

Interactive Ipoh Guide For UTP Students

by

Suhana Binti Zam

1772

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

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University Teknologi PETRONAS

Bandar Seri Iskandar

31750 Tronoh

Perak Darul Ridzuan

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CERTIFICATION OF APPROVAL

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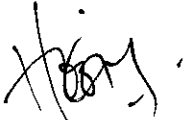
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Suhana Binti Zam

1772

A project dissertation submitted to the
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in partial fulfillment of the requirement for the
BACHELOR OF TECHNOLOGY (Hons)
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Approved by,



(Mrs. Michelle Beh Hooi Ching)

Universiti Teknologi PETRONAS

Bandar Seri Iskandar

31750 Tronoh

Perak Darul Ridzuan

JUNE 2004

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 contained herein have not been undertaken or done by unspecified sources or persons.



(SUHANA BINTI ZAM)

ABSTRACT

This report is a progress report for project 'An Interactive Map of Ipoh City As A Guide To UTP Students' by the author. The goal of the project is to develop a working interactive GIS application of Ipoh city for the UTP students. This is responding to familiar problems face by most of the students in finding their way in the city. With the findings of facts and statistics regarding the related fields, the application is believe to have strong and big potential to be a very useful application. The project will be developed using several methodologies in term of data and information gathering, application building and project management. This application also have bright opportunities for future expansion and added commercial value as time goes by.

ACKNOWLEDGEMENT

Though I would like to take credit for the concepts and ideas presented in the system, I am not alone. I would like to thank the countless number of people who have helped get this Final Year Project (FYP) into a complete success.

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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND OF STUDY

Converting real map to a virtual map in terms of interactive applications is not a new area of research in today technology driven world. Having a virtual map in one's personal technological devices such as personal computer and handheld devices had made life even easier. Traveling has never been more easy with it. With the targeted group of user identified by the author, she hopes to provide one of the useful tools to make traveling easier and faster. The author wishes to provide an application that could help the targeted user organized their trip to respected places. The author also searches on the different way of presenting geographical information to the users so that everybody can use it even though he or she has little knowledge about reading maps and it's features. Besides, the author has conducted research on how to present as much information related to traveling to a particular place without burdening the user with complicated procedures to obtain the information and data.

1.2 PROBLEM STATEMENT

Ipoh is the main city that has all facilities such as shopping complexes, banks, State's Government offices, express bus terminal, hotels, hospitals and others. It becomes the centre of attention of UTP students to cater their needs and wants. Even though Batu Gajah town is nearer compared to Ipoh, but it doesn't really have enough or complete facilities to offer. Since most of the UTP students are not the local citizens of Ipoh, it has been a difficult task for them to find their way in Ipoh. Most of them do not know the route from one place to another in the city. This been a problem not only to the new students but also the seniors. Responding to this matter, the author had decided to propose an interactive electronic GIS map called *Interactive Ipoh Guide For UTP Students* as the FYP title. With this interactive map, the author hope that it can help the

students to plan their way in Ipoh and settle down the problem of getting from one point to another in Ipoh.

Currently, the targeted users are having difficulties to find their way to Ipoh because of lack of information available. With the very few knowledge of the new city, most students will be having these type of problems whereby they will not be able to reach their respective places easily and through the right route. This can cause of difficulties for the students to complete their task that required them to go to the particular place in Ipoh.

By using this interactive map application, students can easily check his or her data and information regarding the places they want to go. The students will receive their information in time. This will reduce unproductive time and student could reach the place they want to go easier and faster.

1.3 OBJECTIVE AND SCOPE OF STUDY

The objective of this project is to provide interactive electronic GIS map of Ipoh City to UTP students. It helps students to learn more about roads and routes in Ipoh city. Besides, it also offers students with various options of getting from one place to another in Ipoh and help students plan their trip before going out to Ipoh in terms of time and cost needed. It also helps students to know the transportation options in Ipoh.

The project will concentrate on developing an interactive electronic GIS map of Ipoh city. It will highlight the main places that usually are the centre of attention of UTP students such as shopping complexes, bus terminal, banks, dining places and others. This project will also give out options about transportation, how much it will cost and approximate time needed to go from one place to another in Ipoh. This will include bus's fare and number, taxi's fare and other transportation option. This application will also generate every route options from point A to point B and highlight the best route to be used.

In this project, the author will concentrate on the use of interactive elements in computerized mapping. It will be more to offer the users with easy-to-read map compare to very detail map of the city. Other field that will be the main scope of this project is the ability of this interactive map in helping the users in making decision.

CHAPTER 2

THEORY

2.1 LITERATURE REVIEW

Map is about marks on a paper that stand for definable things on the earth's surface. The representation usually on a flat surface, of the whole or a part of an area. The term "map", however, in non-geography uses does not necessarily refer to a representation but to how things are arranged or how they relate to one another. For whatever reason, at geographic scales, "map" means a representation of the earth and not earth's patterns themselves. And it usually refers to a graphic representation, although the term "map" can be used more broadly to refer to any representation of geographic space. To reach a graphic representation, there must be a mental conception (or representation) of the world. It determines how we map, and maps in turn influence the mental representation. Maps, though of special concern to geographers, are used throughout the sciences and humanities and virtually every aspect of day-to-day life. Millions of maps are produced and used annually throughout the world by scientists, scholars, governments, and business to meet environmental, economic, political, and social needs. [1]

There are now two types of map produce, the real map and the virtual map. A real map is a hard copy or conventional map while virtual map is a information that can be converted into a real map, i.e. information on a computer screen, mental images, field information, notes, and remote sensing information.

Interactive map is not a new technology nowadays. It had been constructed since early nineties by experts. Among the early constructors of interactive maps are the developers of IRIS (Information Retrieval Intelligent System) software. It was developed for Windows.

Throughout the years, many approaches had been used to develop an interactive map to cater different type of users. Different users had different needs in using an interactive map. As example, the department of land may needs the details of the exact size and scale of a particular land while the department of transportation may needs the details on the roads in a particular area. Realizing this fact, developers always find ways to make the interactive map cater the users need at the highest level. Like CommonGIS, it is a powerful system that combines traditional GIS methods with innovative tools for visual data analysis and decision making. Among the main features of CommonGIS are :

- Novel information visualization tools (dynamic query, table lens, parallel coordinate plots, etc.) dynamically linked to maps and graphics via highlighting, selection, and brushing.
- Tools for interactive multi-criteria decision making and sensitivity analysis for individuals and small groups of decision makers.
- Intelligent user guidance (task support module) helps users to follow problem solving scenarios and utilise all tools of interactive graphics. In particular, CommonGIS is able to suggest tools and recommend how to use them depending on data and task context. [8]

The development of CommonGIS and its predecessors has always been oriented towards user's needs. Several tests had been performed and the results demonstrated that only short training is sufficient for understanding and memorizing the handling of the novel, and sometimes sophisticated looking tools, and their successful utilization in problem solving.

Interactive techniques and tools can support information exploration and knowledge construction only when users are able to properly utilise these instruments. User studies demonstrate that effective use of the techniques requires learning of the new concepts and ideas. Users are able to understand and adopt the new ideas concerning map interactivity. The Support Team (SPADE) at the Fraunhofer Institute for Autonomous Intelligent Systems had conduct a studies and found out that the addition of interactivity and

dynamic elements into the map will actually help the users to understand the map easier. [5]

Interactive techniques and tools can support information exploration and knowledge construction only when users are able to properly utilize these instruments. User studies demonstrate that effective use of the novel techniques requires learning of the new concepts and ideas. Users are able to understand and adopt the new ideas concerning map interactivity and manipulability. [6]

Henry David Thoreau (mid 1800s) had said that “We should become tools of our tools” which can be means that technology for its own sake maybe interesting and fun. GIS technology such as the interactive map helps to empower people to get a better facilities in managing life from the aspects of time, cost and quality of living. [3]

The author is not saying that manual map is no longer practical in today world but the needs to have interactive map available on operating system platform are mounting. It is crucial for people to have virtual map such as interactive map, GPRS and so on in order to their mobile or remote movements requirements.

Based on the facts and studies performed by the experts, the author believe that changing from the conventional type of map to an interactive map will bring out the best in decision making application. The visualization techniques used in building up interactive map can be differ according to the developer creativity and user requirements. Targeted objectives and goals of one interactive map should help it targeted users to make decision in completing related task. A manual map should be a little to static and hardly can it cater users unique needs since it is produced typically with the same concept and techniques. What is clear is that “New technologies are supporting advances in the increasingly important techniques of visualization, the graphical representation of complicated data for easier understanding.” (Bruce E. Davis, 2001, [3]). This explain that with the new technologies available, building and using map should not be a difficult task for anybody regardless their level of knowledge in the related GIS area.

There are several Ipoh maps available over the Internet but it is more to conventional map because it offers no more than what a simple paper-folded map. With all the one way roads in the city, it must be difficult for users to go to the right place, at right time consumption and using the right route. These are the problems that the author hope to overcome by producing the interactive map of Ipoh city in this project.

CHAPTER 3

METHODOLOGY

3.1 PROCEDURE IDENTIFICATION

Throughout the process of developing this Interactive Map of Ipoh project, the author has gone through these stages until the final method. They are identifying problems, determining information, analyzing, designing, develop and test. The brief overview of the procedure can be seen in Figure 3.1 below.

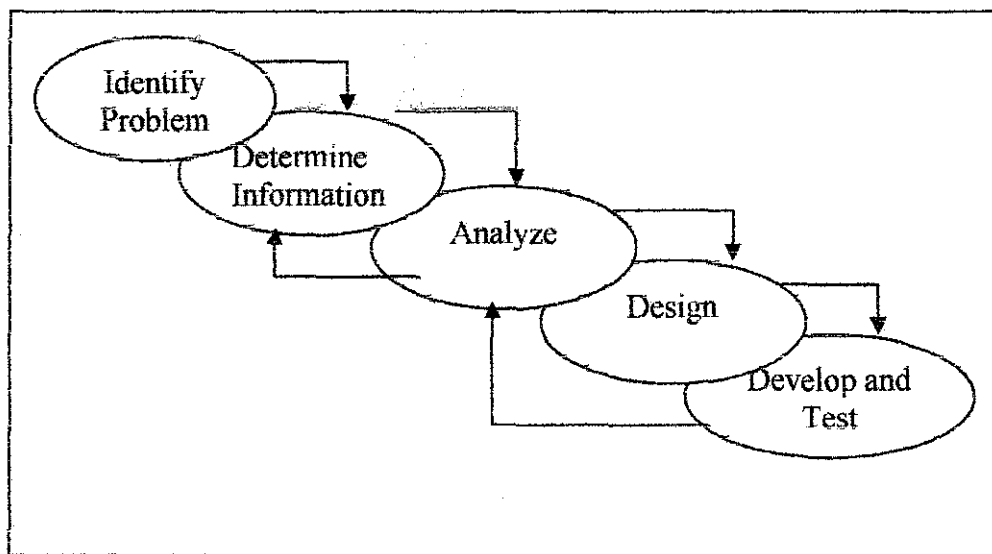


Figure 3.1 Methodology Framework

3.1.1 Identify Problem

In this phase, the author identified the problems that occurred before developing this type of project. The problems include students' traveling patterns, students' knowledge regarding the matter and finding existing similar application if any. The students always face a difficult situation where they do not know or unaware about their way to particular places in Ipoh when they have to travel over there.

3.1.2 Determine information:

This phase require the author to determine the information requirements for the particular features involved. The author conducted survey through questionnaires and interviewed several person. They gave a very good response to the both questionnaires and interviews when it was held. The author also gathered additional information from the internet for further updates and researched on the interactive mapping technology.

This is to make sure that the author really understands the technology of the development of this application and its features.

3.1.3 Analyze

This is the part where the author has to analyze what the application needs. The author draws the process flow so that she can picture it clearly how the system works. The author also uses the story board technique to determine the flow of the application works.

3.1.4 Design

The author used the information collected earlier to accomplish the logical design of the interactive map application. The author designed the application using several method. The most important part is to decide on the design of the Ipoh map. The author has designed the layout of the screen to make the screen more user friendly and it is easily to navigate and also understandable by the user. Throughout the process of designing the main screen for application, the author gathered more information about the application from various resources to enhance the quality of the design.

3.1.5 Develop And Test

At this stage, the author has developed the interactive map of Ipoh using several software. The author first develops the main interface of the application features. This is to allow the author to insert the function codes later.

After developing the basic user interface, the author moved on to develop the functions of the desired features of the applications. Among the functions are zoom function, routing function, fare calculation function and highlight function.

After developing the functions, the author will then link all the features to its functions to make it works. Developing this application, the author performed a trial and error in every feature that was created in the application.

The author then performed functionality testing to detect any technical error in the application. After that, the author perform Usability testing by several selected user to see the acceptance of the users towards the application. The test results highlights several part that need to be improved. From the results, the author reanalyzed back the specific part for remodification and redesign it to cater the user's need.

3.2 TOOL(S) REQUIRED

Tools and hardware that are required for this project are:

- i. Macromedia Flash MX. It is used to develop the map interactive features such as highlighting roads, blinking buildings and resizing map. The author felt that Flash do give the optimum facilities to build up the interactive elements instead of using any GIS oriented software which usually quite static and limited functions.

- ii. Microsoft Front Page. The author used this program as a platform to present the application because it offers flexible coding environment. The author needs such environment to make it possible to integrate several functions of the application to become a working application. It also will need very little modification to make the application online (for future recommendation) and easier to update if there any changes in the application contents.
- iii. Adobe Photoshop. It is used to develop the map and graphic elements in order to support the graphic designing process. It make it possible for the author to create the roads, buildings, buttons and other graphic before inserting interactive elements by using Flash.
- iv. Macromedia Frechhand to support the designing tools.

CHAPTER 4

RESULTS AND DISCUSSION

Throughout the author's work of developing this interactive map, the author had come out with various facts and information that show how much the students in UTP need one application that can help them to plan their trip to the city. This can be showed through the results of questionnaires and interviews survey. Besides that, the author also search for options in order how to cater these students need for interactive map since there are so many existing interactive map available in the Internet.

The author not only gathered information from the survey but also found out from other sources such as journals, articles and books. Most of the information that the author gained from these sources are about the mapping style, trend, feasibilities of interactive maps and other relevant data. The author did search for the information not only form libraries but also from the Internet where examples and samples of interactive maps can be found easily. From these findings, the author was able to compare the pro and contra of the interactive maps and single out the practice and features that the author believed to be useful to be included in the application.

From the survey, the author found that UTP students do need a tool such as the interactive map to help them gain information and plan their trip to Ipoh. Most of the students that have little information about Ipoh are from foundation and first year batch since they're new students in UTP and not knowing much about Ipoh City. The author also gained information about the traveling pattern of UTP students including their frequencies, transportation preferences and purposes when these students go to Ipoh. With these information and data, the author will be able to come out with the user requirements for the application.

The questionnaires had been distributed widely in the campus to get feedback from various students. 150 students had provided the feedbacks compare to 200 sheets questionnaire distributed. The questionnaires results and discussion are as follow

4.1 STUDENTS' FEEDBACK

Students that provide the feedbacks are the students from the foundation year, first year, second year, third year, fourth year and fifth year. The number of students and its percentage of the students can be seen in Table 4.1 and Figure 4.1.

The result shows that students from foundation and first year provides the largest number of feedback. However, the number of feedbacks received for the whole are convincing and satisfying.

Foundation	1st Year	2nd Year	3rd Year	4th Year	5th Year
30	32	21	27	21	19

Table 4.1. Number of Students Provide Feedback

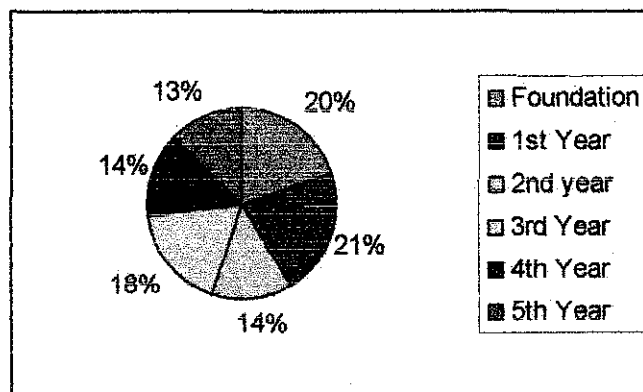


Figure 4.1 Percentage of Students Provide Feedback

4.2 QUESTIONNAIRES.

There are ten questions in the questionnaires sheet. The author distributed it to all residential colleges in UTP. The sample of the questionnaires that had been distributed to the students to get their feedback can be viewed at Appendix 1.

4.2.1 Question 1

Do you own a transport in UTP?

- a) Yes. It is
- b) No.

There are 70 percent of students owned their own transport. The transports are motorcycle and car. The numbers and percentage can be seen through Table 4.2.1 and Figure 4.2.1.

Own transport	Did not own transport
105	45

Table 4.2.1. Number of Students With Transportation

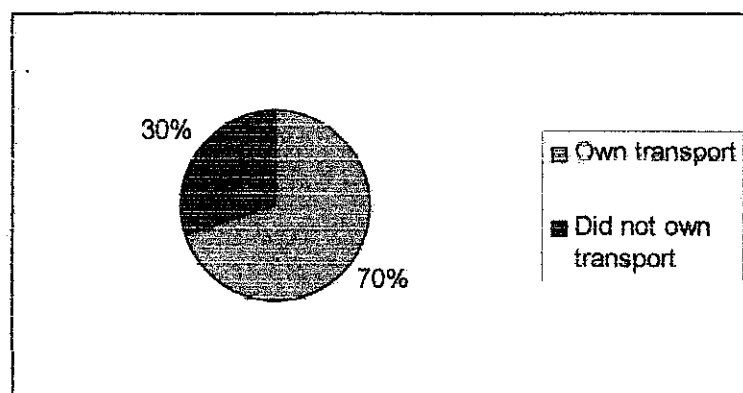


Figure 4.2.1. Percentage of Students With Transportation

This result show that more than half students will travel by their own. And this fact support how important for the student to have a tool like the interactive map to help them plan their travel trip.

4.2.2 Question 2

How often did you go to Ipoh?

- a) Once a week
- b) Once in two weeks
- c) Once a month
- d) Other (please state the frequency)

The result of this question show that more than half students travel once a month to Ipoh followed by once in two weeks which 32 percent of the students did. The full statistic can be viewed through Table 4.2.2 and Figure 4.2.2 below.

Once a week	Once a month	Once in two weeks	Other
26	82	48	4

Table 4.2.2. Student Frequency To Ipoh

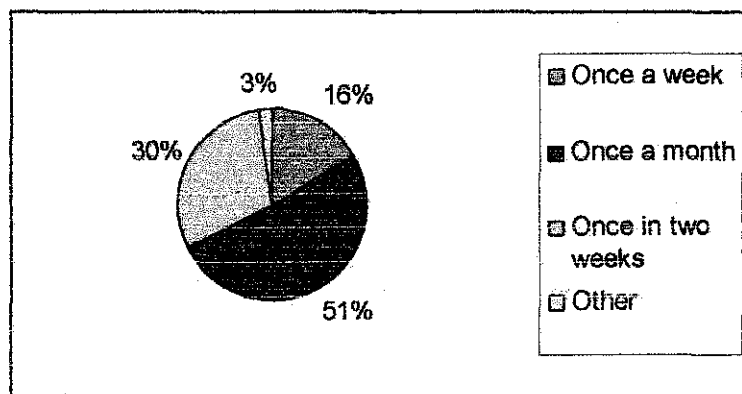


Figure 4.2.2 Student Frequency Percentage To Ipoh

This result shows that UTP students did travel a lot to Ipoh and that is why they need an application like this interactive map to assist them to plan their trip to Ipoh.

4.2.3 Question 3

Usually, what your main purpose(s) traveling to Ipoh?

- a) Leisure
- b) Finance
- c) Studies
- d) Other (please state the purpose(s))

The result shows that more than 70 percent of the students went to the city for leisure. Other result show that they go to Ipoh to take bus to their hometown like Kuala Lumpur and Pulau Pinang. The full result can be viewed through Table 4.2.3 and Figure 4.2.3.

Leisure	Finance	Studies	Other
110	12	8	20

Table 4.2.3 Students Purposes To Ipoh

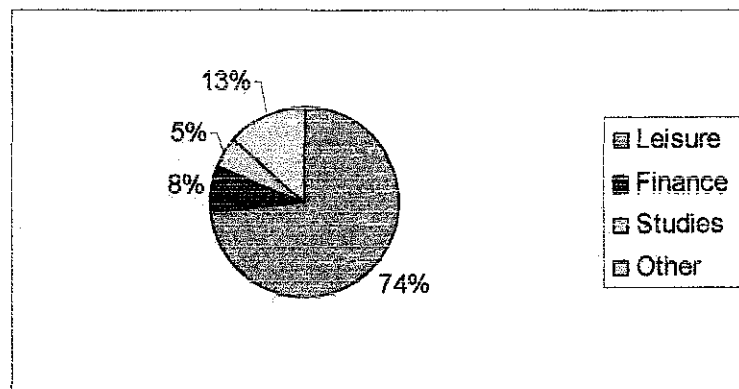


Figure 4.2.3 Students Purposes Percentage To Ipoh

This result show that the students usually go to Ipoh for leisure which required them to know where exactly the place to go. The interactive map can provide them with sufficient information on how to get to interesting places for leisure accurately.

4.2.4 Question 4

How well do you know about Ipoh City?

- a) Very well
- b) Well
- c) Little
- d) Very little

The result show that 43 percent of the students know little about places in Ipoh while 26 percent said to be know Ipoh very well. The result is as in Table 4.2.4 and Figure 4.2.4.

Very well	Well	Little	Very little
39	25	65	21

Table 4.2.4 Students Knowledge About Ipoh City

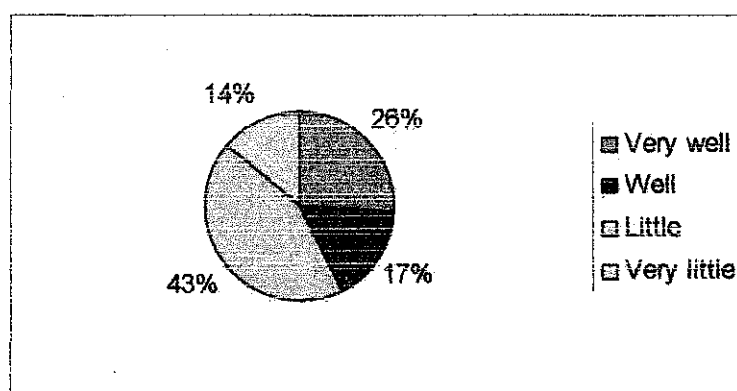


Figure 4.2.4 Student Knowledge Percentage About Ipoh City

This result prove that the students need assistant like the interactive map to know more about Ipoh before travel to the city.

4.2.5 Question 5

Do you find it easy to travel in Ipoh?

- a) Yes
- b) No

More than 65 percent of the students said it is difficult to travel in Ipoh. This show that most of them face problems while traveling in the city. This emphasis the author points how important for the student to have an application like the interactive map to guide them on their way in Ipoh. The full statistic is as in Table 4.2.5 and Figure 4.2.5 below.

Yes	No
100	50

Table 4.2.5 Students Knowledge To Travel In Ipoh City

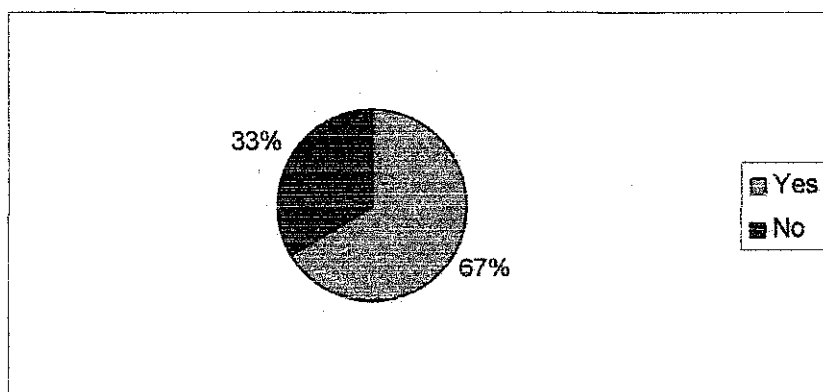


Figure 4.2.5 Students Knowledge Percentage To Travel In Ipoh City

4.2.6 Question 6

Which transport do you prefer to travel in Ipoh?

- a) Private
- b) Public (please state which public transport)

The result show that 69 percent of the students prefer to travel by their own transport while the remaining choose public transport. This show that the students need information about public and private transport to travel to Ipoh. This can be obtain from the interactive map application. The full statistic is as in Table 4.2.6 and Figure 4.2.6 below.

Private	Public
104	46

Table 4.2.6 Students Preferable Transportation To Travel In Ipoh City

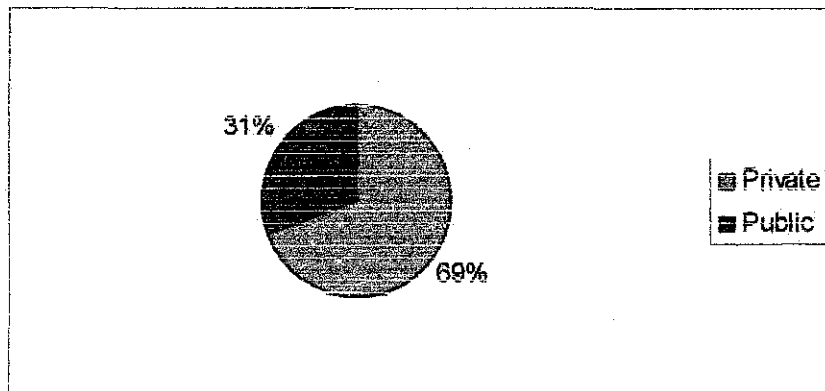


Figure 4.2.6 Students Preferable Transportation Percentage To Travel In Ipoh City

4.2.7 Question 7

If you do not know how to find a place in Ipoh, where did you go for references?

- a) Internet
- b) Manual map
- c) Friends
- d) Other (please state the reference(s)).....

The result show that more than 60 percent students get information about places in Ipoh from their friends. The full result is as in Table 4.2.7 and Figure 4.2.7 below.

Internet	Manual map	Friends	Other
39	12	93	6

Table 4.2.7 Students Sources To Travel In Ipoh City

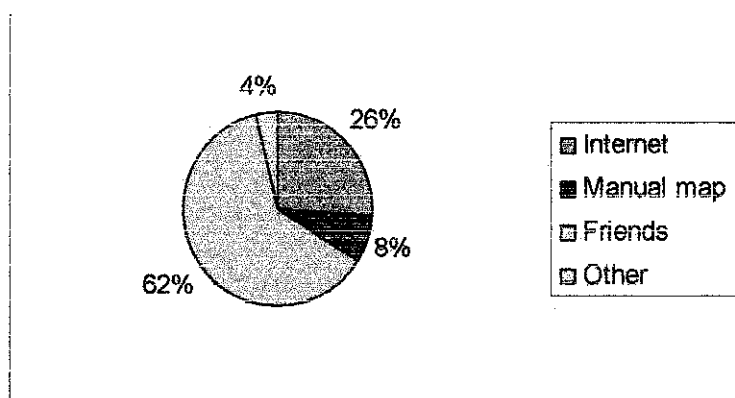


Figure 4.2.7 Students Sources Percentage To Travel In Ipoh City

This result shows that the students need a more reliable tool to help them like the interactive map.

4.2.9 Question 9

Do you find it useful to have an online map as a reference to travel in Ipoh?

- a) Yes
- b) No

More than 90 percent of the students find it going to be useful if they can have an interactive map of Ipoh to help them before making a trip to the city. The full result is as in Table 4.2.9 and Figure 4.2.9.

Yes	No
145	5

Table 4.2.9 Students Says About Ipoh Interactive Map Importance

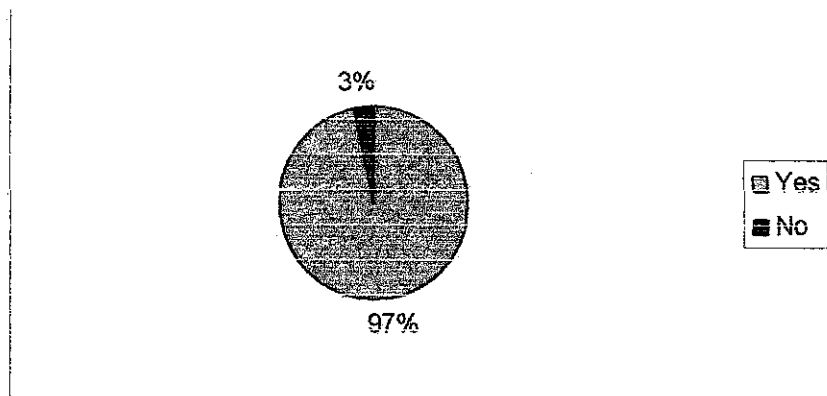


Table 4.2.9 Students Says Percentage About Ipoh Interactive Map Importance

4.2.10 Question 10

Can you state any special features you want to have in the application?

Since this is an open ended question, the author obtain several answers about the features to be included in the application. Among the features the students wants to be available in the application are :

- a) Route in Ipoh
- b) Shopping complex location in Ipoh
- c) Buses' number to go to a particular place
- d) Taxi and bus fares
- e) Main roads in Ipoh
- f) Government building location in Ipoh
- g) Banks and sport complex location in Ipoh.

The author believed she would able to provide this features to the users in order to help them to get the sufficient information.

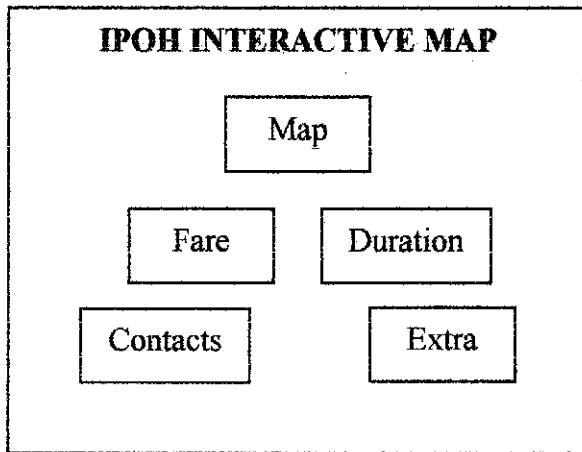
4.3 REQUIREMENTS

From the results and discussion held, the author had come out with the user requirements for the application. They are :

- i. The user can select any particular place in the map to be viewed.
- ii. The user can select two places and view the routes available linking both places.
- iii. The user can view bus and taxi fare from one place to another place.
- iv. The user can view which bus available to travel from one place to another.
- v. The user can see the highlights of any main road they want to find.

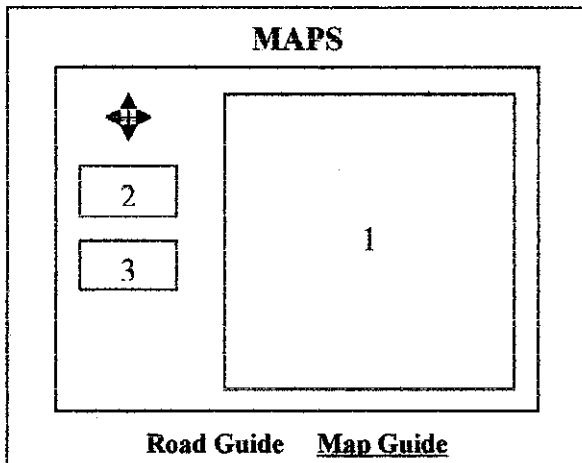
4.4 STORY BOARD

With the requirements specification, the author designed the story board for the application in order to get clear description of it. The story board is important for the author to know how the application flow and links from one page to another. The story boards are as follow:



- Map** - Button
Linked to map section.
- Fare** - Button
Linked to fare chart
- Duration**- Button
Linked to duration chart
- Contact**- Button
Linked to important contacts page
- Extra** - Button
Linked to extra information

Figure 4.4.1 Story Board of Main Screen



- 1 - Roads display
- 2 - Shortest road indicator.
- 3 - Longest road indicator
- ◆ - Map navigation button.

Figure 4.4.2 Story Board of Road Guide in Map Section

DURATION									

A chart of the duration taken to travel from one place to another by bus and car will be displayed in the table.

Figure 4.4.3 Story Board of Duration Section

FARE									

A chart of the fare charge to travel from one place to another by bus and taxi will be displayed in the table.

Figure 4.4.4 Story Board of Fare Section

IMPORTANT CONTACTS	
Bus	
Taxi	
Emergency	

Contacts number of several important places will be provided in the table.

Figure 4.4.5 Story Board of Important Contacts Section

4.5 Print Screen

After the author determined the layout design, the author started with the user interface development. First, the author created the basic user interface regardless the cosmetics part of it. This to allow the author to proceed with the programming part of the application to make it works. The beautification of the user interface will come later once the application perform successfully. The sample of the user interface can be viewed as follow.

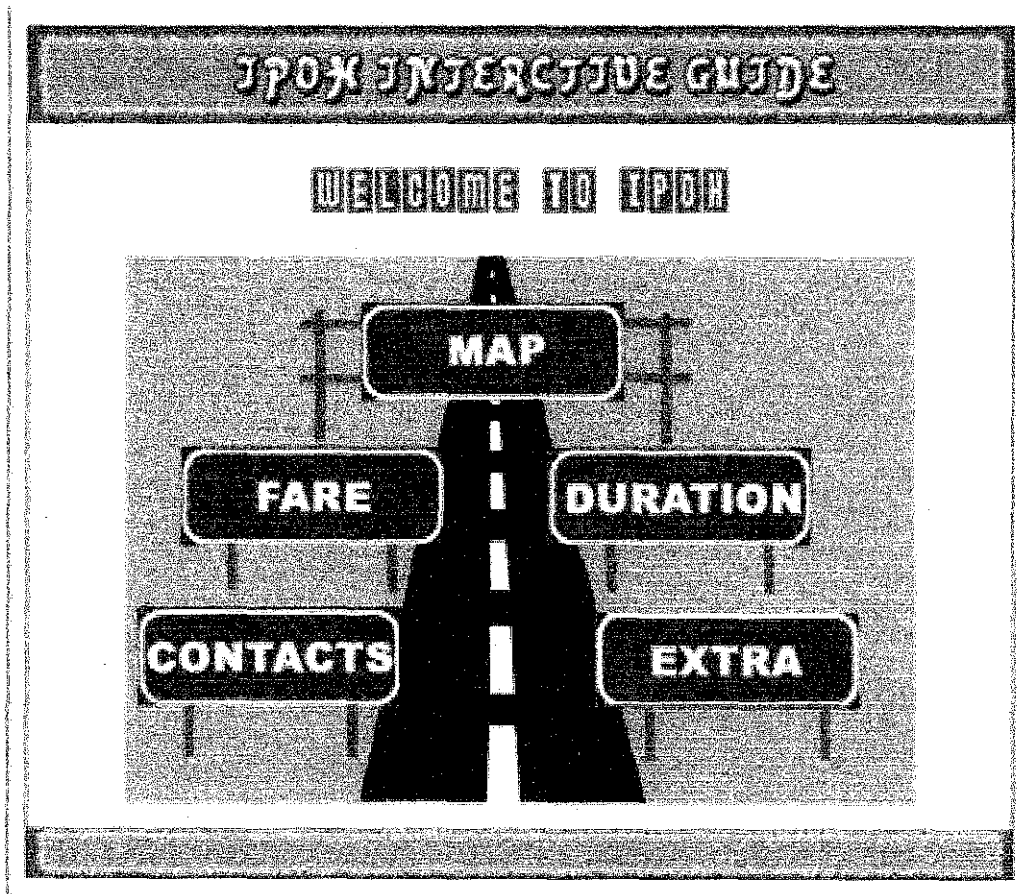


Figure 4.5.1 Main Menu Print Screen

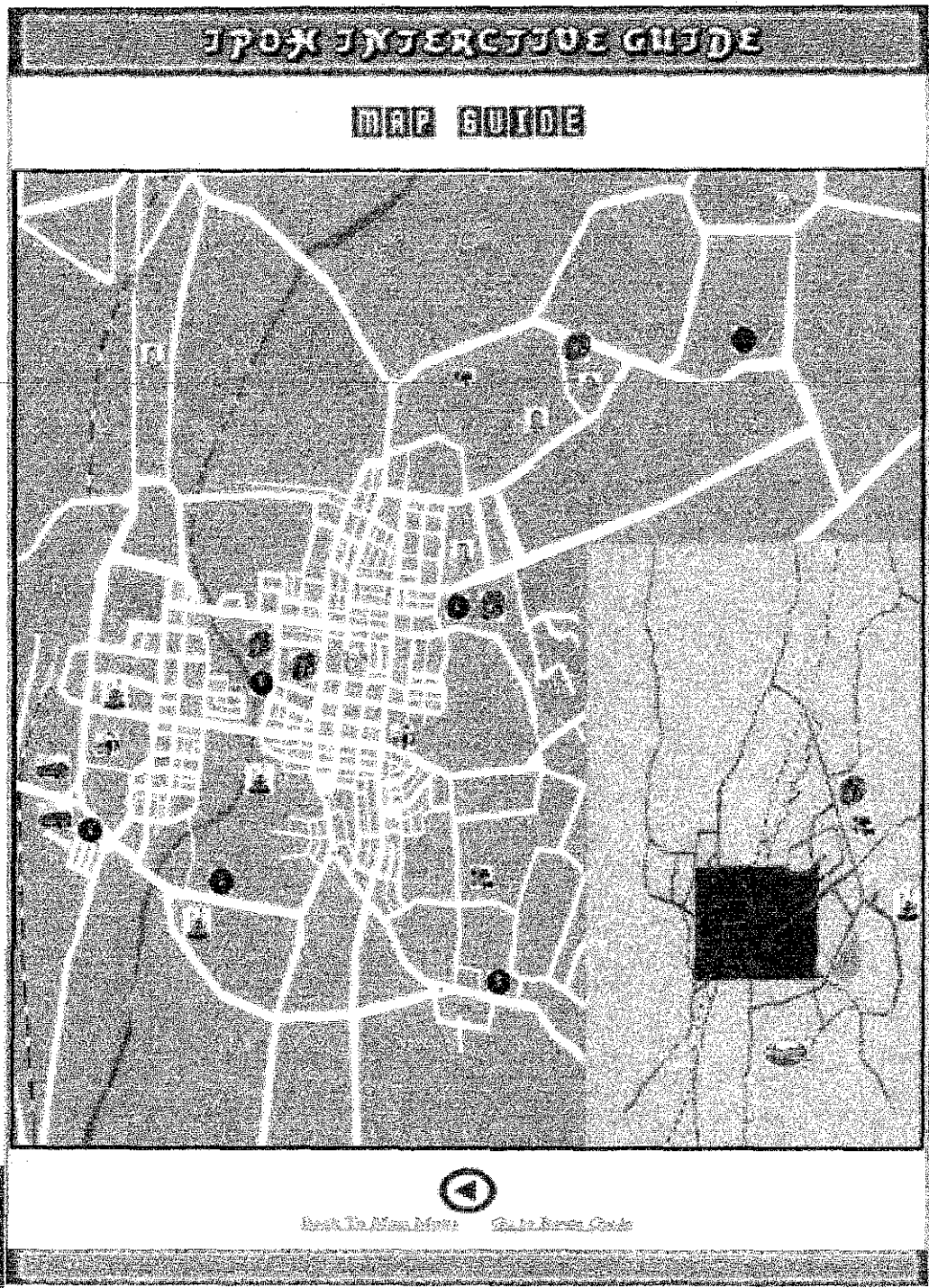


Figure 4.5.2 Map Guide Print Screen

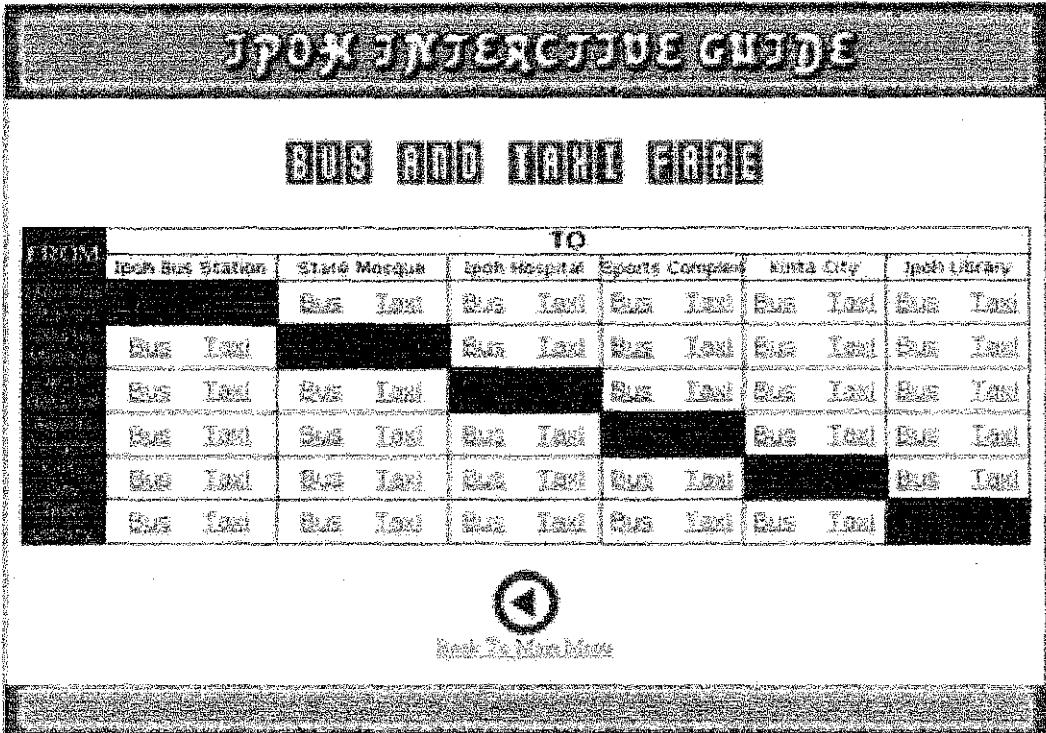


Figure 4.5.3 Fare Section Print Screen

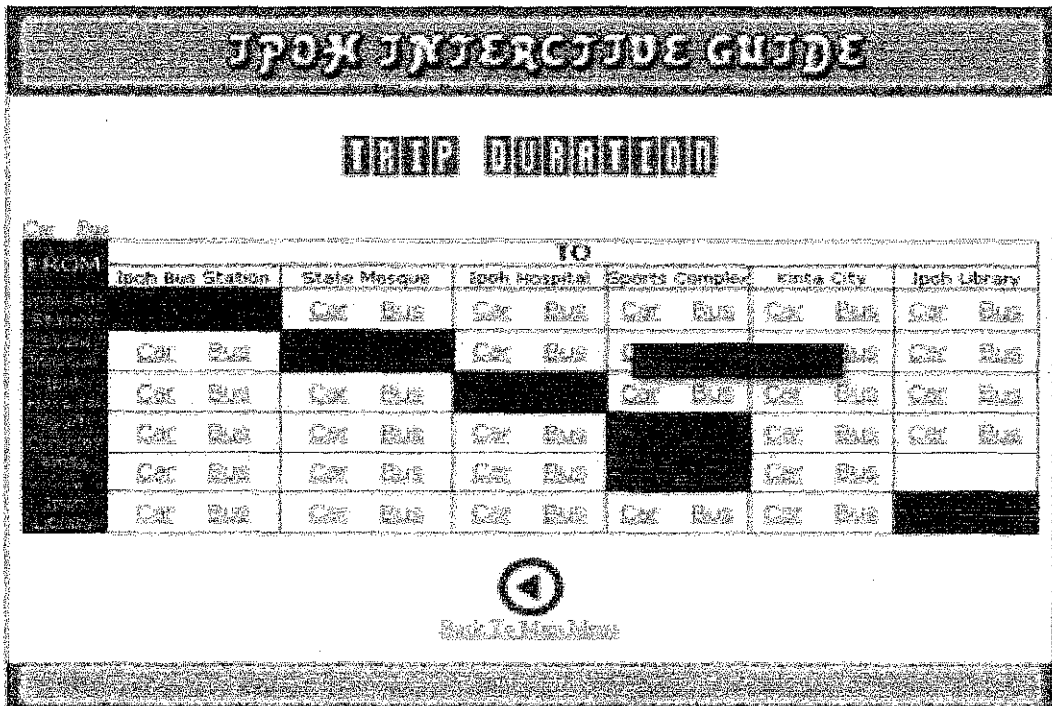


Figure 4.5.4 Duration Section Print Screen

JPOK INTERCTIVE GUIDE

CONTACT NUMBER

BUS

Transnasional	05-2542804
Citrinus	05-2540673
Rensi	05-2569274
Prakarya	05-2542790

TRAIN

Railway Station	05-2546335
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TAXI

Caritation	05-2546987
Raino Cab	05-2559364
Airport Taxi	05-2547274

OTHERS

Police	999
Fire Brigade	994
Telekom	103
Jepoh City Council	05-2541373



Back To Main Menu

Figure 4.5.5 Important Contacts Print Screen

CHAPTER 5:

CONCLUSION AND RECOMMENDATION

Interactive map in today's world is very convenient and reliable for those who wanted to reduce time consuming in terms of finding the best trip to travel. In other words, this is the easiest way to plan a travel arrangement before they make the trip. This saves time and costs for users that have very little knowledge about one place. Interactive map nowadays had been used widely by many people in the world. The interactive map can be in terms of applications, websites and Global Positioning System (GPRS).

The Interactive Map of Ipoh City is important to provide UTP students with the option to plan their trip to Ipoh since they have to go there frequently from time to time. In this case, the interactive map can help them save time and cost consume when traveling to the city. This application can finally help them out from being lost every time they go to Ipoh. Therefore, this project is relevant to develop in order to enhance the way of student lifestyle in UTP.

This application had been build according to the students background in GIS features. The author is aware that students in UTP want an application that is not too complicated with GIS features that not needed according to their needs. So, the author decided to develop the application as simple as possible without abandoning the basic principles of GIS. The author also tried to provide as many information as possible to make the application useful.

After the development of this project, the author had identified several recommendations for future enhancement for the application. The successful of this project could lead to the expansion of the application to a bigger area to be covered. If currently, the author just concentrates on Ipoh city only, in the future it can cover another city nearby Ipoh or even the whole of Perak state and after that all over Malaysia. Besides that, the author also feels that this application can be transfer to a GPRS system which is more

convenient and easier since the use of the devices is now spreading rapidly. The author also recommends UTP authority, if they satisfy with this project, they can adapt this application into the UTP student portal as an addition facilities to be offered to the students. If this application can be made online, it will be a big help to students since intranet connection is available through the university's LAN.

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- [9] **http://www.commongis.com/tutorial/Appendix_2.html**

APPENDICES

Questionnaires

- 1) Do you own a transport in UTP?
 - a) Yes. It is a
 - b) No
 - 2) How often did you go to Ipoh?
 - a) Once a week
 - b) Once in two weeks
 - c) Once a month
 - d) Other (please state the frequency)
 - 3) Usually, what your main purpose(s) traveling to Ipoh?
 - a) Leisure
 - b) Finance
 - c) Studies
 - d) Other (please state the purpose(s))
.....
 - 4) How well do you know about Ipoh City?
 - a) Very well
 - b) Well
 - c) Little
 - d) Very little
 - e) Do not know at all
 - 5) Do you find it easy to travel in Ipoh?
 - a) Yes
 - b) No
 - 6) Which transport do you prefer to travel in Ipoh?
 - a) Private
 - b) Public (please state which public transport)
 - 7) If you do not know hoe to find a place in Ipoh, where did you go for references?
 - a) Internet
 - b) Manual map
 - c) Friends
 - d) Other (please state the reference(s)).....
 - 8) Do you find it important to know how much it cost to travel in Ipoh and how long it takes?
 - a) Yes
 - b) No
 - 9) Do you find it useful to have an online map as a reference to travel in Ipoh?
 - a) Yes
 - b) No
 - 10) Can you state any special features you want to have in the application?
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Drawing Sample of Ipoh Map