Then

A1.BackColor = &H8000000F

Shape6.BackColor = &H8000000F

Élse

A1.BackColor = &HFF&

Shape6.BackColor = &HFF&

MousePointer = Mouselcon

End If

End Sub

Private Sub A2\_Click()

add = A2.Caption

If A2.Caption = 0 Then

MsgBox "Takleh"

frmCongkak.SetFocus

If A1.Caption = 0 And A2.Caption = 0

And A3.Caption = 0 And A4.Caption = 0

And A5.Caption = 0 And A.Caption < 19 Then

MsgBox "Computer Wins!! "

End If

Else

If add = 1 Then

A2.Caption = 0

tikamA3 = A3.Caption + 1

time = 0

time2 = time

hand.Top = 3360

hand.Left = 4680

A3.Caption = A3.Caption + 1

If tikamA3 = 1 Then

tikam

End If

If hand. Top = 3360 And hand. Left = 4680

And A3:Caption > 0 Then

If A3.Caption = I Then

Timer1.Enabled = False

Timer2.Enabled = True

Label2.Visible = False

Label 1.V isible = True

Else

time = A3.Caption

 $\Delta 3$ . Caption = -1

Timer1.Enabled = True

End If

End If

ElseIf add = 2 Then

A2.Caption = 0

Timer1.Enabled = True

time = 1

time2 = time

hand. Top = 3360

hand.Left = 4680

ElseIf add = 3 Then

A2. Caption = 0

Timer1.Enabled = True

time = 2

time2 = time

hand. Top = 3360

hand.Left = 4680

ElscIf add = 4 Then

A2.Caption = 0

Timer1.Enabled = True

time = 3

time2 = time

hand.Top = 3360

hand.Left = 4680

Elself add = 5 Then

A2.Caption = 0

Timer1.Enabled = True

time = 4

time2 = time

hand.Top = 3360

hand.Left = 4680

Elself add = 6 Then

A2.Caption = 0

Timer1 Enabled = True

time = 5

time2 = time

hand.Top = 3360

hand.Left = 4680

Elself add = 7 Then

A2.Caption = 0

Timer1.Enabled = True

time = 6

time2 = time

hand. Top = 3360

hand.Left = 4680

ElseIf add = 8 Then

A2.Caption = 0

Timer1.Enabled = True

time = 7

time2 = time

hand.Top = 3360

hand.Left = 4680

Elself add = 9 Then

A2.Caption = 0

Timer1.Enabled = True

time = 8

time2 = time

hand.Top = 3360

Elself add = 10 Then

A2.Caption = 0

Timer1.Enabled = True

time = 9

time2 = time

hand.Top = 3360

hand.Left = 4680

Elself add = 11 Then

A2.Caption = 0

Timer1 Enabled = True

time = 10

time2 = time

hand.Top = 3360

hand.Left = 4680

Elself add = 12 Then

A2.Caption = 0

Timer I Enabled = True

time = 11

time2 = time

hand.Top = 3360

hand.Left = 4680

ElseIf add = 13 Then

A2Caption = 0

Timer1 Enabled = True

time = 12

time2 = time

hand.Top = 3360

hand.Left = 4680

ElseIf add = 14 Then

A2.Caption = 0

Timer1.Enabled = True

time = 13

time2 = time

hand.Top = 3360

hand.Left = 4680

End If

End If

End Sub

Private Sub A2\_MouseMove(Button As
Integer, Shift As Integer, X As Single, Y As Single)
A2.BackColor = &HFF&
Shape7.BackColor = &HFF&
End Sub

Private Sub A3\_Click()
add = A3.Caption

If A3.Caption = 0 Then

MsgBox "Takleh"

frmCongkak.SetFocus

If A1.Caption = 0 And A2.Caption = 0

And A3.Caption = 0 And A4.Caption = 0

And A5.Caption = 0 And A.Caption < 19 Then

MsgBox "Computer Wins!!"

End If

Else

If add = 1 Then
A3.Caption = 0
tikamA4 = A4.Caption + 1
time = 0
time2 = time
hand.Top = 3360
hand.Left = 5640
A4.Caption = A4.Caption + 1

If tikam A4 = 1 Then

tikam

End If

If hand.Top = 3360 And hand.Left = 5640

And A4. Caption  $ext{$<>$}$  0 Then

If A4.Caption = 1 Then

Timer1.Enabled = False

Label 1. Visible = True

Label2.Visible = False

Timer2.Enabled = True

Else

time = A4.Caption

A4.Caption = -1

Timer1.Enabled ≈ True

End If

End If

EiseIf add = 2 Then A3.Caption = 0 Timer1.Enabled = True

time = 1

time2 = time

hand.Top = 3360

hand, Left = 5640

ElscIf add = 3 Then

A3.Caption = 0

Timer1.Enabled = True

time = 2

time2 = time

hand.Top = 3360

hand.Left = 5640

ElseIf add = 4 Then

A3.Caption = 0

Timer1 Enabled = True

time = 3

time2 = time

hand. Top = 3360

hand.Left = 5640

ElseIf add = 5 Then

A3.Caption = 0

Timer1.Enabled = True

time = 4

time2 = time

hand.Top = 3360

hand.Left = 5640

Elself add = 6 Then

A3.Caption = 0

Timer1.Enabled = True

time = 5

time2 = time

hand.Top = 3360

hand.Left = 5640

Elself add = 7 Then

A3.Caption = 0

Timer1.Enabled = True

time = 6

time2 = time

hand.Top = .3360

hand.Left = 5640

ElseIf add = 8 Then

A3.Caption = 0

Timer1 Enabled = True

time = 7

time2 = time

hand.Top = 3360

hand.Left = 5640

Elself add = 9 Then

A3.Caption = 0

Timer1.Enabled = True

time = 8

time2 = time

hand.Top = 3360

hand.Left = 5640

ElseIf add = 10 Then

A3. Caption = 0

Timer1.Enabled = True

time = 9

time2 - time

hand.Top = 3360

hand.Left = 5640

End If

End If

End Sub

Private Sub A3 MouseMove(Button As

Integer, Shift As Integer, X As Single, Y As Single)

A3.BackColor = &HFF&

Shape8.BackColor = &HFF&

End Sub

Private Sub A4\_Click()

add = A4.Caption

If A4.Caption = 0 Then

MsgBox "Takleh"

frmCongkak.SetFocus

If A1.Caption = 0 And A2.Caption = 0

And A3.Caption = 0 And A4.Caption = 0

And A5.Caption = 0 And A.Caption < 19 Then

MsgBox "Computer Wins!! "

End If

Eisc

If add = 1 Then

A4.Caption = 0

tikamA5 = A5.Caption + 1

time = 0

time2 = time

hand.Top = 3360

hand.Left = 6600

A5.Caption = A5.Caption + 1

If tikamA5 = 1 Then

tikam

End If

If hand Top = 3360 And hand Left = 6600

And A5.Caption > 0 Then

If A5.Caption = 1 Then

Timer1.Enabled = False

Label 1. Visible = True

Label2.Visible = False

Timer2.Enabled = True

Else

time = A5.Caption

A5.Caption = -1

Timer1.Enabled = True

End If

End If

Elself add = 2 Then

A4. Caption = 0

Timer! Enabled = True

time = 1

time2 = time

hand.Top = 3360

hand.Left = 6600

Elself add = 3 Then

A4.Caption = 0

Timer1.Enabled = True

time = 2

time2 = time

hand.Top = 3360

hand Left = 6600

Elself add = 2 Then

A5. Caption = 0

Timer1.Enabled = True

time = 1

time2 = time

hand.Top = 3360

hand.Left = 7560

ElseIf add = 3 Then

A5. Caption = 0

Timer1.Enabled = True

time = 2

time2 = time

hand.Top = 3360

hand.Left = 7560

ElseIf add = 4 Then

A5.Caption = 0

Timer1.Enabled = True

time = 3

time2 = time

hand.Top = 3360

hand.Left = 7560

Elself add = 5 Then

A5.Caption = 0

Timer1.Enabled = True

time = 4

time2 = time

hand.Top = 3360

hand.Left = 7560

ElseIf add = 6 Then

A5.Caption = 0

Timer1.Enabled = True

time = 5

time2 = time

hand. Top = 3360

hand.Left = 7560

ElseIf add = 7 Then

A5.Caption = 0

Timer1.Enabled = True

time = 6

time2 = time

hand.Top = 3360

hand, Left = 7560

Elself add = 8 Then

A5.Caption = 0

Timer1 Enabled = True

time = 7

time2 = time

hand.Top = 3360

hand.Left = 7560

ElseIf add = 9 Then

A5.Caption = 0

Timer1.Enabled = True

time = 8

time2 = time

hand.Top = 3360

hand.Left = 7560

Elself add = 10 Then

A5.Caption = 0

Timer1.Enabled = True

time = 9

time2 = time

hand.Top = 3360

hand.Left = 7560

End If

End If

End Sub

Private Sub A5\_MouseMove

(Button As Integer, Shift As

Integer, X As Single, Y As Single)

A5.BackColor = &HFF&

Shape 10. Back Color = & HFF &

End Sub

Private Sub Command1\_Click()

mnuNew\_Click

End Sub

Private Sub Command2\_Click()

End

End Sub

Private Sub Form\_Load()

Timer1.Enabled = False

Label2.Visible = True

A1.Caption = 4

A2.Caption = 4

A3.Caption - 4

A4.Caption = 4

A5.Caption = 4

B1.Caption = 4

B2.Caption = 4

B3.Caption = 4

B4.Caption = 4

B5.Caption = 4

End Sub

Private Sub Form MouseMove(Button As

Integer, Shift As Integer, X As Single, Y As Single)

A1.BackColor = &H8000000F

A2.BackColor = &H8000000F

A3.BackColor = &H8000000F

A4.BackColor = &H8000000F

A5.BackColor = &H8000000F

Shape6.BackColor = &H8000000F

Shape7.BackColor = &H8000000F

Shape8.BackColor = &H8000000F

Shape9.BackColor = &H8000000F

Shape10.BackColor = &H8000000F

End Sub

Private Sub Labell \_Click()

Label 1. Visible = False

End Sub

Private Sub mnuAbout\_Click()

frm About. Show

End Sub

Private Sub mnuExit\_Click()

End

End Sub

Private Sub mnuNew Click()

Label3.Visible = True

Label2.Visible = True

Label 1. Visible = False

A1.Caption = 4

A2.Caption = 4

A3.Caption = 4

A4.Caption = 4

A5.Caption = 4

B1.Caption = 4

B2.Caption = 4

B3,Caption = 4

B4.Caption = 4

B5.Caption = 4

A. Caption = 0

B.Caption = 0

Timer2.Enabled = False

Timer3.Enabled = False

Timer4.Enabled = False

End Sub

Private Sub Timer1 Timer()

If hand Left = 6600 And hand Top = 2280 Then

B1.Caption = B1.Caption + 1

End If

If hand Left = 5640 And hand Top = 2280 Then

B2.Caption = B2.Caption + 1

End If

If hand, Left = 4680 And hand, Top = 2280 Then

B3.Caption = B3.Caption + 1

End If

If hand.Left = 3720 And hand.Top = 2280 Then

B4.Caption = B4.Caption + 1

End If

If hand.Left = 2760 And hand.Top = 2280 Then

B5.Caption = B5.Caption + 1

End If

If hand.Left = 2760 And hand.Top = 3360 Then

A1.Caption = A1.Caption + 1

End If

If hand Left = 3720 And hand Top = 3360 Then

A2.Caption = A2.Caption + 1

End If

If hand.Left = 4680 And hand.Top = 3360 Then

 $\Delta 3$ . Caption =  $\Delta 3$ . Caption + 1

If hand.Left = 5640 And hand.Top = 3360 Then
A4.Caption = A4.Caption + 1
End If

If hand.Left = 6600 And hand.Top = 3360 Then
A5.Caption = A5.Caption + 1
End If

If hand.Left = 7560 Then

A.Caption = A.Caption + 1

End If time = time - 1 If hand.Left = 2760 And hand.Top = 2280 Then hand.Top = 2280 + 1080 hand.Left = 1800 End If

If hand Left = 7560 Then hand Top = 3360 - 1080 End If

If hand.Top = 2280 Then hand.Left = hand.Left - 960 End If

If hand Top = 3360 Then hand Left = hand Left + 960 End If

tikamA1 = A1.Caption + 1 tikamA2 = A2.Caption + 1 tikamA3 = A3.Caption + 1 tikamA4 = A4.Caption + 1 tikamA5 = A5.Caption + 1

If time = 0 Then
Timer1.Enabled = False
Timer2.Enabled = True

If hand.Top = 2280 And hand.Left = 2760 Then B5.Caption = B5.Caption + 1

ElseIf hand.Top = 2280 And hand.Left = 3720 Then B4.Caption = B4.Caption + 1

ElseIf hand.Top = 2280 And hand.Left = 4680 Then B3.Caption = B3.Caption + 1

ElseIf hand Top = 2280 And hand Left = 5640 Then B2.Caption = B2.Caption + I

ElseIf hand.Top = 2280 And hand.Left = 6600 Then B1.Caption = B1.Caption + 1

Elself hand. Left = 2760 Then
Al. Caption = Al. Caption + 1
If tikamAl = 1 Then
tikam
End If
Elself hand. Left = 3720 Then
A2. Caption = A2. Caption + 1
If tikamA2 = 1 Then
tikam
End If
Elself hand. Left = 4680 Then
A3. Caption = A3. Caption + 1
If tikamA3 = 1 Then
tikam

tikam
End If

ElseIf hand.Left = 5640 Then

A4.Caption = A4.Caption + 1

If tikamA4 = 1 Then

tikam

End If

Else If hand. Left = 6600 Then

A5. Caption = A5. Caption + 1

If tikamA5 = 1 Then

tikam

End If

EiseIf hand.Left = 7560 Then A.Caption = A.Caption + 1 End If End If If hand. Top = 2280 And hand. Left = 6600

And time = 0 And B1.Caption <> 0 Then

If B1.Caption = 1 Then

Timer1 Enabled = False

Label1.Visible = True

Label2.Visible = False

Timer2.Enabled = True

Else

time = B1.Caption

B1.Caption = -1

Timer1.Enabled = True

End If

End If

If hand. Top = 2280 And hand. Left = 5640

And time = 0 And B2.Caption <> 0 Then

If B2.Caption = 1 Then

Timer1.Enabled = False

Label1.Visible = True

Label2.Visible = False

Timer2.Enabled = True

Else

time = B2.Caption

B2.Caption = -1

Timer1.Enabled = True

End If

End If

If hand. Top = 2280 And hand. Left = 4680

And time = 0 And B3.Caption extstyle 0 Then

If B3.Caption = 1 Then

Timer1.Enabled = False

Labell Visible = True

Label2.Visible = False

Timer2.Enabled = True

Elsc

time = B3.Caption

B3.Caption = -1

Timer1.Enabled = True

End If

End If

If hand.Top = 2280 And hand.Left = 3720

And time = 0 And B4.Caption <> 0 Then

If B4.Caption = 1 Then

Timer1.Enabled = False

Labell Visible - True

Label2.Visible = False

Timer2.Enabled = True

Else

time = B4.Caption

B4.Caption = -1

Timer1.Enabled = True

End If

End If

If hand. Top = 2280 And hand. Left = 2760

And time = 0 And B5.Caption <> 0 Then

If B5.Caption = 1 Then

Timer1.Enabled = False

Label1.Visible = True

Label2.Visible = False

Timer2.Enabled = True

Else

time = B5.Caption

B5.Caption = -I

Timer).Enabled = True

End If

End If

If hand.Top = 3360 And hand.Left = 2760

And time = 0 And Al Caption > 0 Then

If A1.Caption = 1 Then

Timer1.Enabled = False

Label1.Visible = True

Label2.Visible = False

Timer2.Enabled = True

Else

time = Al.Caption

Al Caption = -1

Timer1.Enabled = True

End If

If hand. Top = 3360 And hand. Left = 3720

And time = 0 And A2.Caption <> 0 Then

If A2.Caption = 1 Then

Timer1.Enabled = False

Label 1. Visible = True

Label2.Visible = False

Timer2.Enabled = True

Else

time = A2.Caption

A2. Caption = -1

Timer1.Enabled = True

End If

End If

If hand.Top = 3360 And hand.Left = 4680

And time = 0 And A3.Caption > 0 Then

If A3.Caption = 1 Then

Timer1.Enabled = False

Label1.Visible = True

Label2.Visible = False

Timer2.Enabled = True

Else

time = A3.Caption

A3. Caption = -1

Timer1.Enabled = True

End If

End If

If hand.Top = 3360 And hand.Left = 5640

And time = 0 And A4.Caption  $\Leftrightarrow$  0 Then

If A4.Caption = 1 Then

Timer1.Enabled = False

Label 1. Visible = True

Label2.Visible = False

Timer2Enabled = True

Else

time = A4.Caption

A4.Caption = -1

Timer1.Enabled = True

End If

End If

If hand. Top = 3360 And hand. Left = 6600

And time = 0 And A5.Caption <> 0 Then

If A5.Caption = 1 Then

Timer1.Enabled = False

Labell Visible = True

Label2.Visible = False

Timer2.Enabled = True

Else

time = A5.Caption

A5.Caption = -1

Timer1.Enabled = True

End If

End If

End Sub

Sub tikam()

If hand Left = 2760 And A1. Caption = 1

And B5.Caption © 0 Then

 $last = B5. Caption \pm 1$ 

Al Caption = 0

B5.Caption = 0

A.Caption = A.Caption + last

Timer2.Enabled = True

Labell.Visible = True

Label 2. Visible = False

Elself hand.Left = 3720 And A2.Caption = 1

And B4.Caption © 0 Then

last = B4.Caption + 1

A2. Caption = 0

B4.Caption = 0

A.Caption = A.Caption + last

Timer2.Enabled = True

Label I. Visible = True

Label2.Visible = False

Elself hand Left = 4680 And A3.Caption = 1

And B3.Caption <> 0 Then

last = B3.Caption + 1

A3.Caption = 0

B3.Caption = 0

A.Caption = A.Caption + last

Timer2.Enabled = True

Label1.Visible = True

Label2.Visible = False

Elself hand Left = 5640 And A4. Caption = I

And B2.Caption <> 0 Then

last = B2.Caption + 1

A4.Caption = 0

B2.Caption = 0

 $\Lambda$ .Caption =  $\Lambda$ .Caption + last

Timer2.Enabled = True

Labelt Visible - True

Label2. Visible = False

Elself hand.Left = 6600 And A5.Caption = 1

And B1.Caption <> 0 Then

last = B1.Caption + i

A5. Caption = 0

B1.Caption =  $\theta$ 

A.Caption = A.Caption + last

Timer2.Enabled = True

Label 1.Visible = True

Label2 Visible = False

End If

End Sub

Private Sub Timer2\_Timer()

hand.Left = 4560

hand. Top = 360

If B.Caption > 20 Then

MsgBox "Computer Wins!!"

End If

If B.Caption = 16 And A1.Caption = 0

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 0

And A.Caption = 19 And B5.Caption = 1

And B4.Caption = 1 And B3.Caption = 2

And B2.Caption = 0 And B1.Caption = 1 Then

"B5.Caption = 0

"hand.Top = 2280

"hand.Left = 2760

'Timer2.Enabled = False

'MsgBox " Computer Wins !! "

End If

If A1.Caption = 1 And A2.Caption = 6

And A3.Caption = 6 And A4.Caption = 0

And A5 Caption = 1 Then

time = 5

B4.Caption = 0

B5.Caption = 0

hand.Top = 2280

hand.Left = 1800

Timer3.Enabled = True

Timer2 Enabled = False

End IF

If A1.Caption = 0 And A2.Caption = 0

And A3.Caption = 1 And A4.Caption = 5

And A5.Caption = 2 Then

time = 4

B3.Caption = 0

B4.Caption = 0

hand Top = 2280

hand.Left = 2760

Timer3.Enabled = True Timer2.Enabled = False

End If

If A1.Caption = 0 And A2.Caption = 0

And A3.Caption = 5 And A4.Caption = 7

And A5. Caption = 1 Then

time = 1

'B3.Caption = 0

B4.Caption = 0

hand.Top = 2280

hand.Left = 2760

Timer3.Enabled = True

Timer2.Enabled = False

End If

If A1.Caption = 0 And A2.Caption = 0

And A3.Caption = 0 And A4.Caption = 9

And A5.Caption = 3 Then

time = 1

B3.Caption = 0

B1.Caption = 0

hand.Top = 2280

hand.Left = 5640

Timer3.Enabled = True

Timer2.Enabled = False

If B.Caption = 15 And Al.Caption = 0

And A2 Caption = 0 And A3. Caption = 0

And A4.Caption = 0 And A5.Caption = 0

And A.Caption = 17 And B2.Caption = 6

And B1.Caption = 0 Then

B4.Caption = 0

B5.Caption = 1

hand.Top = 360

hand.Left = 4440

MsgBox "Computer Wins !!"

mnuNew Click

Timer2.Enabled = False

Timer3.Enabled = False

Timer4.Enabled = False

End If

If B.Caption = 18 And Al.Caption = 0

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 0

And A.Caption = 20 Then

B5.Caption = 0

B.Caption = 19

hand. Top = 2280

hand.Left = 6600

Timer2.Enabled = False

Label1.Visible = True

Label2.Visible = False

MsgBox " Game Draw !! "

End If

If A1.Caption = 1 And A2.Caption = 0

And A3.Caption = 0 And A4.Caption = 0

And A5.Caption = 4 Then

time = 3

B1.Caption = 0

B2.Caption = 0

hand.Top = 2280

hand.Left = 4680

Timer3.Enabled = True

Timer2.Enabled = False

End If

If A1.Caption = 1 And A2.Caption = 0

And A3.Caption = 0 And A4.Caption = 9

And A5.Caption = 0 Then

B1.Caption = 0

B2.Caption = 0

A4.Caption = 0

B.Caption = 29

hand.Top = 2280

hand.Left = 5640

MsgBox "Computer Wins!!"

End If

If A1.Caption = 0 And A2.Caption = 1

And A3.Caption = 0 And A4.Caption = 9

And A5.Caption = 3 Then

time = 1

B3.Caption = 0

B2.Caption = 0

hand, Top = 2280

hand.Left = 3720

Timer3.Enabled = True

Timer2.Enabled = False

End If

If A1. Caption = 0 And A2. Caption = 0

And A3.Caption = 1 And A4.Caption = 9

And A5.Caption = 3 Then

time = 1

B3.Caption = 0

B1.Caption = 0

hand.Top = 2280

hand.Left = 5640

Timer3.Enabled = True

Timer2.Enabled = False

MsgBox "Computer Wins!! "

End If

If A1.Caption = 1 And A2.Caption = 0

And A3.Caption = 1 And A4.Caption = 0

And A5.Caption = 4 Then

time = 2

B4.Caption = 0

B2.Caption = 0

hand.Top = 2280

hand.Left = 2760

Timer3.Enabled = True

Timer2.Enabled = False

If A1.Caption = 0 And A2.Caption = 1

And A3.Caption = 0 And A4.Caption = 9

And A5.Caption = 0 Then

B5,Caption = 0

hand. Top = 2280

hand.Left = 1800

B.Caption = 20

B4.Caption = 0

time = 1

hand.Top = 2280

hand.Left = 2760

Timer3.Enabled = True

Timer2.Enabled = False

End If

If A1.Caption = 0 And A2.Caption = 1

And A3.Caption = 6 And A4.Caption = 0

And A5.Caption = 3 Then

time = 1

B4.Caption = 0

B2.Caption = 0

hand.Top = 2280

handLeft = 2760

Timer3.Enabled = True

Timer2.Enabled = False

End If

If A1.Caption = 0 And A2.Caption = 1

And A3, Caption = 6 And A4. Caption = 8

And A5, Caption = 0 Then

time = 1

B3.Caption = 0

B2.Caption = 0

hand.Top = 2280

hand.Left = 3720

Timer3.Enabled = True

Timer2.Enabled = False

End If

If A1.Caption = 1 And A2.Caption = 1

And A3.Caption = 0 And A4.Caption = 9

And A5.Caption = 1 Then

B3.Caption = 0

hand. Top = 2280

hand.Left = 3720

B4.Caption = 0

 $\Lambda 2$ .Caption = 0

B.Caption = 21

MsgBox "Computer Wins!! "

Timer2.Enabled = False

End If

If A1.Caption = 0 And A2.Caption = 1

And A3.Caption = 0 And A4.Caption = 9

And A5.Caption = 1 Then

time = 1

B4.Caption = 0

hand Top = 2280

hand.Left = 2760

Timer3.Enabled = True

Timer2.Enabled = False

End If

If A1.Caption = 0 And A2.Caption = 1

And A3, Caption = 6 And A4, Caption = 0

And A5.Caption = 1 Then

time = 3

134.Caption = 0

B3.Caption = 0

hand Top = 2280

hand.Left = 2760

Timer3.Enabled = True

Timer2.Enabled = False

End If

If A1.Caption = 0 And A2.Caption = 1

And A3.Caption = 7 And A4.Caption = 1

And A5.Caption = 1 Then

B2.Caption = 0

A3.Caption = 0

B.Caption = 28

hand.Top = 2280

hand.Left = 4680

MsgBox "Computer Wins!! "

Timer2.Enabled = False

If Al.Caption = 1 And A2.Caption = 0

And A3.Caption = 0 And A4.Caption = 2

And A5.Caption = 2 Then

time = 1

B2.Caption = 0

hand Top = 2280

hand.Left = 4680

Timer3 Enabled = True

Timer2 Enabled = Faise

End If

If B.Caption = 13 And A1.Caption = 0

And A2.Caption = 0 And A3.Caption = 1

And A4.Caption = 0 And A5.Caption = 2

And A.Caption = 17 Then

time = 3

B1.Caption = 0

hand. Top = 2280

hand.Left = 5640

Timer3.Enabled = True

Timer2.Enabled = False

End If

If A1.Caption = 1 And A2.Caption = 0

And A3.Caption = 7 And A4.Caption = 0

And A5.Caption = 0 Then

B5.Caption = 0

hand. Top = 2280

hand Left = 1800

B.Caption = 21

MsgBox "Computer Wins!! "

Timer2.Enabled = False

End If

If A1.Caption = 0 And A2.Caption = 0

And A3.Caption = 8 And A4.Caption = 0

And A5.Caption = 3 Then

time = 1

B1.Caption = 0

A3.Caption = 0

B.Caption = 22

hand.Top = 2280

hand.Left = 5640

MsgBox "Computer Wins!! "

Timer2.Enabled = False

End If

If A1.Caption = 0 And A2.Caption = 0

And A3.Caption = 0 And A4.Caption = 2

And A5.Caption = 0 Then

time = 1

B3.Caption = 0

hand.Top = 2280

hand.Left = 3720

Timer3.Enabled = True

Timer2.Enabled = False

End If

If A1.Caption = 0 And A2.Caption = 0

And A3.Caption = 2 And A4.Caption = 0

And A5.Caption = 0 Then

time = 3

B1.Caption = 0

hand. Top = 2280

hand.Left = 5640

Timer3.Enabled = True

Timer2.Enabled = False

End If

If A1.Caption = 0 And A2.Caption = 0

And A3.Caption = 0 And A4.Caption = 1

And A5.Caption = 1 Then

B5.Caption = 0

B.Caption = 14

hand.Top = 2280

hand.Left = 1800

B4.Caption = 0

time = 1

hand. Top = 2280

hand Left = 2760

Timer3.Enabled = True

Timer2.Enabled = False

If B.Caption = 18 And A1.Caption = 0

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 0 Then

B5.Caption = 0

hand.Top = 2280

hand Left = 1800

B.Caption = 19

B2.Caption = 0

time = 5

hand Top = 2280

hand.Left = 4680

Timer3.Enabled = True

Timer2.Enabled = False

End If

If B.Caption = 20 And Al., Caption = 0

And A2.Caption = 0 And A3.Caption = 1

And A4 Caption = 1 And A5 Caption = 0 Then

B5, Caption = 0

B.Caption = 21

hand Top = 2280

hand Left = 1800

MsgBox "Computer Wins!!"

Timer2.Enabled = False

End If

If B.Caption = 20 And Al.Caption = 1

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 0 Then

B5.Caption = 0

B.Caption = 21

hand Top = 2280

hand.Left = 1800

MsgBox "Computer Wins!!"

Timer2 Enabled = False

End If

If B.Caption = 20 And A1 Caption = 1

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 0 Then

B5.Caption = 0

B.Caption = 19

hand.Top = 2280

hand.Left = 1800

B2.Caption = 0

time = 5

hand Top = 2280

hand.Left = 4680

Timer3.Enabled = True

Timer2.Enabled = False

End If

If B.Caption = 18 And A1 Caption = 0

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 1 Then

B5.Caption = 0

B.Caption = 19

hand. Γορ = 2280

hand.Left = 1800

B2. Caption = 0

timc = 5

hand Top = 2280

hand.Left = 4680

Timer2.Enabled = False

Timer3.Enabled = True

End if

If B.Caption = 20 And A1.Caption = 0

And A2.Caption = 0 And A3.Caption = 1

And A4.Caption = 1 And A5.Caption = 1 Then

B5.Caption = 0

B,Caption = 21

hand. Top = 2280

hand.Left = 1800

MsgBox "Computer Wins!!"

Timer2.Enabled = False

End If

If B.Caption = 20 And Al.Caption = 1

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 1 Then

B5.Caption = 0

B.Caption = 21

hand.Top = 2280

hand.Left = 1800

MsgBox "Computer Wins!! "

Timer2.Enabled = False

If A.Caption  $\Leftrightarrow$  17 And Al.Caption = 0

And A2.Caption = 0 And A3.Caption = 1

And A4.Caption = 0 And A5.Caption = 2 Then

time = 1

B4.Caption = 0

hand.Top = 2280

hand.Left - 2760

Timer3.Enabled = True

Timer2.Enabled = False

End If

If B.Caption = 18 And A1.Caption = 0

And A2.Caption = 0 And A3.Caption = 2

And A4.Caption = 1 And A5.Caption = 2 Then

B5.Caption = 0

B.Caption = 19

hand.Top = 2280

hand.Left = 1800

B4.Caption = 0

hand.Top = 2280

hand.Left = 2760

time = 1

Timer3.Enabled = True

Timer2.Enabled = False

End If

If B.Caption = 18 And A1.Caption = 1

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 1 And A5.Caption = 0 Then

B5.Caption = 0

B.Caption = 19

hand. Top = 2280

hand.Left = 1800

B4.Caption = 0

hand Top = 2280

hand.Left = 2760

time = 1

Timer3.Enabled = True

Timer2.Enabled = False

End If

If B.Caption = 18 And Al.Caption = I

And A2.Caption = 1 And A3.Caption = 0

And A4.Caption = 1 And A5.Caption = 2

And A.Caption = 13 Then

B5.Caption = 0

B.Caption = 19

hand.Top = 2280

hand.Left = 1800

B4.Caption = 0

hand. Top = 2280

hand.Left = 2760

time = 1

Timer3.Enabled = True

Timer2.Enabled = False

End If

If B.Caption = 18 And A1.Caption = 1

And A2.Caption = 1 And A3.Caption = 1

And A4.Caption = 0 And A5.Caption = 0 Then

B5.Caption = 0

B.Caption = 19

hand.Top = 2280

hand.Left = 1800

B4.Caption = 0

hand.Top = 2280

hand.Left = 2760

time = 1

Timer3.Enabled = True

Timer2.Enabled = False

End If

If A1.Caption = 1 And A2.Caption = 0

And A3.Caption = 0 And A4.Caption = 2

And A5.Caption = 1 Then

B4.Caption = 0

A1.Caption = 0

B.Caption = 15

hand. Top = 2280

hand.Left = 2760

Labell. Visible = False

Label2.Visible = True

Timer2.Enabled = False

If B.Caption = 15 And Al.Caption = 0

And A2 Caption = 0 And A3 Caption = 0

And A4.Caption = 0 And A5.Caption = 0 Then

time = 1

B3.Caption = 0

B4.Caption = 0

hand.Top = 2280

hand Left = 2760

Timer3.Enabled = True

Timer2.Enabled = False

End If

If B.Caption = 18 And A1. Caption = 0

And A2.Caption = 0 And A3.Caption = 1

And A4.Caption = 1 And A5.Caption = 0 Then

B5.Caption = 0

B.Caption = 19

B3.Caption = 0

B4.Caption = 0

time = 1

hand Top = 2280

hand.Left = 2760

Timer2.Enabled = False

Timer3.Enabled = True

End If

If B, Caption = 18 And A1. Caption = 1

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 0 Then

B5.Caption = 0

B.Caption = 19

B4.Caption = 0

A1.Caption = 0

B.Caption = 21

hand. Top = 2280

hand.Left = 2760

Timer2.Enabled = False

MsgBox " Computer Wins!! "

End If

If B.Caption = 13 And A1.Caption = 0

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 2 Then

B5.Caption = 0

B.Caption = 14

B4.Caption = 0

time = 1

hand Top = 2280

hand.Left = 2760

Timer2.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 13 And A1.Caption = 0

And A2.Caption = 0 And A3.Caption = 1

And A4.Caption = 0 And A5.Caption = 0

And A.Caption = 18 Then

B5:Caption = 0

B.Caption = 14

B4.Caption = 0

time = 1

hand.Top = 2280

hand.Left = 2760

Timer3.Enabled = True

Timer2.Enabled = False

End If

If B.Caption = 13 And A1.Caption = 1

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 2

And A Caption = 14 Then

B5.Caption = 0

B4.Caption = 0

A1.Caption = 0

B.Caption = 15

B4.Caption = 0

hand. Top = 2280

hand Left = 2760

Timer2.Enabled = False

Labell.Visible = False

Label2.Visible = True

End If

If B.Caption = 13 And A1.Caption = 0

And A2.Caption = 2 And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 0

And A.Caption = 16 Then

B5.Caption = 0

B.Caption = 14

B4.Caption = 0

time = 1

hand.Top = 2280

handLeft = 2760

Timer2.Enabled = False
Timer3.Enabled = True
End If

If B.Caption = 17 And A1.Caption = 0
And A2.Caption = 0 And A3.Caption = 1
And A4.Caption = 1 And A5.Caption = 1
And A.Caption = 18 Then
MsgBox " You Win!! "
Timer2.Enabled = False
Label1.Visible = False
Label2.Visible = True
End If

If B.Caption = 17 And A1.Caption = 0
And A2.Caption = 0 And A3.Caption = 0
And A4.Caption = 0 And A5.Caption = 2
And A.Caption = 19 Then
B5.Caption = 0
B.Caption = 18
B3.Caption = 0
B4.Caption = 1
hand.Top = 2280
hand.Left = 3720
Timer2.Enabled = False
Label1.Visible = False
Label2.Visible = True

If B.Caption = 17 And A1.Caption = 1
And A2.Caption = 0 And A3.Caption = 0
And A4.Caption = 0 And A5.Caption = 0
And A.Caption = 18 Then
MsgBox " Computer Wins!! "
Timer2.Enabled = False
End If

End If

If B.Caption = 17 And A1.Caption = 1
And A2.Caption = 0 And A3.Caption = 1
And A4.Caption = 0 And A5.Caption = 0
And A.Caption = 17 Then
MsgBox " Computer Wins!! "
Timer2.Enabled = False
End If

If B.Caption = 17 And A1.Caption = 0
And A2.Caption = 0 And A3.Caption = 1

And A4.Caption = 1 And A5.Caption = 0
And A.Caption = 19 Then
MsgBox " You Win!! "
Timer2.Enabled = False
End If

If B.Caption = 17 And A1.Caption = 1
And A2.Caption = 0 And A3.Caption = 0
And A4.Caption = 0 And A3.Caption = 1
And A.Caption = 18 Then
MsgBox "You Win!!"
Timer2.Enabled = False
Find If

If B.Caption = 17 And A1.Caption = 1 And A2.Caption = 0 And A3.Caption = 1 And A4.Caption = 0 And A5.Caption = 1 And A.Caption = 17 Then B5.Caption = 0 B.Caption = 18 B4.Caption = 0 B5.Caption = 1 hand.Top = 2280hand Left = 2760 B5.Caption = 0 A1.Caption = 0B.Caption = 20 Timer2.Enabled = False MsgBox "Computer Wins!!" End If

If B.Caption = 13 And A1.Caption = 0
And A2.Caption = 0 And A3.Caption = 1
And A4.Caption = 0 And A5.Caption = 1
And A.Caption = 14 Then
time = 1
B4.Caption = 0
hand.Top = 2280
hand.Left = 2760
Timer2.Enabled = False
Timer3.Enabled = True
End If

If B.Caption = 18 And A1.Caption = 0 And A2.Caption = 0 And A3.Caption = 2 And A4.Caption = 1 And A5.Caption = 1 And A.Caption = 14 Then MsgBox "Computer Wins!! " Timer2.Enabled = False End If

If B.Caption = 18 And A1.Caption = 1
And A2.Caption = I And A3.Caption = 0
And A4.Caption = I And A5.Caption = 1
And A.Caption = 14 Then
B5.Caption = 0
B.Caption = 19
B4.Caption = 0
time = 1
hand.Top = 2280
hand.Left = 2760
Timer2.Enabled = False
Timer3.Enabled = True
End If

If B.Caption = 18 And A1.Caption = 0
And A2.Caption = 0 And A3.Caption = 2
And A4.Caption = 1 And A5.Caption = 0
And A.Caption = 15 Then
MsgBox " Computer Wins!! "
Timer2.Enabled = False
End If

If B.Caption = 18 And A1.Caption = 1
And A2.Caption = 0 And A3.Caption = 0
And A4.Caption = 1 And A5.Caption = 1
And A.Caption = 15 Then
MsgBox " Computer Wins!!"
Timer2.Enabled = False
End If

If B.Caption = 18 And A1.Caption = 1
And A2.Caption = 1 And A3.Caption = 0
And A4.Caption = 1 And A5.Caption = 0
And A.Caption = 15 Then
MsgBox " Computer Wins!! "
Timer2.Enabled = False
End If

If B.Caption = 13 And A1.Caption = 1 And A2.Caption = 0 And A3.Caption = 0 And A4.Caption = 2 And A5.Caption = 0 And A.Caption = 14 Then B4.Caption = 0 A1.Caption = 0

B.Caption = 15

B4.Caption = 0

hand Top = 2280

hand Left = 2760

Timer2.Enabled = False

Label1.Visible = False

Label2.Visible = True

End If

If B.Caption = 13 And A1.Caption = 0
And A2.Caption = 2 And A3.Caption = 0
And A4.Caption = 2 And A5.Caption = 1
And A.Caption = 12 Then
time = 4
B2.Caption = 0
hand.Top = 2280
hand.Left = 4680
Timer2.Enabled = False
Timer3.Enabled = True
End If

If B.Caption = 14 And A1.Caption = 0 And A2.Caption = 0 And A3.Caption = 1 And A4.Caption = 3 And A5.Caption = 0 And A.Caption = 16 Then time = 2 B2.Caption = 0 B3.Caption = 0 hand.Top = 2280 hand.Left = 3720 Timer2.Enabled = False Timer3.Enabled = True End If

If B.Caption = 17 And A1.Caption = 0 And A2.Caption = 0 And A3.Caption = 2 And A4.Caption = 0 And A5.Caption = 1 And A.Caption = 17 Then B5.Caption = 0 B.Caption = 18 B2.Caption = 0 A3.Caption = 0 hand.Top = 2280 hand.Left = 4680 B.Caption = 21 Timer2.Enabled = False MsgBox "Computer Wins!!"
End If

If B.Caption = 17 And A1.Caption = 1 And A2.Caption = 0 And A3.Caption = 0 And A4.Caption = 4 And A5.Caption = 1 And A.Caption = 16 Then MsgBox " You Wins!! " Timer2.Enabled = False End If

If B.Caption = 17 And Al Caption = 1

And A2.Caption = 1 And A3.Caption = 0
And A4.Caption = 0 And A5.Caption = 1
And A.Caption = 17 Then
B5.Caption = 0
B.Caption = 18
B2.Caption = 0
B1.Caption = 0
time = 1
hand.Top = 2280
hand.Left = 4680
Timer2.Enabled = False
Timer3.Enabled = True

End If

If B.Caption = 20 And A1.Caption = 0
And A2.Caption = 1 And A3.Caption = 0
And A4.Caption = 0 And A5.Caption = 1
And A.Caption = 17 Then
B3.Caption = 0
A2.Caption = 0
B.Caption = 22
hand.Top = 2280
hand.Left = 3720
Timer2.Enabled = False
MsgBox " Computer Wins!! "
End If

If B.Caption = 20 And A1.Caption = 0 And A2.Caption = 1 And A3.Caption = 0 And A4.Caption = 0 And A5.Caption = 0 And A.Caption = 18 Then B3.Caption = 0 A2.Caption = 0 B.Caption = 22 hand.Top = 2280 hand.Left = 3720
Timer2.Enabled = False
MsgBox " Computer Wins!! "
End If

If B.Caption = 17 And A1.Caption = 1
And A2.Caption = 1 And A3.Caption = 1
And A4.Caption = 0 And A5.Caption = 1
And A.Caption = 17 Then
B5.Caption = 0
B.Caption = 18
B1.Caption = 0
B2.Caption = 1
hand.Top = 2280
hand.Left = 5640
Timer2.Enabled = False
MsgBox " You Wins!! "
End If

End If

If B.Caption = 14 And AI.Caption = 1

And A2.Caption = 2 And A3.Caption = 0

And A4.Caption = 1 And A5.Caption = 0

And A.Caption = 18 Then

B1.Caption = 0

A4.Caption = 0

B.Caption = 16

B5.Caption = 0

time = 2

hand.Top = 2280

hand.Left = 1800

Timer2.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 17 And A1.Caption = 0
And A2.Caption = 1 And A3.Caption = 0
And A4.Caption = 2 And A5.Caption = 0
And A.Caption = 19 Then
B1.Caption = 0
A4.Caption = 0
B.Caption = 20
hand.Top = 2280
hand.Left = 5640
Timer2.Enabled = False
MsgBox " Game Draw!!"
End If

If B.Caption = 17 And A1.Caption = 0
And A2.Caption = 1 And A3.Caption = 1
And A4.Caption = 0 And A5.Caption = 2
And A.Caption = 19 Then
Timer2.Enabled = False
MsgBox " You Wins!! "
End If

If B.Caption = 17 And A1.Caption = 2
And A2.Caption = 0 And A3.Caption = 0
And A4.Caption = 0 And A5.Caption = 0
And A.Caption = 20 Then
Timer2.Enabled = False
MsgBox " You Wins!! "
End If

If B.Caption = 17 And A1.Caption = 2
And A2.Caption = 0 And A3.Caption = 1
And A4.Caption = 0 And A5.Caption = 0
And A.Caption = 19 Then
Timer2.Enabled = False
MsgBox " You Wins!! "
End If

If B.Caption = 17 And A1.Caption = 0
And A2.Caption = 1 And A3.Caption = 0
And A4.Caption = 2 And A5.Caption = 1
And A.Caption = 19 Then
Timer2.Enabled = False
MsgBox " You Wins!! "
End If

If B.Caption = 17 And A1.Caption = 0 And A2.Caption = 1 And A3.Caption = 1 And A4.Caption = 0 And A5.Caption = 1 And A.Caption = 20 Then Timer2.Enabled = False MsgBox " You Wins!! " End If

If B.Caption = 17 And A1.Caption = 0
And A2.Caption = 1 And A3.Caption = 1
And A4.Caption = 0 And A5.Caption = 0
And A.Caption = 21 Then
Timer2.Enabled = False
MsgBox " You Wins!!"

End If

If B.Caption = 17 And A1.Caption = 2

And A2.Caption = 0 And A3.Caption = 1

And A4.Caption = 0 And A5.Caption = 1

And A.Caption = 19 Then

Timer2.Enabled = False

MsgBox " You Wins!! "

End If

If B.Caption = 14 And A1.Caption = 0
And A2.Caption = 0 And A3.Caption = 1
And A4.Caption = 1 And A5.Caption = 0
And A.Caption = 14 Then
B5.Caption = 0
B.Caption = 15
B4.Caption = 0
time = 1
hand.Top = 2280
hand.Left = 2760
Timer2.Enabled = False
Timer3.Enabled = True
End If

If B.Caption = 14 And A1.Caption = 0
And A2.Caption = 3 And A3.Caption = 0
And A4.Caption = 0 And A5.Caption = 0
And A.Caption = 17 Then
B2.Caption = 0
B3.Caption = 1
Timer2.Enabled = False
Timer3.Enabled = True
Label1.Visible = False
Label2.Visible = True
End If

If B.Caption = 14 And A1.Caption = 0
And A2.Caption = 0 And A3.Caption = 1
And A4.Caption = 1 And A5.Caption = 1
And A.Caption = 17 Then
B4.Caption = 0
time = 2
hand.Top = 2280
hand.Left = 2760
Timer2.Enabled = False
Timer3.Enabled = True
MsgBox " You Wins!! "

End If

If B.Caption = 14 And A1.Caption = 0

And A2.Caption = 0 And A3.Caption = 1

And A4.Caption = 3 And A5.Caption = 0

And A.Caption = 18 Then

B5.Caption = 0

B.Caption = 15

time = 1

B4.Caption = 0

hand. Top = 2280

hand.Left = 2760

Timer2.Enabled = False

Timer3.Enabled = True

MsgBox " You Wins!! "

End If

If B.Caption = 14 And A1.Caption = 0

And A2.Caption = 1 And A3.Caption = 0

And A4.Caption = 1 And A5.Caption = 0

And A.Caption = 15 Then

B2.Caption = 0

B3.Caption = 3

B3.Caption = 0

time = 2

hand. Top = 2280

hand.Left = 3720

Timer2.Enabled = False

Timer3.Enabled = True

End If

If B.Caption  $\equiv$  18 And A1.Caption  $\equiv$  0

And A2.Caption = 1 And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 1

And A Caption = 15 Then

B2.Caption = 0

B3.Caption = 1

Label1.Visible = False

Label2.Visible = True

End If

If B.Caption = 13 And A1.Caption = 2

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 2 And A5.Caption = 1

And A.Caption = 12 Then

B4.Caption = 0

Al Caption = 0

hand. Top = 2280

hand.Left = 2760

B.Caption = 16

Timer2.Enabled = False

Label1.Visible = False

Label2.Visible = True

End If

If B.Caption = 16 And A1.Caption = 2

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 2 And A5.Caption = 1

And A.Caption = 12 Then

B4.Caption = 0

A1.Caption = 0

hand.Top = 2280

hand Left = 2760

B.Caption = 16

Timer2.Enabled = False

Label1.Visible = False

Label2.Visible = True

End If

If B.Caption = 16 And A1.Caption = 0

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 0

And A.Caption = 16 Then

B2.Caption = 0

time = 5

hand.Top = 2280

hand, Left = 4680

Timer2.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 17 And Al.Caption = 0

And A2.Caption = 0 And A3.Caption = 1

And A4.Caption = 1 And A5.Caption = 0

And A.Caption = 16 Then

B5.Caption = 0

B.Caption = 18

B4.Caption = 0

time = 1

hand. Top = 2280

hand.Left = 2760

Timer2.Enabled = False

Timer3.Enabled = True

If B.Caption = 17 And Al.Caption = 1 And A2.Caption = 0 And A3.Caption = 0 And A4.Caption = 0 And A5.Caption = 0 And A.Caption - 19 Then B5.Caption = 0 B.Caption = 18 B4. Caption = 0time = 1 hand. Top = 2280

Timer2.Enabled = False Timer3.Enabled = True

hand Left = 2760

MsgBox "Game Draw!!"

End If

If B.Caption = 13 And Al.Caption = 0 And A2.Caption = 2 And A3.Caption = 0 And A4.Caption = 0 And A5.Caption = 2 And A.Caption = 13 Then B2.Caption = 0 time = 4 hand.Top = 2280hand.Left = 4680

Timer2.Enabled = False

Timer3.Enabled = True

End If

If B, Caption = 14 And A1. Caption = 1 And A2.Caption = 0 And A3.Caption = 1 And A4 Caption = 1 And A5 Caption = 2 And A.Caption = 13 Then B5.Caption = 0

B.Caption = 15 B4.Caption = 0 time = 1

hand.Top = 2280

hand.Left = 2760

Timer2.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 19 And A1.Caption = 0 And A2.Caption = 0 And A3.Caption = 0 And A4.Caption = 0 And A5.Caption = 0 And A.Caption = 17 Then B3.Caption = 0

time = 2hand. Top = 2280hand.Left = 3720 Timer2.Enabled = False Timer3.Enabled = True MsgBox "Computer Wins!!" End If

If B.Caption = 19 And A1.Caption = 0 And A2.Caption = 0 And A3.Caption = 1 And A4.Caption = 0 And A5.Caption = 0 And A.Caption = 16 Then B3.Caption = 0time = 2hand. Top = 2280hand.Left = 3720 Timer2.Enabled = False Timer3.Enabled = True MsgBox "Computer Wins!!"

End If If B.Caption = 19 And Al.Caption = 0 And A2.Caption = 0 And A3.Caption = 1

And A4.Caption = 1 And A5.Caption = 0 And A.Caption = 14 Then B2.Caption = 0 B3.Caption = 3

time = 2

hand. Top = 2280

hand.Left = 3720

B3.Caption = 0

Timer2.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 14 And A1.Caption = 0 And A2 Caption = 3 And A3 Caption = 0 And A4. Caption = 0 And A5. Caption = 0And A.Caption = 17 Then B3.Caption = 0 B4.Caption = 4 time = 3 hand.Top = 2280 hand.Left = 2760

B4.Caption = 0 Timer2.Enabled = False Timer3.Enabled = True

End If

If B.Caption = 17 And Al.Caption = 0

And A2.Caption = 1 And A3.Caption = 1

And A4.Caption = 1 And A5.Caption = 0

And A.Caption = 17 Then

B5.Caption = 0

time = 2

hand. Top = 2280

hand Left = 1800

B5.Caption = 0

Timer2 Enabled = False

Timer3.Enabled = True

MsgBox " Game Draw!! "

End If

If B.Caption = 17 And A1.Caption = 0

And A2 Caption = 1 And A3 Caption = 0

And A4.Caption = 0 And A5.Caption = 1

And A.Caption = 18 Then

B5.Caption = 0

time = 2

hand. Top = 2280

hand.Left = 1800

B5.Caption = 0

Timer2.Enabled = False

Timer3 Enabled = True

MsgBox " You Win!! "

End If

If B.Caption = 17 And Al.Caption = 0

And A2.Caption = 1 And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 0

And A.Caption = 19 Then

B5.Caption = 0

time = 2

hand.Top = 2280

hand.Left = 1800

B5.Caption =  $\theta$ 

Timer2.Enabled = False

Timer3.Enabled = True

MsgBox " You Win !!."

End If

If B.Caption = 13 And A1.Caption = 2

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 2

And A.Caption = 13 Then

B1.Caption = 0

time = 3

hand.Top = 2280

hand.Left = 5640

B5.Caption = 0

Timer2.Enabled = False

Timer3.Enabled = True

End If

If B. Caption = 16 And A1. Caption = 0

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 0

And A.Caption = 14 Then

B4.Caption = 0

time = 1

hand. Top = 2280

hand.Left = 2760

B4.Caption = 0

Timer2.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 19 And A1.Caption = 1

And A2 Caption = 0 And A3 Caption = 0

And A4.Caption = 0 And A5.Caption = 0

And A.Caption = 17 Then

B5.Caption = 0

B.Caption = 20

hand. Top = 2280

hand.Left = 2760

Timer2.Enabled = False

MsgBox " Computer Wins !! "

End If

If B.Caption = 13 And A1.Caption = 0

And A2.Caption = 2 And A3.Caption = 1

And A4.Caption = 0 And A5.Caption = 0

And A.Caption = 18 Then

B5.Caption = 0

B.Caption = 14

hand. Top = 2280

hand.Left = 2760

Timer2.Enabled = False

MsgBox "You Win!!"

If B.Caption = 13 And A1.Caption = 0
And A2.Caption = 2 And A3.Caption = 0
And A4.Caption = 2 And A5.Caption = 0
And A.Caption = 13 Then
B2.Caption = 0
time = 4
hand.Top = 2280
hand.Left = 4680
Timer2.Enabled = False
Timer3.Enabled = True
End If

If B.Caption = 13 And A1.Caption = 2
And A2.Caption = 0 And A3.Caption = 0
And A4.Caption = 2 And A5.Caption = 0
And A.Caption = 13 Then
B4.Caption = 0
A1.Caption = 0
B.Caption = 16
Timer2.Enabled = False
Label1.Visible = False
Label2.Visible = True
End If

If B.Caption = 13 And A1.Caption = 0 And A2.Caption = 2 And A3.Caption = 0 And A4.Caption = 0 And A5.Caption = 1 And A.Caption = 14 Then B2.Caption = 0 time = 4 hand.Top = 2280 hand.Left = 4680 Timer2.Enabled = False Timer3.Enabled = True End If

If B.Caption = 14 And A1.Caption = 0
And A2.Caption = 0 And A3.Caption = 1
And A4.Caption = 1 And A5.Caption = 0
And A.Caption = 18 Then
B4.Caption = 0
time = 2
hand.Top = 2280
hand.Left = 2760
Timer2.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 13 And A1.Caption = 0

And A2.Caption = 2 And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 0

And A.Caption = 15 Then

B2.Caption = 0

time = 4

hand.Top = 2280

hand.Left = 4680

Timer2.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 14 And A1.Caption = 0
And A2.Caption = 0 And A3.Caption = 1
And A4.Caption = 1 And A5.Caption = 0
And A.Caption = 20 Then
B5.Caption = 0
B.Caption = 15
Timer2.Enabled = False
MsgBox " You Win !! "
End If

If B.Caption = 13 And A1.Caption = 1
And A2.Caption = 3 And A3.Caption = 0
And A4.Caption = 0 And A5.Caption = 5
And A.Caption = 12 Then
B3.Caption = 0
A2.Caption = 0
hand.Top = 2280
hand.Left = 4680
B.Caption = 17
Timer2.Enabled = False
Label1.Visible = False
Label2.Visible = True
End If

If B.Caption = 17 And A1.Caption = 0 And A2.Caption = 1 And A3.Caption = 0 And A4.Caption = 0 And A5.Caption = 5 And A.Caption = 12 Then B1.Caption = 0 time = 2 hand.Top = 2280 hand.Left = 5640 Timer2.Enabled = False Timer3.Enabled = True
End If

If B.Caption = 19 And A1.Caption = 0

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 0

And A.Caption = 13 Then

B2.Caption = 0

time = 1

hand. Top = 2280

hand.Left = 4680

Timer2.Enabled = False

Timer3.Enabled = True

MsgBox "Computer Wins!!"

End If

If B.Caption = 17 And A1.Caption = 1

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 0

And A.Caption = 13 Then

B3.Caption = 0

B4.Caption = 2

time = 1

hand.Top = 2280

hand Left = 2760

B4.Caption = 0

Timer2.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 18 And A1.Caption = 0

And A2.Caption = 1 And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 0

And A.Caption = 13 Then

B3.Caption = 0

A2.Caption = 0

B.Caption = 20

hand, Top = 2280

hand.Left = 3720

Timer2.Enabled = False

Label1.Visible = False

Label2.Visible = True

MsgBox "Computer Wins!!"

End If

If B.Caption = 13 And A1.Caption = 1 And A2.Caption = 3 And A3.Caption = 1 And A4.Caption = 0 And A5.Caption = 0

And A.Caption = 8 Then

B4.Caption = 0

B5.Caption = 3

time = 2

hand Top = 2280

hand.Left = 1800

B5.Caption = 0

Timer2.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 13 And A1.Caption = 0

And A2, Caption = 2 And A3. Caption = 7

And A4.Caption = 0 And A5.Caption = 0

And A.Caption = 9 Then

B4.Caption = 0

time = 4

hand.Top = 2280

hand.Left = 2760

Timer2 Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 13 And A1.Caption = 1

And A2.Caption = 2 And A3.Caption = 0

And A4.Caption = 7 And A5.Caption = 1

And A.Caption = 3 Then

B5.Caption = 0

time = 7

hand.Top = 2280

hand.Left = 1800

Timer2.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 13 And A1.Caption = 0

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 1 And A5.Caption = 2

And A.Caption = 18 Then

B2.Caption = 0

time = 3

hand.Top = 2280

hand Left = 4680

Timer2.Enabled = False

Timer3.Enabled = True

If B.Caption = 13 And A1.Caption = 0

And A2.Caption = 1 And A3.Caption = 0

And A4.Caption = 1 And A5.Caption = 2

And A.Caption = 6 Then

B3.Caption = 0

B4.Caption = 0

time = 1

hand. Top = 2280

hand.Left = 2760

Timer2.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 13 And A1.Caption = 0

And A2.Caption = 1 And A3.Caption = 0

And A4 Caption = 1 And A5 Caption = 1

And A.Caption = 7 Then

B5.Caption = 0

time = 9

hand.Top = 2280

hand.Left = 1800

Timer2.Enabled = False

Timer3.Enabled = True

End If

End Sub

Sub tikamB()

If hand.Left = 2760 And B5.Caption = 1

And A1.Caption <> 0 Then

last = A1.Caption + 1

A1. Caption = 0

B5.Caption = 0

B.Caption = B.Caption + last

Timer3.Enabled = False

Label1.Visible = False

Label2.Visible = True

If B.Caption > 20 Then

MsgBox "Computer Wins!!"

End If

ElseIf hand.Left = 3720 And B4.Caption = 1

And A2.Caption <> 0 Then

last = A2.Caption + 1

A2.Caption = 0

B4.Caption = 0

B.Caption = B.Caption + last

Timer3.Enabled = False

Label 1. Visible = False

Label2.Visible = True

If B.Caption > 20 Then

MsgBox "Computer Wins!!"

End If

Elself hand Left = 4680 And B3. Caption = 1

And A3.Caption © 0 Then

last = A3.Caption + 1

A3.Caption = 0

B3.Caption = 0

B.Caption = B.Caption + last

Timer3.Enabled = False

Label1.Visible = False

Label2.Visible = True

If B.Caption > 20 Then

MsgBox "Computer Wins!!"

End If

ElseIf hand Left = 5640 And B2.Caption = 1

And A4.Caption <> 0 Then

last = A4.Caption + 1

A4.Caption = 0

B2.Caption = 0

B.Caption = B.Caption + last

Timer3.Enabled = False

Label1.Visible = False

Label2.Visible = True

If B.Caption > 20 Then

MsgBox "Computer Wins!!"

End If

ElseIf hand.Left = 6600 And B1.Caption = 1

And A5 Caption 🗢 0 Then

last = A5.Caption + 1

 $\Lambda$ 5.Caption = 0

B1.Caption = 0

B.Caption = B.Caption + last

Timer3.Enabled = False

Label1.Visible = False

Label2.Visible = True

If B.Caption > 20 Then

MsgBox "Computer Wins!!"

End If

End If

End Sub

Private Sub Timer3\_Timer()

If B.Caption > 20 Then

MsgBox " Computer Wins !! "

End If

If hand.Left = 6600 And hand.Top = 2280 Then
B1.Caption = B1.Caption + 1
End If

If hand.Left = 5640 And hand.Top = 2280 Then
B2.Caption = B2.Caption + 1
End If

If hand.I.eft = 4680 And hand.Top = 2280 Then
B3.Caption = B3.Caption + 1
End If

If hand.Left = 3720 And hand.Top = 2280 Then
B4.Caption = B4.Caption + 1
End If

If hand.Left = 2760 And hand.Top = 2280 Then

B5.Caption = B5.Caption + 1

End If

If hand.Left = 2760 And hand.Top = 3360 Then
A1.Caption = A1.Caption + 1
End If

If hand.Left = 3720 And hand.Top = 3360 Then
A2.Caption = A2.Caption + 1
End If

If hand.Left = 4680 And hand.Top = 3360 Then
A3.Caption = A3.Caption + 1
End If
If hand.Left = 5640 And hand.Top = 3360 Then
A4.Caption = A4.Caption + 1
End If

If hand.Left = 6600 And hand.Top = 3360 Then A5.Caption =  $\Lambda$ 5.Caption + 1 End If

If hand.Left = 1800 Then

B.Caption = B.Caption + 1

End If

time = time - 1

If hand.Left = 1800 And hand.Top = 2280 Then

hand. Top = 2280 + 1080

'hand.Left = 1800

End If

If hand.Left = 6600 And hand.Top = 3360 Then hand.Top = 3360 - 1080

hand.Left = 7560

End If

If hand Left = 6600 Then

hand.Top = 3360 - 1080

hand.Left = 6600

End If

If hand. Top = 2280 Then

hand.Left = hand.Left - 960

End If

If hand. Top = 3360 Then

hand.Left = hand.Left + 960

End If

tikamB1 = B1.Caption + 1

tikamB2 = B2.Caption + 1

tikamB3 = B3.Caption + 1

tikamB4 = B4.Caption + 1

tikamB5 = B5.Caption + 1

If time = 0 Then

If B.Caption > 20 Then

MsgBox "Computer Wins!!"

End If

Timer3.Enabled = False

If hand.Top = 3360 And hand.Left = 6600 Then

A5.Caption = A5.Caption + 1

ElseIf hand Top = 3360 And hand Left = 5640 Then

A4.Caption = A4.Caption + 1

ElseIf hand Top = 3360 And hand Left = 4680 Then A3.Caption = A3.Caption + 1

ElseIf hand.Top = 3360 And hand.Left = 3720 Then A2.Caption = A2.Caption + 1

Elself hand Top = 3360 And hand Left = 2760 Then A1.Caption = A1.Caption + 1

Elself hand Left = 6600 Then

B1.Caption = B1.Caption + 1

If tikamB1 = 1 Then

tikamB

End If

Elself hand Left = 5640 Then

B2.Caption = B2.Caption + 1

If tikamB2 = 1 Then

tikamB

End If

ElseIf hand Left = 4680 Then

B3.Caption = B3.Caption + 1

If tikamB3 = 1 Then

tikamB

End If

Elself hand.Left = 3720 Then

B4.Caption = B4.Caption + 1

If tikamB4 = 1 Then

tikamB

End If

Elself hand Left = 2760 Then

B5.Caption = B5.Caption + 1

If tikamB5 = 1 Then

tikamB

End If

ElseIf hand.Left = 1800 Then

B.Caption = B.Caption + 1

End If

End If

If hand.Top = 3360 And hand.Left = 6600

And time = 0 And A5.Caption > 0 Then

If A5.Caption = 1 Then

Timer3.Enabled = False

Label1.Visible = False

Label2.Visible = True

Else

time = A5.Caption

A5.Caption = -1

Timer3.Enabled = True

End If

End If

If hand. Top = 3360 And hand. Left = 5640

And time = 0 And A4.Caption <> 0 Then

If A4.Caption = 1 Then

Timer3.Enabled = False

Label1.Visible = False

Label2.Visible = True

Else

time = A4.Caption

A4.Caption = -1

Timer3.Enabled = True

End If

End If

If hand, Top = 3360 And hand. Left = 4680

And time = 0 And A3.Caption <> 0 Then

If A3. Caption = 1 Then

Timer3.Enabled = False

Label1.Visible = False

Label2.Visible = True

Else

time = A3.Caption

A3.Caption = -1

Timer3.Enabled = True

End If

End If

If hand Top = 3360 And hand Laft = 3720

And time = 0 And A2.Caption ⇔ 0 Then

If A2.Caption = 1 Then

Timer3.Enabled = False

Labell.Visible = False

Label2.Visible = True

Else

time = A2.Caption

A2.Caption = -1

Timer3.Enabled = True

End If

If hand.Top = 3360 And hand.Left = 2760 And time = 0 And A1.Caption  $\Leftrightarrow$  0 Then

If A1.Caption = 1 Then

Timer3.Enabled = False

Labell.Visible = False

Label2.Visible = True

Else

time = A1.Caption

A1.Caption = -I

Timer3.Enabled = True

End If

End If

If hand. Top = 2280 And hand. Left = 2760

And time = 0 And B5.Caption <> 0 Then

If B5.Caption = 1 Then

Timer3.Enabled = False

Label1.Visible = False

Label2.Visible = True

Eise

time = B5.Caption

B5.Caption = -1

Timer3.Enabled = True

End If

End If

If hand. Top = 2280 And hand. Left = 3720

And time = 0 And B4.Caption  $\Leftrightarrow 0$  Then

If B4.Caption = 1 Then

Timer3.Enabled = False

Label1.Visible = False

Label2.Visible = True

Else

time = B4.Caption

B4.Caption = -1

Timer3.Enabled = True

End If

End If

If hand.Top = 2280 And hand.Left = 4680

And time = 0 And B3.Caption  $\bigcirc$  0 Then

If B3.Caption = 1 Then

Timer3.Enabled = False

Label 1 Visible = False

Label2.Visible = True

Else

time = B3.Caption

B3.Caption = -1

Timer3.Enabled = True

End If

End If

If hand. Top = 2280 And hand. Left = 5640

And time = 0 And B2.Caption > 0 Then

If B2.Caption = 1 Then

Timer3.Enabled = False

Label 1 Visible = False

Label2.Visible = True

Flee

time = B2.Caption

B2.Caption = -1

Timer3.Enabled = True

End If

End If

If hand. Top = 2280 And hand. Left = 6600

And time = 0 And B1.Caption <> 0 Then

If B1.Caption = 1 Then

Timer3.Enabled = False

Label I. Visible = False

Label2.Visible = True

Else

time = B1.Caption

B1.Caption = -1

Timer3.Enabled = True

End If

End If

if time = 0 And hand.Left = 1800 Then

Timer4.Enabled = True

Timer3.Enabled = False

End If

End Sub

Private Sub Timer4\_Timer()

If B.Caption > 20 Then

MsgBox "Computer Wins!!"

Timer4.Enabled = False

End If

If A1.Caption = 3 And A2.Caption = 8

And A3.Caption = 0 And A4.Caption = 2

And A5.Caption = I Then

time = 7

B3.Caption = 0

B5.Caption = 0

hand.Top = 2280

hand.Left = 3720

Timer3.Enabled = True

Timer4.Enabled = False

End If

If A1.Caption = 0 And A2.Caption = 1

And A3.Caption = 3 And A4.Caption = 5

And A5.Caption = 2 And B5.Caption = 6

And B4.Caption = 0 And B3.Caption = 3 Then

time = 2

B3.Caption = 0

B5.Caption = 0

hand.Top = 2280

hand.Left = 3720

Timer3.Enabled = True

Timer4.Enabled = False

End If

If B.Caption = 8 And Al. Caption = 0

And A2.Caption = 1 And A3.Caption = 3

And A4.Caption = 5 And A5.Caption = 2 Then

time = 10

B1.Caption = 0

B5.Caption = 0

hand Top = 2280

hand,Left = 5640

Timer3.Enabled = True

Timer4.Enabled = False

End If

If A1.Caption = 0 And A2.Caption = 0

And A3.Caption = 5 And A4.Caption = 7

And A5.Caption = 1 Then

time = 1

B3.Caption = 0

B2.Caption = 0

hand. Top = 2280

hand.Left = 3720

Timer3.Enabled = True

Timer4.Enabled = False

End If

If B.Caption = 16 And Al.Caption = 1

And A2.Caption = 1 And A3.Caption = 6

And A4.Caption = 8 And A5.Caption = 2 Then

B5.Caption = 0

B5.Caption = 0

hand Top = 2280

hand Left = 1800

B.Caption = 17

B2.Caption = 0

B3.Caption = 0

time = 1

hand. Top = 2280

hand, Left = 3720

Timer3.Enabled = True

Timer4.Enabled = False

End If

If B.Caption = 17 And A1.Caption = 0

And A2.Caption = 1 And A3.Caption = 6

And A4.Caption = 8 And A5.Caption = 2 Then

time = 1

B2.Caption = 0

B3.Caption = 0

hand.Top = 2280

hand.Left = 3720

Timer3.Enabled = True

Timer4.Enabled = False

End If

If A1.Caption = 1 And A2.Caption = 0

And A3.Caption = 0 And A4.Caption = 0

And A5.Caption = 4 Then

time = 2

B1.Caption = 0

B5.Caption = 0

hand Top = 2280

handLeft = 1800

Timer3.Enabled = True

Timer2.Enabled = False

End If

If A1.Caption = 0 And A2.Caption = 1

And A3.Caption = 6 And A4.Caption = 0

And A5.Caption = 3 Then

B5.Caption = 0

hand.Top = 2280

hand.Left = 1800

B.Caption = 21

MsgBox "Computer Wins!! "

Timer4.Enabled = False

End If

If A1.Caption = 0 And A2.Caption = 1

And A3.Caption = 0 And A4.Caption = 9

And A5.Caption = 1 Then

time = 1

B5.Caption = 0

hand. Top = 2280

hand.Left = 1800

Timer3.Enabled = True

Timer4.Enabled = False

End If

If B.Caption = 15 And Al.Caption = 0

And A2. Caption = 0 And A3. Caption = 0

And A4.Caption = 1 And A5.Caption = 1 Then

B5.Caption = 0

hand. Top = 2280

hand.Left = 1800

B.Caption = 16

B3.Caption = 0

time = 2

hand.Top = 2280

hand Left = 3720

Timer3.Enabled = True

Timer4.Enabled = False

End If

If B.Caption = 17 And A1.Caption = 0

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 1 And A5.Caption = 1 Then

B5.Caption = 0

hand.Top = 2280

handLeft = 1800

B.Caption = 18

B4.Caption = 0

hand.Top = 2280

hand.Left = 2760

Timer4.Enabled = False

B5.Caption = 1

Label 1. Visible = False

Label2.Visible = True

End If

If B.Caption = 14 And A1.Caption = 0

And A2.Caption = 0 And A3.Caption = 1

And A4.Caption = 0 And A5.Caption = 2 Then

B5.Caption = 0

hand Top = 2280

hand.Left = 1800

B.Caption = 15

B3.Caption = 0

time = 2

hand Top = 2280

hand.Left = 3720

Timer3.Enabled = True

Timer4.Enabled = False

End If

If B.Caption = 16 And A1.Caption = 0

And A2.Caption = 0 And A3.Caption = 1

And A4.Caption = 0 And A5.Caption = 2 Then

B5.Caption = 0

hand Top = 2280

hand.Left = 1800

B Caption = 17

B2.Caption = 0

time = 5

hand Top = 2280

hand.Left = 4680

Timer3.Enabled = True

Timer4.Enabled = False

If B.Caption = 20 And Al.Caption = 0

And A2.Caption = 0 And A3.Caption = 2

And A4.Caption = 1 And A5.Caption = 2 Then

B5.Caption = 0

hand. Top = 2280

hand.Left = 1800

B.Caption = 21

MsgBox "Computer Wins!! "

Timer4.Enabled = False

End If

If B.Caption = 20 And A1 Caption = 1

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 1 And A5.Caption = 0 Then

B5.Caption = 0

hand Top = 2280

hand.Left = 1800

B.Caption = 21

MsgBox "Computer Wins!! "

Timer4.Enabled = Faise

End If

If B.Caption = 20 And A1.Caption = 1

And A2.Caption = 1 And A3.Caption = 0

And A4.Caption = 1 And A5.Caption = 2 Then

B5,Caption = 0

hand.Top = 2280

hand.Left = 1800

B.Caption = 21

MsgBox "Computer Wins!!"

Timer4.Enabled = False

End If

If B.Caption = 20 And Al.Caption = 1

And A2.Caption = 1 And A3.Caption = 1

And A4.Caption = 0 And A5.Caption = 0 Then

B5.Caption = 0

hand.Top = 2280

hand.Left = 1800

B.Caption = 21

MsgBox "Computer Wins!! "

Timer4.Enabled = False

End If

If B.Caption = 16 And A1.Caption = 0

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 0 Then

B5.Caption = 0

hand. Top = 2280

hand Left = 1800

B.Caption = 17

B2.Caption = 0

time = 5

hand.Top = 2280

hand.Left = 4680

Timer4.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 20 And Al.Caption = 0

And A2.Caption = 0 And A3.Caption = 1

And A4.Caption = 1 And A5.Caption = 0 Then

B5.Caption = 0

hand.Top = 2280

hand.1.eft = 1800

B.Caption = 21

MsgBox "Computer Wins!!"

Timer4.Enabled = False

End If

If B.Caption = 15 And Al.Caption = 0

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 2 Then

B5.Caption = 0

B.Caption = 16

B3.Caption = 0

time = 2

hand.Top = 2280

hand.Left = 3720

Timer3.Enabled = True

Timer2.Enabled = False

End If

If B.Caption = 17 And Al.Caption = 0

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 2 Then

B5.Caption = 0

B.Caption = 18

B4.Caption = 0

B5.Caption = 1

hand.Top = 2280

hand.Left = 2760 Timer2.Enabled = False Label1.Visible = False Label2.Visible = True

End If

If B.Caption = 15 And A1.Caption = 0

And A2.Caption = 0 And A3.Caption = 1

And A4.Caption = 0 And A5.Caption = 0

And A.Caption = 18 Then

B5.Caption = 0

B.Caption = 16

B3.Caption = 0

time = 2

hand. Top = 2280

hand.Left = 3720

Timer3.Enabled = True

Timer2.Enabled = False

End If

If B.Caption = 17 And A1.Caption = 0

And A2.Caption = 0 And A3.Caption = 1

And A4.Caption = 0 And A5.Caption = 0

And A.Caption = 18 Then

B2.Caption = 0

A3.Caption = 0

B.Caption = 19

hand.Top = 2280

hand.Left = 4680

Timer4.Enabled = False

MsgBox "Computer Wins!! "

End If

If B.Caption = 15 And A1.Caption = 0

And A2.Caption = 2 And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 0

And A.Caption = 16 Then

B5.Caption = 0

B.Caption = 16

B2.Caption = 0

time = 5

hand.Top = 2280

hand.Left = 4680

Timer4.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 14 And AI.Caption = 0

And A2.Caption = 0 And A3.Caption = 1

And A4.Caption = 0 And A5.Caption = 1

And A.Caption = 14 Then

B5.Caption = 0

B.Caption = 15

time = 2

B3.Caption = 0

hand.Top = 2280

hand.Left = 3720

Timer4.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 16 And A1.Caption = 0

And A2.Caption = 0 And A3.Caption = 1

And A4.Caption = 0 And A5.Caption = 1

And A.Caption = 14 Then

B5.Caption = 0

B.Caption = 17

time = 5

B2.Caption = 0

hand Top = 2280

hand.Left = 4680

Timer4.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 20 And A1.Caption = 1

And A2.Caption = 1 And A3.Caption = 0

And A4.Caption = 1 And A5.Caption = 1

And A.Caption = 14 Then

B5.Caption = 0

B.Caption = 21

hand.Top = 2280

hand.Left = 2760

Timer4.Enabled = False

MsgBox "Computer Wins!!"

End If

If B.Caption = 15 And Al.Caption = 0

And A2.Caption = 0 And A3.Caption = 1

And A4.Caption = 3 And A5.Caption = 0

And A.Caption = 16 Then

B5.Caption = 0

B.Caption = 16

B4.Caption = 0

time = 3

hand Top = 2280

hand.Left = 2760

Timer4.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 16 And A1.Caption = 0

And A2.Caption = 0 And A3.Caption = 1

And A4.Caption = 1 And A5.Caption = 0

And A.Caption = 14 Then

B5.Caption = 0

B.Caption = 17

B1.Caption = 0

time = 4

hand.Top = 2280

hand.Left = 5640

Timer4.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 18 And Al.Caption = 0

And A2.Caption = 0 And A3.Caption = 1

And A4.Caption = 1 And A5.Caption = 0

And A.Caption = 14 Then

 $\mathbf{B5.Caption} = 0$ 

B.Caption = 19

B2.Caption = 0

time = 1

hand Top = 2280

hand.Left = 4680

Timer4.Enabled - False

Timer3.Enabled = True

End If

If B.Caption = 15 And A1.Caption = 0

And A2.Caption = I And A3.Caption = 0

And A4.Caption = 1 And A5.Caption = 0

And A.Caption = 15 Then

B4.Caption = 0

time = 3

hand.Top = 2280

hand.Left = 2760

Timer4.Enabled = False

Timer3.Enabled - True

End If

If B.Caption = 19 And Al.Caption = 0

And A2. Caption = 0 And A3. Caption = 1

And A4.Caption = 1 And A5.Caption = 0

And A.Caption = 16 Then

B5.Caption = 0

B.Caption = 20

time = 1

B3.Caption = 0

hand.Top = 2280

hand.Left = 3720

Timer4.Enabled = False

Timer3.Enabled = True

MsgBox "Computer Wins!! "

End If

If B.Caption = 16 And A1.Caption = 1

And A2.Caption = 0 And A3.Caption = 1

And A4.Caption = 1 And A5.Caption = 2

And A.Caption = 13 Then

B5.Caption = 0

B.Caption = 17

B1.Caption = 0

time = 3

hand. Top = 2280

hand Left = 5640

Timer4.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 17 And A1.Caption = 0

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 0

And A.Caption = 14 Then

B5.Caption = 0

B.Caption = 18

B2.Caption = 0

time = 5

hand. Top = 2280

hand.Left = 4680

B2.Caption = 0

Timer4.Enabled = False

Timer3.Enabled = True

If B.Caption = 18 And A1.Caption = I

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 0 And A5.Caption = 0

And A.Caption = 13 Then

B2.Caption = 0

B3.Caption = 1

hand. Top = 2280

hand Left = 4680

Timer4.Enabled = False

Labell.Visible = False

End If

If B.Caption = 15 And A1.Caption = 2

And A2.Caption = 0 And A3.Caption = 2

And A4.Caption = 1 And A5.Caption = 1

And A.Caption = 8 Then

B5.Caption = 0

B.Caption = 16

time = 2

----

B3.Caption = 0

hand.Top = 2280

hand Left = 3720

Timer4.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 17 And A1.Caption = 2

And A2.Caption = 0 And A3.Caption = 2

And A4.Caption = 1 And A5.Caption = 1

And A.Caption = 8 Then

B5.Caption = 0

B.Caption = 18

time = 1

B4.Caption = 0

hand Top = 2280

hand.Left = 2760

Timer4.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 19 And A1.Caption = 2

And A2.Caption = 0 And A3.Caption = 2

And A4.Caption = 1 And A5.Caption = 1

And A.Caption = 8 Then

B5.Caption = 0

B.Caption = 20

hand.Top = 2280

hand.Left = 3720

Timer4.Enabled = False

Label I.Enabled = False

MsgBox "Computer Wins!! "

End If

If B.Caption = 15 And A1.Caption = 1

And A2.Caption = 3 And A3.Caption = 0

And A4.Caption = 1 And A5.Caption = 1

And A.Caption = 9 Then

B2.Caption = 0

B3.Caption = 0

time = 2

hand.Top = 2280

hand. Left = 3720

Timer4.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 16 And A1. Caption = 1

And A2.Caption = 3 And A3.Caption = 0

And A4.Caption = 1 And A5.Caption = 1

And A.Caption = 9 Then

B4.Caption = 0

time = 1

hand.Top = 2280

hand.Left = 2760

Timer4.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 17 And A1.Caption = 1

And A2.Caption = 3 And A3.Caption = 0

And A4, Caption = 1 And A5. Caption = 1

And A.Caption = 9 Then

B1.Caption = 0

time = 3

hand. Top = 2280

hand.Left = 5640

Timer4.Enabled = False

Timer3.Enabled = True

If B.Caption = 17 And A1.Caption = 1

And A2,Caption = 0 And A3,Caption = 3

And A4, Caption = 1 And A5. Caption = 4

And A.Caption = 3 Then

B3.Caption = 0

time = 3

hand.Top = 2280

hand.Left = 3720

Timer4.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 14 And A1.Caption = 0

And A2.Caption = 0 And A3.Caption = 0

And A4.Caption = 1 And A5.Caption = 2

And A.Caption = 18 Then

B1.Caption = 0

A4.Caption = 0

B.Caption = 16

hand.Top = 2280

hand.Left = 5640

Timer4.Enabled = False

Label I. Visible = False

Label2, Visible = True

End If

If B.Caption = 14 And A1.Caption = 0

And A2.Caption = 1 And A3.Caption = 0

And A4, Caption = 1 And A5. Caption = 2

And A.Caption = 6 Then

B2.Caption = 0

time = 3

hand. Top = 2280

hand Left = 4680

Timer4.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 15 And A1. Caption = 0

And A2.Caption = 1 And A3.Caption = 0

And A4.Caption = 1 And A5.Caption = 2

And A.Caption = 6 Then

B5.Caption = 0

time = 11

hand. Top = 2280

hand Left = 1800

Timer4.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 17 And A1.Caption = 1

And A2.Caption = 2 And A3.Caption = 1

And A4.Caption = 2 And A5.Caption = 3

And A.Caption = 6 Then

B5.Caption = 0

B.Caption = 18

time = 1

hand.Top = 2280

hand.Left = 2760

B4.Caption = 0

Timer4.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 19 And A1.Caption = 1

And A2.Caption = 2 And A3.Caption = 1

And A4.Caption = 2 And A5.Caption = 3

And A.Caption = 6 Then

B5.Caption = 0

B.Caption = 20

time = 1

hand. Top = 2280

hand.Left = 3720

B3.Caption = 0

Timer4.Enabled = False

Timer3.Enabled = True

End If

If B.Caption = 15 And A1.Caption = 1

And A2.Caption = 2 And A3.Caption = 1

And A4.Caption = 2 And A5.Caption = 2

And A.Caption = 7 Then

B5.Caption = 0

B.Caption = 16

time = 1

hand.Top = 2280

hand.Left = 5640

BI.Caption = 0

Timer4.Enabled = False

Timer3.Enabled = True

If B.Caption = 17 And A1.Caption = 1

And A2.Caption = 2 And A3.Caption = 1

And A4.Caption = 2 And A5.Caption = 2

And A, Caption = 7 Then

B5.Caption = 0

B.Caption = 18

hand.Top = 2280

hand.Left = 3720

B3.Caption = 0

B4.Caption = 0

A2.Caption = 0

Timer4.Enabled = False

B.Caption = 21

MsgBox "Computer Wins!!"

End If

End Sub