

ADVANCED ADVISORY SYSTEM

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INFORMATION & COMMUNICATION TECHNOLOGY

UNIVERSITI TEKNOLOGI PETRONAS

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CERTIFICATION OF APPROVAL

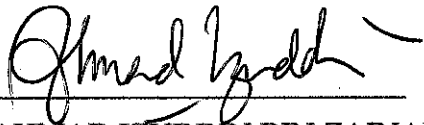
Advanced Advisory System

by

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A project dissertation submitted to the
Information and Communication Technology Programme
Universiti Teknologi PETRONAS
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Approved by,



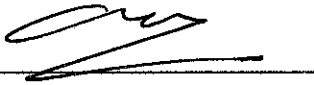
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July 2007

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.



AHMAD AFIZI BIN KAMARULZAMAN

ABSTRACT

In five years of study in Universiti Teknologi Petronas (UTP), a student will finish numerous of assignments, projects and thesis for all courses taken. Unfortunately, all the documentation of their works will be left disorganized when they graduate. This situation is called “brain drain” and students come and go hence leaving this situation continuing happen. Knowledge Sharing through Forum Session of Advance Advisory System (AAS) is the solution to the problem of disorganized sources of knowledge among (UTP) students. With the function of forum discussion, file sharing and message conversation, AAS will suit well with the university style of having a campus community with large database. In addition, students will benefit a lot from lesson learn and experience gained that are shared in the forum. With the LAN application among the campus and the academic building, AAS will be utilized efficiently. AAS hopefully will enable students and UTP management to advance a step ahead with SAP approach which will give benefit in term of database, security and learning improvement in the global world.

ACKNOWLEDGEMENT

The utmost gratitude goes to Allah, for his strength, blessing, and kindness for granting a life of hope all along the road.

To Mr. Ahmad Izuddin bin Zainal Abidin, my respected supervisor who has been a wonderful person with her guidance in this project, cause without her undying support, this project would not make it to the end. Every form of advice, teaching, support and cooperation that was given by her had helped me to make this a more wholesome experience. Her readiness and patience in helping me with my projects is highly appreciated. It is an honor to have her contribution and cooperation in accomplishing my studies.

Not forgetting to all my friends that have supported me with ideas and morale support throughout the making of this project, I would like to thank you all. All those morale support and advices were really motivating me to accomplish the project.

I hope that "AAS" project will success and will benefit all users, especially UTP students. Thank you again to everyone who supported me from the beginning of this project until the end.

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CHAPTER 1

INTRODUCTION

1.0 Background Information

Universities all over the world have their own advisory system that been used for management purpose. All the advisory system are designed to maintaining student and staff data including personal data, hostel and student registry, finance and other important information. These systems must be reliable in any condition in order to make the system fully trusted and can hold on for a long time. Each university have either outsourcing or create the own advisory system but the system is control by the university staff itself for security purpose.

Advanced Advisory system, by definition is a system which to monitoring process flow of information, provide any combination of information needed in different way, and the most important thing is giving any output needed without any error. University management sees the advisory system is very helpful as the university itself contain many type of student and staff with different type of data. Combination of many type of advisory system is currently being used of many university because of some system does not support certain type of department.

System Application Product (SAP) is a new technology that used its own system in order to develop and overcome any kind of problem exists in the area of development. It is a complete system that also supports any type of different system to make the system process easier and faster. SAP can take any type of information includes any type of information, database, platform for interface purpose, security of the information, and the most important thing is the reliability of the system is proven around the world.

SAP from the SAP news 2005, found that student advisory system will create the most reliable system ever implemented in any university throughout the whole world.

This is proven by the University of Kentucky which they implement the SAP technology to support the student advisory system. Also, many big company throughout the world inclusive Malaysia such as IBM Malaysia, TELEKOM Malaysia, Dewan Bandaraya Kota Kinabalu(DBKK) using SAP for its compatibility to support their daily work. This shows SAP technology's is proven of its reliability and security. Through the information, it will become another effective media for advertisement.

1.1 Problem Statement

Currently in most universities, the advisory system used is combination of many type of system. This system is tedious and consumes a lot of time. Most of the times a student have to walk around from one department to other department. The current system used is not very supportive and not very user friendly. The information may easily forget after one time to another time. Sometime, certain department cannot produce the information needed on the spot and can take more than one day. This is one of the inefficient effects of using many type of system.

1.1.1 Problem Identification

Some of the problems that have been identified based on UTP normal ways of current advisory system are:

i) Student takes a lot of time to walk from one department to another department. Sometimes, the department is not available for that time. For every department, there are about one or two counter to charge over the student. If there are a lot of students at one time, it will take more time for the management to cater all of them.

ii) Preparation for making the information and print it out to hard-copy take long time. The preparation of paper based information which includes any information need by student. It can waste time and money because the hard-copy only is used for

the time being. It cannot be saved by student in softcopy and if the copy is lost, the work had to be redone.

iii) Each type of information currently based on its department. For example, finance will conduct the financial and payment issues and ACS only conduct the registration of student in academic. So, student had difficult to check their personal status in the campus. They don't have short listed of their personal information.

iv) A lot of personnel are needed in every single department, for contact with the student purpose. That's mean a lot a work to do. The process begins with the student itself but if this step is not complete the university cannot proceed to the next level. It will consume time if there are any corrections to be made.

Due to the reasons above, the SAP solution is the most appropriate for the problems faced by the current system. Below is list of criteria needed to consider and answer a few questions in researching and developing the new system:

- i) What is the best way to safe time and cost?
- ii) What is the form of information that is critically needed by students?
- iii) How to deliver and what are the devices and hardware needed to create the system?
- iv) When is the best time to deliver the information to the student?

1.1.2Significance of the Project

The main objective of this project is to improve the current way of student advisory system within the campus area; to develop an effective way of delivering information detail other than the common and usual way is paper-based. In order to achieve this, the development will be focused on how to make it available and effective with security of each information details.

Before developing the new system, the old current system of advisory system in the campus is studied and analyzed. The problem faced with the old system need to analyzed and possible solutions are identified to overcome most of the problem faced.

The implementation of Advance Advisory System can be very beneficial not to mention solving most of the problem faced by the previous system which is combination of many type of system and paper-based. This is again reinforced with the fact that all students in the campus have mobile devices. The new system promised user friendliness and time and cost reduction for student the check and gains their own information.

The Advance Advisory System aims in assisting or replacing the current advisory system to overcome the problems faced which are time and cost consuming. More importantly, to make sure that the information intended to be delivered to the student has no error and complete.

1.2 Objectives of the Study

The main objectives of the project are:

- i) To create a centralized database using SAP technology and system.

As mention before, the current system of student advisory system is created by combining many type of system due to the current system is not suitable for every department in the university. It used a platform or medium to transfer data from one department to the other department. It shows that every system needs its own maintenance and once one system is down, other system cannot operate smoothly. In order to minimize the error and time consuming, it's rather good to use just one system that can support many type of department to avoid duplication data or space for storing data.

- ii) To create a new medium for data transferring needs by student in the campus area while ensuring the information received by the student.

The campus resident's majority portions are students and lecturers and a small portion of them are workers and other staffs. To deliver the information, the common items for all these individuals will be the best medium. It is researched and proved that 99% of the campus residences have mobile devices or more accurately, mobile phones. This device will be the main medium to be researched throughout the project because of its availability and integrity of delivering information purposes.

- iii) To create a more interesting way of delivering information while reducing the management works.

To deliver information from a mobile device is somewhat interesting and efficient. It fulfills the purpose and student will not face difficulty to search for their information comparing to the older system process. From this kind of way, the university management can save lot of time and energy for the next level of the system process. The student just needs to register in the website to check to information needed and choose what type of information and problem they face. Then they system will adjust to help the student from step A to Z until the process complete.

- iv) To deliver the information directly without any error.

The current version of advisory system is slow which needed time from student to register, fill certain form or get sign from the lecturer. For instance, the information deliver by mobile phone technology can make the student easier and know what to do next without previous step left. This is a hassle and most probably the best way to overcome crowded in the counter of each department. The mobile information delivery method will ensure the information retrieve is the only information needed by the student.

- v) To create a systematic and reliable database and information deliverable system by applying SAP technology, website and wireless technology.

The system of the researched project will require a database to store in the data related and automatically send the information to the student when they needed. This cuts cost and manpower to the minimum while ensuring the data to be cached and secure. The information is secure because the owner of the information will have the key or password to retrieve the data. the password is generated in SAP itself and will be combine with the SMS tool. By this, the information is secure between student and university management.

1.3 Scope of Study

1.3.1 Effective Database and Programming Language (SAP technology)

A proper database and programming language is needed to ensure consistency of the data and information in many type and many way. The system should store in the information needed in the database before delivering it to the users. The system will automatically send the message to target mobile devices within the area coverage once the owner activated the button.

The author will need to use SAP database program as the system's database. This is to ensure the database availability and to cut cost comparing to buying an on-the-shelf product. SAP program also are often reviewed and a lot of other users gain their detail information using the program provided even provide tutorial programs. This could assist the management in understanding the program and applying it to the system.

The same implies to the programming language. SAP programming language is highly preferable because SAP have its own programming language which is ABAP language.

1.3.2 Push-Based Mobile Technology (SMS tool)

Mobile devices are pocket-sized computing devices, typically utilizing a small visual display screen for user output and a miniaturized keyboard for user input and output. A mobile device includes personal digital assistant, laptops and smart phones. Mobile technology has been increasing from time to time. The latest technology in mobile devices is 3G or more specifically 3rd Generation.

For the project which will be researched by the author, it is more concentrated to the mobile phone device. This is because out of all mobile devices, this device is the most popular and most of the students have this device. Instead of the normal use of mobile phone which is making calls, mobile phones nowadays could send and receive messages through SMS and MMS. A few models of mobile phones could also allow their owner to browse through the internet just by using their mobile phone.

A push-based mobile technology is basically one of the methods on delivering information through these devices. As the name implies, this method force the message into other user's mobile devices which in the case of the project by the author, exists in the area of the coverage set by the author. The push-based message will be delivered through an antenna connected to the server.

The push-based mobile technology is the perfect way to run the project which is the information. It also ensures that the message of information reached to its specific owner rather than other people.

1.3.3 Medium Platform (if necessary)

Medium platform is also a very important issue that the author needs to address. The medium plays an important role as the medium from SAP database to the delivering the message to the student mobile phone. The target student must have password to retrieve the information otherwise the target student could not retrieve the information.

The author needs to study on these medium because it plays a vital role of ensuring the project's success. The author has to consider the most interactive yet inexpensive, common yet available to most mobile phones used by the target audience. Even though latest technology has introduced new was of sending text information, but the author has to consider audience who own old mobile phones which doesn't have the privilege to use that facility.

CHAPTER 2

LITERATURE REVIEW

2.1 Advisory system

Student advisory systems have been used from time to time. What is change is the methodology used, starting from paper-based to the more efficient way by using computer. By this technology involves, there are many way for a university to use an advisory system whether they build themselves or they outsourcing. Managing and maintaining an advisory system need a lot of work involving manpower, money, time, and maintenance. For near and perfect example is UTP website [1] and E-learning [2]. Both examples are clear initiating that UTP not using a proper and better solution for student advisory system.

It's really hard to have a solid system to support the whole university but there is still a way to solve the problem. Based on my research and related to my topic, University of Kentucky in U.S.A [3] have implemented the SAP technology and used it as the current advisory system. Even though the universities have a lot of student, the management manages to overcome their problem by using SAP solution.

2.2 SAP Information and Usage

SAP R/3 is a client/server based application, utilizing a 3-tired model. A presentation layer, or client, interfaces with the user. The application layer houses all the business-specific logic and the database layer records and stores all the information about the system, including transactional and configuration data [4].

SAP R/3 functionality is structured using its own proprietary language called ABAP (Advanced Business Application Programming). ABAP or ABAP/4 is a fourth generation language (4GL). R/3 also offers a complete development environment where developers can either modify existing SAP code to modify existing

functionality or develop their own functions, whether reports or complete transactional systems within the SAP framework.

One of the advantage of ABAP's is the main interaction of the database system is via Open SQL statements. These statements allow a developer to query, update, or delete information from the database. Advanced topics include GUI development and advanced integration with other systems. With the introduction of ABAP object, ABAP provides the opportunity to develop applications with object-oriented programming [4].

SAP has several layers. The **Basis System** (BC) includes the ABAP programming language, and is the heart (i.e. the base) of operations and should not be visible to higher level or managerial users. Other customizing and implementation tools exist also. The heart of the system (from a manager's viewpoint) is the application modules [5].

2.3 System Hardware and Devices

There no need a lot of hardware devices to be use for this project. First, for database purpose, the project requires a normal standalone server. Server use for implementing SAP is using prototype server [6]. Secondly, for data transmitting, this project requires a normal mobile phone. For the data transmitting purpose, I used the Nokia [7] as example and further research will be done in the future that involving other type of mobile phone.

2.4 System Software and Programming Languages

Databases are most useful when it comes to storing information that fits into logical categories. For example, say that you wanted to store information of all the employees in a company. With a database you could group different parts of your business into separate tables.

SAP system has its own language name ABAP language [8]. It consists of its own object, parameter, GUI and database [9]. It is a complete set to be used because it has

all need to build a system. It also can import and export its data, interact with other language like JAVA or in MYSQL format. SAP platform it very compatible to be used for integration issues. For the website used as the platform form the database to the mobile phone, it actually only be used as a alternative if the integrated system have problem.

CHAPTER 3

METHODOLOGY

3.1 Methodology

The best system development methodology for the system is the Rapid Application Development methodology (RAD). This methodology is a combination of series of short, iterative development cycles which consists of analysis, design, build and test phases. Comparing to the traditional sequential development model e.g. Waterfall Methodology, this method have a number of advantages.

The objective of choosing this model is to build fast system development and delivery of a high quality system at a relatively low investment cost. It can reduce project risk by breaking the project into smaller segments and providing more ease-of-change during the development process. While this system concentrates on fulfilling the business need, and while technological or engineering excellence is of lesser importance, RAD is most suitable choice.

The project control involves prioritizing development and defining delivery deadlines or “time boxes”. If the project starts to slip, emphasis is on reducing requirements to fit the time box, not in increasing the deadline. Standard systems analysis and design techniques can also be fitted into this framework. The RAD methodology is most appropriate to be adopted in a small to medium scale and of short duration, where the project scope is focused, such that the business objectives are well defined and narrow such as Advance Advisory system.

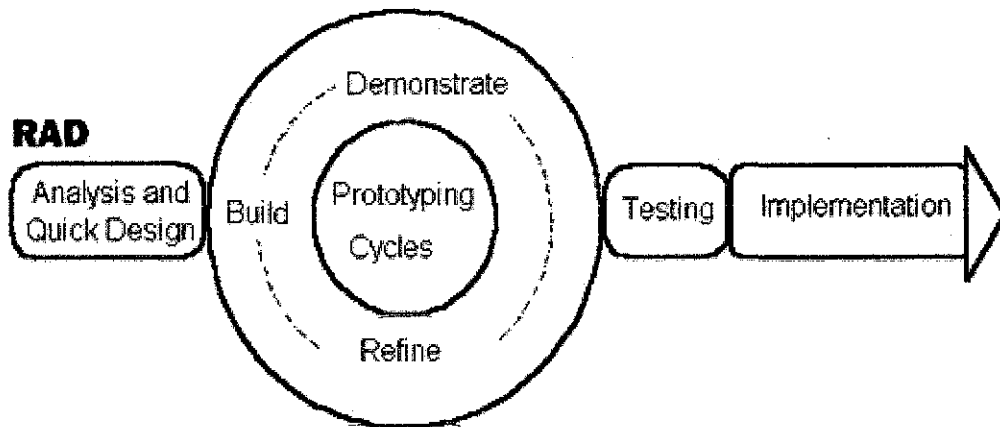


Figure 3.1 Traditional VS Rapid Application Developments (RAD)

3.1.1 Planning

Planning phase are related mostly on the source of the project, identifying the problems faced and the objectives of the project which involves most on overcoming the problems faced. Gathering information from friends, professional individuals and lecturers are also conducted in this phase to give the main idea, capability and feasibility of the project. Main part like database and program codes are decided here depend on the type of program need to create.

3.1.2 Analysis

User requirements and systems requirements information are gathered and documented in this phase. Research and literature reviews about related information of the system are studied by gathering journals, books, articles, and running surveys. Main areas of studies are service gateway, mobile technology, mobile devices and applications, database software and hardware devices. Software and hardware which will be used for the project development could also be determined during this phase while the specifications will be identified. All kind of information had been gathered through planning phase.

3.1.3 Designing

In designing phase, storyboard of the system is drafted based on the information gathered during analysis phases. Draft of the system interface and algorithms of the

system will be identified during this phase. The sub-systems and functional part of the system will be developed. The development method for the system is using bottom-up, from functional parts and sub-function of the system to development of system interfaces. The designing part will start at building a database to store information about the advertisement. Then, the system interface will be developed followed by developing coding and source code for the system. Continuing the design part, the next step is to configure the gateway so that the system will allow mobile network service. This step will be simultaneously designed with the hardware assembling. After all the functional parts developed is combined, the whole system will be up and running.

3.1.4 Testing

During testing phase, the functionality and reliability of the system will be tested on the real mobile phone with SMS technology. Before the testing with the real device, the testing will involve using an emulator so faults or errors of the software could be detected. After there are no problems regarding the software, real mobile phones will be used to test the hardware of the system. The testing will be conducted to many different users and many different mobile phones to ensure availability of the system. Also the testing will be conduct is the database itself with test data to know if the system will work properly or not.

3.1.5 Implementation

The implementation of the system will be done interchangeably with the testing phase to ensure the quality of the system and to reduce failure. The system will be released and used by normal users. Feedback and further suggestion for the system improvements is gathered for future enhancement.

3.2 System Hardware and Software

3.2.1 Minimum Software Requirements

i. Database Application

The database will enquire SAP database as the database program and Apache as the hosting.

ii. Coding Language

The suitable coding language is ABAP language.

iii. Website Program (Optional) –only used if SMS tool is not available.

A gateway program freeware will be used which will integrate with the database of the system to the SMS. This program is an important program as the medium. For this task, Microsoft Dream weaver is the most appropriate software.

iv. SMS tool

SMS tool name SMS debugger – simple Bluetooth connector.

3.2.2 Minimum Hardware Requirements

i. Computer (build in server)

Operating System : Window XP Professional 2002

Processor : Intel Pentium 4 2.8 GHz

Memory : One GB DDR RAM

HardDisk : (Big, in survey, depend on the test data)

iii. Mobile Phone – Any mobile phone

CHAPTER 4

SYSTEM FRAMEWORK

The Advance Advisory system is aimed at providing faster information to the target student within the campus area. The mobile devices in the area will be able to receive the information. The administrator will first need to create the database and the suitable program for the system to run. Once complete, student then have to visit the program created to select the information needed to send through SMS. Once the student have complete this step, an identify key will be generate in the program. The identify key is used for to activated the SMS function. Student is limited to five related information to be select to be sent via SMS.

Once the SMS is sent, the owner (student itself) will have to send back the identify key to verify the owner. After a while, the system will send the chosen information to the student. The progress to sending the information is done in instant. Examples of types of information are hostel room number, class venue and time or financial status. The information will be delivered through SMS.

After receiving the information reply from the server, the server will save all the information need by that particular student for further reference. The system should be able to store the information sent by the user into a database and will be viewable whenever an authorized person would retrieve the information. This feature replaces the traditional way of registering or form filling from paper based to mobile.

Graphical view of system framework.

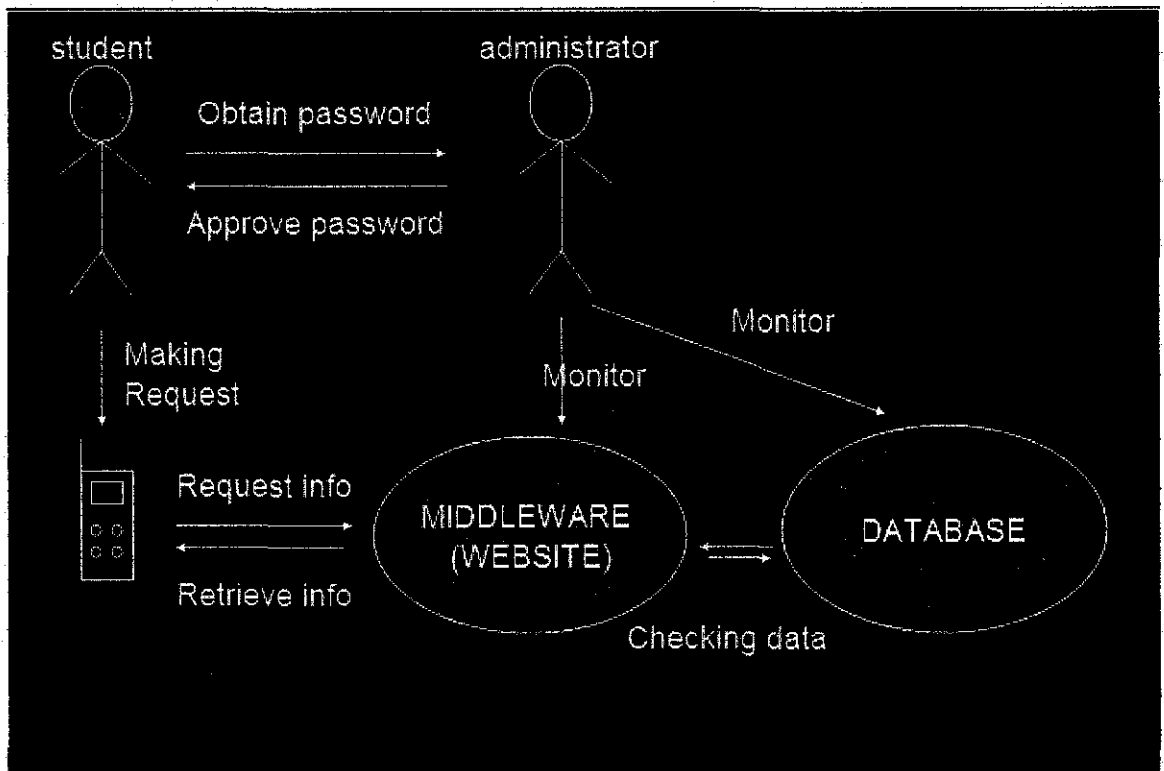


Figure 4.1

Storyboard

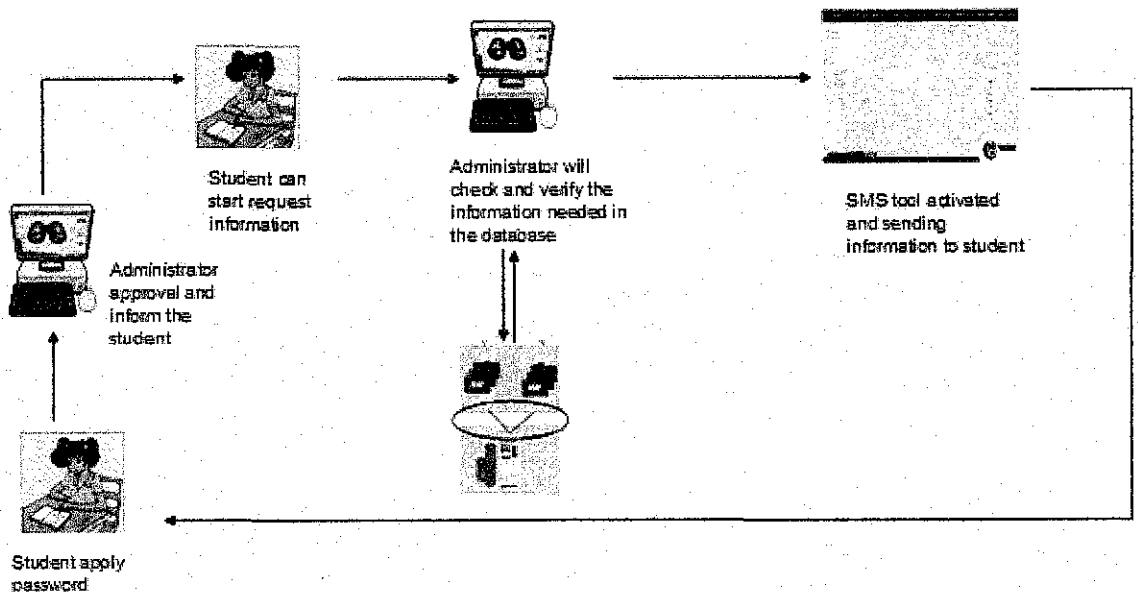


Figure 4.2

System Framework step

- 1) Student need to register with the administrator and ask for their password. (Each student will have their own unique password)
- 2) The Administrator will approve the password and register the user in the system. (administrator will need to ensure the user is register in other the next step can be execute)
- 3) Student start to making request through their hand phone. (Only five types of data will be executed at the testing process).
- 4) The website will get the signal from student hand phone, and will check if the data available in the database or not. (an administrator is needed to maintain the website from time to time)
- 5) In the meantime, the database will working as needed and ordered by the website.
- 6) Next, after the information is collected, the website will execute them and sent the data back to the student itself.

Sequence Diagram

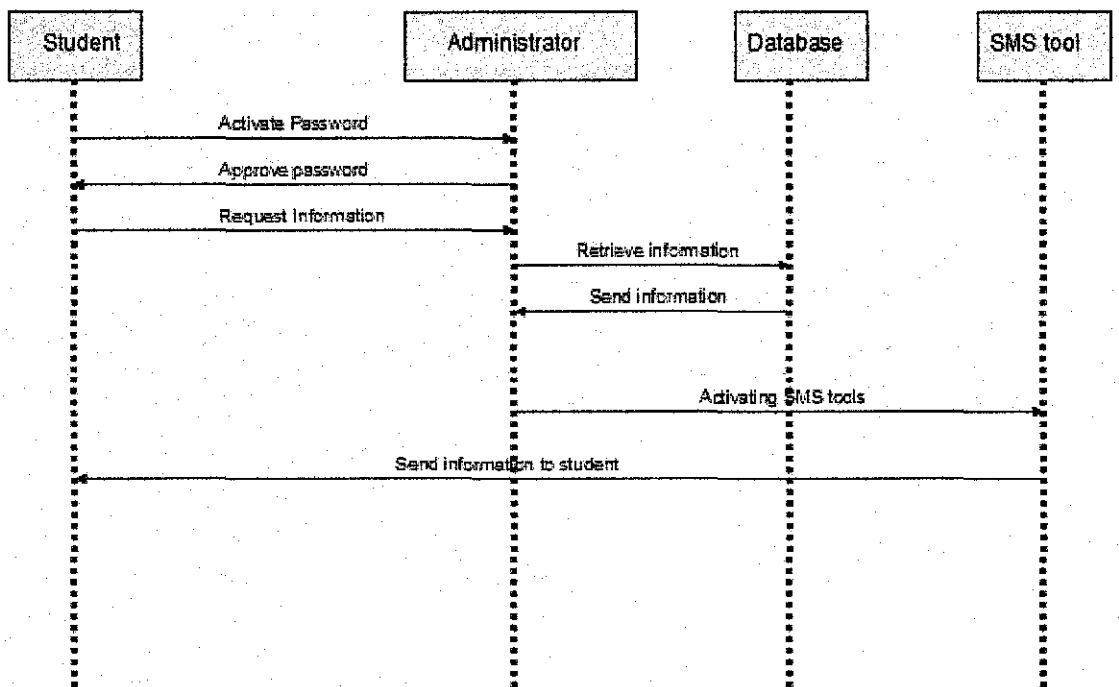


Figure 4.3

CHAPTER 5

RESULT AND DISCUSSION

5.1 Discussion and Meeting

Discussion and meeting had been conduct from time to time with the external party which is the company which I'm been practical with (Vantage Point Consultant subsidiary of HIGH TECH PADU). The discussion takes place whether with online (Yahoo Messenger) or going to the office itself. During the discussion many information had been gather and many new skill had been acquire. The information gathered really help me to overcome some problem which I faced during the designing the database and program creation phase. Besides, I also have contact one of the lecturer in UNIVERSITY OF KENTUCKY regarding my project. He also gives some tips to overcome some major problem faces by me while dealing with SAP system. My supervisor himself helps me by giving me example and information for my project.

Table/ data type sample that had been finish.

- UTP STUDENT = Z5313_UTPSTUD
- UTP DEPARTMENT = Z5313_UTPDEPT
- UTP STUDENT STATUS = Z5313_STUDSTAT
- UTP STUDENT EDUCATION STATUS = Z5313_STUDESTAT
- UTP SPONSPORSHIP = Z5313_UTPSPON
- UTP ACS = Z5313_UTPACS
- UTP FINANCE = Z5313_UTPFINANCE
- UTP HOSTEL DEPARTMENT = Z5313_UTPHOS
- UTP SECURITY = Z5313_UTP SECURITY
- UTP STUDENT VEHICLE = Z5313_UTPSTUDVEHI

Screenshot of on of the table:-

Fields	Key	Init	Field type	Data	Lgth	Dec.p.	Check table	Short text
SID	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ZSID	CHAR	6	0		Student Id data element
STUDENT_PROGRAM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ZPROGRAM	CHAR	20	0		Student Program
FNAME	<input type="checkbox"/>	<input type="checkbox"/>	ZFNAME	CHAR	15	0		customer's first name
LNAME	<input type="checkbox"/>	<input type="checkbox"/>	ZLNAME	CHAR	15	0		customer's last name
MAJOR	<input type="checkbox"/>	<input type="checkbox"/>	ZMAJOR	CHAR	20	0		Major of student
YEAROFSTUDY	<input type="checkbox"/>	<input type="checkbox"/>	ZYEAROFSTUDY	CHAR	25	0		Year of Study
ICNUMBER	<input type="checkbox"/>	<input type="checkbox"/>	ZSTUDICNUMBER	CHAR	15	0		Studet IC number
MAIN_SPONSORSHIP	<input type="checkbox"/>	<input type="checkbox"/>	ZSPONSOR	CHAR	20	0		Student Sponsorship
GENDER	<input type="checkbox"/>	<input type="checkbox"/>	ZSTUDGENDER	CHAR	6	0		Student Gender
STATUS	<input type="checkbox"/>	<input type="checkbox"/>	ZSTUDSTATUS	CHAR	20	0		Student Status
PHONENUMBER	<input type="checkbox"/>	<input type="checkbox"/>	ZPHONE	CHAR	30	0		Data element for phone Number
RACE	<input type="checkbox"/>	<input type="checkbox"/>	ZRACE	CHAR	20	0		Race
RELIGION	<input type="checkbox"/>	<input type="checkbox"/>	ZRELIGION	CHAR	20	0		Religion
EMAIL	<input type="checkbox"/>	<input type="checkbox"/>	ZEMAIL	CHAR	20	0		Student Email
BOD	<input type="checkbox"/>	<input type="checkbox"/>	ZBOD	INT4	10	0		Date of Birth
FINANCIAL STATUS	<input type="checkbox"/>	<input type="checkbox"/>	ZSTAT	CHAR	20	0		Student Finance Status
COUNTRY	<input type="checkbox"/>	<input type="checkbox"/>	ZCOUNTRY	CHAR	20	0		Student Nationality

Table 5.1.1

Coding screenshot:-

```

ABAP Editor: Change Report Z5313_FYP001
Report Z5313_FYP001 Active
parameters: rb_ch05 type c as checkbox default ''.
Selection-screen end of block b1.
START-OF-SELECTION.
*****1001
*all data
IF so_cust = '1001' and
  rb_ch01 = 'X' and
  rb_ch02 = '' and
  rb_ch03 = '' and
  rb_ch04 = '' and
  rb_ch05 = ''.

select *
from Z5313_utpstud into table it_student
where SID = SO_CUST.

LOOP AT it_student INTO wa_student.
  uLINE.
  WRITE:/ sy-vLINE, 'STUDENT NAME:', wa_student-STUDENT_NAME.
  WRITE:/ sy-vLINE, 'STUDENT ID:', wa_student-SID.
  WRITE:/ sy-vLINE, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
  uLINE.

  WRITE:/'MINOR:', wa_student-MAJOR,
  / 'STATUS:', wa_student-STATUS,
  / 'LAST SEMESTER RESULT:', wa_student-STUDENTRESULT,
  / 'EMAIL ADDRESS:', wa_student-EMAIL

```

Figure 5.1.1

Screen shot selection screen:-

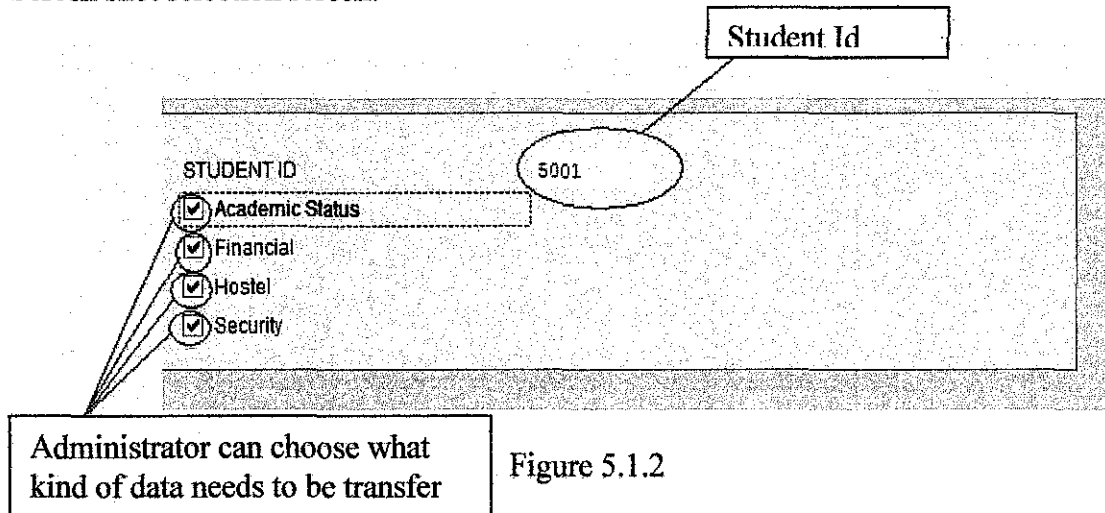


Figure 5.1.2

Screen shot of Output Screen:-

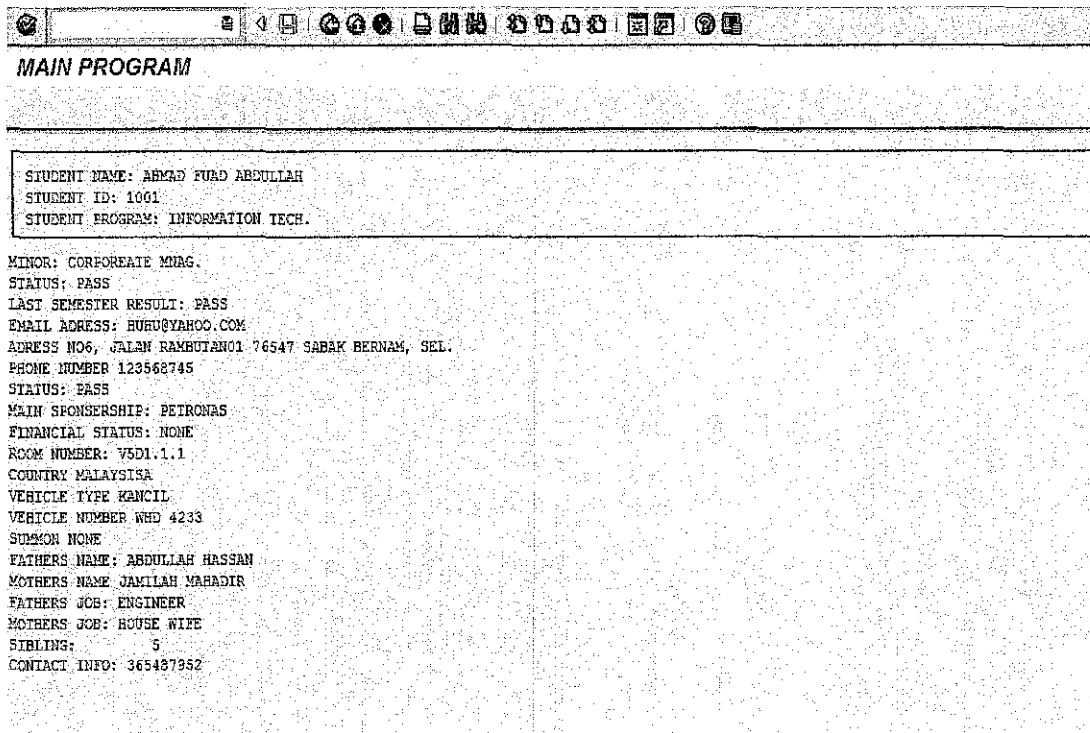


Figure 5.1.3

5.2 Problem Faced

5.2.1 Database Security

For now, the table which will be used for the project is safe in local system which means it can be access and edit by other user. The problem will rise if the table or program will be edit by other user.

5.2.2 Student Data Insertion Template.

In the SAP system itself, there is some template need to be used for certain cases. Student template really come into handy if it can be get from external party or simply can be buy from SAP office which is very expensive.

5.3 Solution for the problem.

5.3.1 Database Security

For this problem, I had discuss with my supervisor to give me a development class which mean only I and my supervisor can access the progress of my system. The solution definitely overcomes the problem face for this topic.

5.3.2 Student Data Insertion Template

Having discussion with external party (Lecturer from UNIVERSITY OF KENTUCKY) really helpful and I hope he can help me by giving me some sample of student data insertion template. I will wait until I get the resources. By the way, the other solution is stated below. The other way is to create a new program to save the data insert by administrator and call in the main program. These choices might be difficult to be done which need more time and resources to be complete.

CONCLUSION

This report describes the overview of the Advanced advisory system development. The system utilizes SAP technology and mobile devices network connectivity to deliver and receive messages. The idea of the system is to overcome the problems faced by existing system by providing new way to deliver information yet preserving the main objective of advertising and provide advertising needs. The report also explains the appropriate and most effective methodology for this type of project which is Rapid Application Development (RAD). Stated in the report are the system hardware and software requirements and specifications. The system is aimed to ensure the information detail are to be delivered to target student in the covered area thus optimizing the database resource and costs and also providing easier way for student to solve their problem independently and without any error.

In the final report, I also include the work which had been done for the past development months besides having meeting and discussion with the external party. Even though Sap system will need to be charged of the maintenance and support when it is implemented, but it is very good if SAP system to be compared with other kind of system.

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Other References

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Appendix

Project timeline

No	Detail	Week													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Obtain resources														
2	Documentation Process														
3	Meeting														
4	Project creation														
5	Testing														

- Milestone
- 1st Seminar
- 2nd Seminar
- Meeting with external

Coding line

```
REPORT Z5313_FYP001
NO STANDARD PAGE HEADING.
```

```
CONSTANTS pos TYPE i VALUE 72.
```

```
tables: z5313_utpstud.
```

```
data:
```

```
it_student type table of Z5313_utpstud ,
wa_student LIKE LINE OF it_student,
field1(10) TYPE c,
field2(10) TYPE c, field3(10) TYPE c,
box TYPE c,
it_course_reg TYPE STANDARD TABLE OF z5313_utpstud,
wa_course_reg like it_course_reg,
one type c,
ok_code TYPE sy-ucomm.
```

```
Selection-screen begin of block b1 with frame title text-001.
```

```
parameters:so_cust(10) TYPE C.
```

```
parameters: rb_ch01 type c as checkbox default ''.
```

```
parameters: rb_ch02 type c as checkbox default ''.
```

```
parameters: rb_ch03 type c as checkbox default ''.
```

```
parameters: rb_ch04 type c as checkbox default ''.
```

```
parameters: rb_ch05 type c as checkbox default ''.
```

```
Selection-screen end of block b1.
```

```
START-OF-SELECTION.
```

```
*****1001
```

```
*all data
```

```
IF so_cust = '1001' and
```

```
rb_ch01 = 'X' and
```

```
rb_ch02 = '' and
```

```
rb_ch03 = '' and
```

```
rb_ch04 = '' and
rb_ch05 = ''.
```

```
select *
from Z5313_utpstud into table it_student
where SID = SO_CUST.
```

```
LOOP AT it_student INTO wa_student.
```

```
uline.
WRITE:/ sy-vline, 'STUDENT NAME:', wa_student-STUDENT_NAME.
WRITE:/ sy-vline, 'STUDENT ID:', wa_student-SID.
WRITE:/ sy-vline, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
uline.
```

```
WRITE:/'MINOR:', wa_student-MAJOR,
/ 'STATUS:',wa_student-STATUS,
/ 'LAST SEMESTER RESULT:',wa_student-STUDENTRESULT,
/ 'EMAIL ADRESS:',wa_student-EMAIL,
/ 'ADRESS',wa_student-STUDENT_ADDRESS,
/ 'PHONE NUMBER',wa_student-STUDENT_PHONENUM,
/ 'STATUS:',wa_student-STATUS,
/ 'MAIN SPONSERSHIP:',wa_student-MAIN_SPONSORSHIP,
/ 'FINANCIAL STATUS:',wa_student-FINANCIAL_STATUS,
/ 'ROOM NUMBER:', wa_student-ROOM_NO,
/ 'COUNTRY',wa_student-COUNTRY,
/ 'VEHICLE TYPE', wa_student-VEHICLE_TYPE,
/ 'VEHICLE NUMBER', wa_student-VEHICLE_NUMBER,
/ 'SUMMON', wa_student-SUMMON,
/ 'FATHERS NAME:', wa_student-FATHERS_NAME,
/ 'MOTHERS NAME', wa_student-MOTHERS_NAME,
/ 'FATHERS JOB:', wa_student-FATHERS_JOB,
/ 'MOTHERS JOB:', wa_student-MOTHERS_JOB,
/ 'SIBLING:', wa_student-SIBLING,
/ 'CONTACT INFO:', wa_student-STUDENT_HOMENUM.
```

```
endloop.
```

```
*academic 2
```

```
ELSEIF so_cust = '1001' and
rb_ch01 = '' and
rb_ch02 = 'X' and
rb_ch03 = '' and
rb_ch04 = '' and
rb_ch05 = ''.
```

```
select *
from Z5313_utpstud into table it_student
where SID = SO_CUST.
LOOP AT it_student INTO wa_student.
```

```
uline.
WRITE:/ sy-vline, 'STUDENT NAME:', wa_student-STUDENT_NAME.
WRITE:/ sy-vline, 'STUDENT ID:', wa_student-SID.
WRITE:/ sy-vline, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
uline.
```

```
WRITE:/'MINOR:', wa_student-MAJOR,
/ 'STATUS:',wa_student-STATUS,
/ 'LAST SEMESTER RESULT:',wa_student-STUDENTRESULT,
/ 'EMAIL ADRESS:',wa_student-EMAIL,
/ 'ADRESS',wa_student-STUDENT_ADDRESS,
/ 'PHONE NUMBER',wa_student-STUDENT_PHONENUM.
```

```
endloop.
```

```
*financial 3
```

```
elseif so_cust = '1001' and
rb_ch01 = '' and
rb_ch02 = '' and
rb_ch03 = 'X' and
rb_ch04 = '' and
rb_ch05 = ''.
```

```

SELECT *
from Z5313_utpstud into table it_student
where SID = SO_CUST.
LOOP AT it_student INTO wa_student.
  uLINE.
  WRITE:/ sy-vLINE, 'STUDENT NAME:', wa_student-STUDENT_NAME.
  WRITE:/ sy-vLINE, 'STUDENT ID:', wa_student-SID.
  WRITE:/ sy-vLINE, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
  uLINE.

  WRITE: / 'STATUS:',wa_student-STATUS,
          / 'MAIN SPONERSHIP:',wa_student-MAIN_SPONSORSHIP,
          / 'FINANCIAL STATUS:',wa_student-FINANCIAL_STATUS.
endloop.

*hostel 4
elseif so_cust = '1001' and
  rb_ch01 = '' and
  rb_ch02 = '' and
  rb_ch03 = '' and
  rb_ch04 = 'X' and
  rb_ch05 = ''.

select *
from Z5313_utpstud into table it_student
where SID = SO_CUST.
LOOP AT it_student INTO wa_student.
  uLINE.
  WRITE:/ sy-vLINE, 'STUDENT NAME:', wa_student-STUDENT_NAME.
  WRITE:/ sy-vLINE, 'STUDENT ID:', wa_student-SID.
  WRITE:/ sy-vLINE, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
  uLINE.

  WRITE:/ 'ROOM NUMBER:', wa_student-ROOM_NO.
endloop.

*security 5
elseif so_cust = '1001' and
  rb_ch01 = '' and
  rb_ch02 = '' and
  rb_ch03 = '' and
  rb_ch04 = '' and
  rb_ch05 = 'X'.

SELECT *
from Z5313_utpstud into table it_student
where SID = SO_CUST.
LOOP AT it_student INTO wa_student.
  uLINE.
  WRITE:/ sy-vLINE, 'STUDENT NAME:', wa_student-STUDENT_NAME.
  WRITE:/ sy-vLINE, 'STUDENT ID:', wa_student-SID.
  WRITE:/ sy-vLINE, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
  uLINE.

  WRITE:
  / 'VEHICLE TYPE', wa_student-VEHICLE_TYPE,
  / 'VEHICLE NUMBER', wa_student-VEHICLE_NUMBER,
  / 'SUMMON', wa_student-SUMMON.
endloop.

*2 n 3
elseif so_cust = '1001' and
  rb_ch01 = '' and
  rb_ch02 = 'X' and
  rb_ch03 = 'X' and
  rb_ch04 = '' and
  rb_ch05 = ''.

select *
from Z5313_utpstud into table it_student
where SID = SO_CUST.

```

```

LOOP AT it_student INTO wa_student.
  uLINE.
  WRITE:/ sy-vLINE, 'STUDENT NAME:', wa_student-sID.
  WRITE:/ sy-vLINE, 'STUDENT ID:', wa_student-STUDENT_NAME.
  WRITE:/ sy-vLINE, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
  uLINE.
  WRITE:/'MINOR:', wa_student-MAJOR,
    / 'STATUS:',wa_student-STATUS,
    / 'LAST SEMESTER RESULT:',wa_student-STUDENTRESULT,
    / 'EMAIL ADRESS:',wa_student-EMAIL,
    / 'ADRESS',wa_student-STUDENT_ADDRESS,
    / 'PHONE NUMBER',wa_student-STUDENT_PHONENUM,
    / 'VEHICLE NUMBER',wa_student-VEHICLE_NUMBER,
    / 'MAIN SPONSERSHIP:',wa_student-MAIN_SPONSORSHIP,
    / 'FINANCIAL STATUS:',wa_student-FINANCIAL_STATUS.

endloop.

```

```

*2 n 4
elseif so_cust = '1001' and
  rb_ch01 = '' and
  rb_ch02 = 'X' and
  rb_ch03 = '' and
  rb_ch04 = 'X' and
  rb_ch05 = ''.

```

```

select *
from Z5313_utpstud into table it_student
where SID = SO_CUST.
LOOP AT it_student INTO wa_student.
  uLINE.
  WRITE:/ sy-vLINE, 'STUDENT NAME:', wa_student-sID.
  WRITE:/ sy-vLINE, 'STUDENT ID:', wa_student-STUDENT_NAME.
  WRITE:/ sy-vLINE, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
  uLINE.
  WRITE:/'MINOR:', wa_student-MAJOR,
    / 'STATUS:',wa_student-STATUS,
    / 'LAST SEMESTER RESULT:',wa_student-STUDENTRESULT,
    / 'EMAIL ADRESS:',wa_student-EMAIL,
    / 'ADRESS',wa_student-STUDENT_ADDRESS,
    / 'PHONE NUMBER',wa_student-STUDENT_PHONENUM,
    / 'VEHICLE NUMBER',wa_student-VEHICLE_NUMBER.
endloop.

```

```

* 2 n 5
elseif so_cust = '1001' and
  rb_ch01 = '' and
  rb_ch02 = 'X' and
  rb_ch03 = '' and
  rb_ch04 = '' and
  rb_ch05 = 'X'.

```

```

select *
from Z5313_utpstud into table it_student
where SID = SO_CUST.
LOOP AT it_student INTO wa_student.
  uLINE.
  WRITE:/ sy-vLINE, 'STUDENT NAME:', wa_student-sID.
  WRITE:/ sy-vLINE, 'STUDENT ID:', wa_student-STUDENT_NAME.
  WRITE:/ sy-vLINE, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
  uLINE.

  WRITE:/'MINOR:', wa_student-MAJOR,
    / 'STATUS:',wa_student-STATUS,
    / 'LAST SEMESTER RESULT:',wa_student-STUDENTRESULT,
    / 'EMAIL ADRESS:',wa_student-EMAIL,
    / 'ADRESS',wa_student-STUDENT_ADDRESS,
    / 'PHONE NUMBER',wa_student-STUDENT_PHONENUM,
    / 'VEHICLE NUMBER',wa_student-VEHICLE_NUMBER,
    / 'ROOM NUMBER:', wa_student-ROOM_NO.
endloop.

```

*3 n 4

```
elseIF so_cust = '1001' and
  rb_ch01 = '' and
  rb_ch02 = '' and
  rb_ch03 = 'X' and
  rb_ch04 = 'X' and
  rb_ch05 = ''

select *
from Z5313_utpstud into table it_student
where SID = SO_CUST.
LOOP AT it_student INTO wa_student.
  uLINE.
  WRITE:/ sy-vLINE, 'STUDENT NAME:', wa_student-STUDENT_NAME.
  WRITE:/ sy-vLINE, 'STUDENT ID:', wa_student-SID.
  WRITE:/ sy-vLINE, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
  uLINE.

  WRITE: / 'STATUS:',wa_student-STATUS,
    / 'MAIN SPONSERSHIP:',wa_student-MAIN SPONSORSHIP,
    / 'FINANCIAL STATUS:',wa_student-FINANCIAL_STATUS,
    / 'ROOM NUMBER:', wa_student-ROOM_NO.

endloop.
```

*3 n 5

```
elseIF so_cust = '1001' and
  rb_ch01 = '' and
  rb_ch02 = '' and
  rb_ch03 = 'X' and
  rb_ch04 = '' and
  rb_ch05 = 'X'.

select *
from Z5313_utpstud into table it_student
where SID = SO_CUST.
LOOP AT it_student INTO wa_student.
  uLINE.
  WRITE:/ sy-vLINE, 'STUDENT NAME:', wa_student-STUDENT_NAME.
  WRITE:/ sy-vLINE, 'STUDENT ID:', wa_student-SID.
  WRITE:/ sy-vLINE, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
  uLINE.

  WRITE:/ 'STATUS:',wa_student-STATUS,
    / 'MAIN SPONSERSHIP:',wa_student-MAIN SPONSORSHIP,
    / 'FINANCIAL STATUS:',wa_student-FINANCIAL_STATUS,
    / 'VEHICLE TYPE', wa_student-VEHICLE_TYPE,
    / 'VEHICLE NUMBER', wa_student-VEHICLE_NUMBER,
    / 'SUMMON', wa_student-SUMMON,
    / 'VEHICLE TYPE', wa_student-VEHICLE_TYPE,
    / 'VEHICLE NUMBER', wa_student-VEHICLE_NUMBER,
    / 'SUMMON', wa_student-SUMMON.

endloop.
```

*4 n 5

```
elseIF so_cust = '1001' and
  rb_ch01 = '' and
  rb_ch02 = '' and
  rb_ch03 = '' and
  rb_ch04 = 'X' and
  rb_ch05 = 'X'.

select *
from Z5313_utpstud into table it_student
```

```

where SID = SO_CUST.
LOOP AT it_student INTO wa_student.
  uLINE.
  WRITE:/ sy-vLINE, 'STUDENT NAME:', wa_student-STUDENT_NAME.
  WRITE:/ sy-vLINE, 'STUDENT ID:', wa_student-SID.
  WRITE:/ sy-vLINE, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
  uLINE.

  WRITE:
  / 'ROOM NUMBER:', wa_student-ROOM_NO,
  / 'VEHICLE TYPE', wa_student-VEHICLE_TYPE,
  / 'VEHICLE NUMBER', wa_student-VEHICLE_NUMBER,
  / 'SUMMON', wa_student-SUMMON.
endloop.

```

*3 n 4 n 5

```

elseif so_cust = '1001' and
  rb_ch01 = '' and
  rb_ch02 = '' and
  rb_ch03 = 'X' and
  rb_ch04 = 'X' and
  rb_ch05 = 'X'.

```

select *

```

from Z5313_utpstud into table it_student
where SID = SO_CUST.
LOOP AT it_student INTO wa_student.
  uLINE.
  WRITE:/ sy-vLINE, 'STUDENT NAME:', wa_student-STUDENT_NAME.
  WRITE:/ sy-vLINE, 'STUDENT ID:', wa_student-SID.
  WRITE:/ sy-vLINE, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
  uLINE.
  WRITE:/ 'STATUS:', wa_student-STATUS,
  / 'MAIN SPONSERSHIP:', wa_student-MAIN SPONSORSHIP,
  / 'FINANCIAL STATUS:', wa_student-FINANCIAL_STATUS,
  / 'ROOM NUMBER:', wa_student-ROOM_NO,
  / 'VEHICLE TYPE', wa_student-VEHICLE_TYPE,
  / 'VEHICLE NUMBER', wa_student-VEHICLE_NUMBER,
  / 'SUMMON', wa_student-SUMMON.
endloop.

```

*2 n 4 n 5

```

elseif so_cust = '1001' and
  rb_ch01 = '' and
  rb_ch02 = 'X' and
  rb_ch03 = '' and
  rb_ch04 = 'X' and
  rb_ch05 = 'X'.

```

select *

```

from Z5313_utpstud into table it_student
where SID = SO_CUST.
LOOP AT it_student INTO wa_student.
  uLINE.
  WRITE:/ sy-vLINE, 'STUDENT NAME:', wa_student-STUDENT_NAME.
  WRITE:/ sy-vLINE, 'STUDENT ID:', wa_student-SID.
  WRITE:/ sy-vLINE, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
  uLINE.
  WRITE:/ 'MINOR:', wa_student-MAJOR,
  / 'STATUS:', wa_student-STATUS,
  / 'LAST SEMESTER RESULT:', wa_student-STUDENTRESULT,
  / 'EMAIL ADDRESS:', wa_student-EMAIL,
  / 'ADDRESS', wa_student-STUDENT_ADDRESS,
  / 'PHONE NUMBER', wa_student-STUDENT_PHONENUM,
  / 'VEHICLE NUMBER', wa_student-VEHICLE_NUMBER.
endloop.

```

*****1001
*****1002

*all data

```
ELSEIF so_cust = '1002' and
  rb_ch01 = 'X' and
  rb_ch02 = '' and
  rb_ch03 = '' and
  rb_ch04 = '' and
  rb_ch05 = ''.
```

```
select *
from Z5313_utpstud into table it_student
where SID = SQ_CUST.
```

```
LOOP AT it_student INTO wa_student.
```

```
  uline.
  WRITE:/ sy-vline, 'STUDENT NAME:', wa_student-STUDENT_NAME.
  WRITE:/ sy-vline, 'STUDENT ID:', wa_student-SID.
  WRITE:/ sy-vline, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
  uline.
```

```
  WRITE:/ 'MINOR:', wa_student-MAJOR,
  / 'STATUS:', wa_student-STATUS,
  / 'LAST SEMESTER RESULT:', wa_student-STUDENTRESULT,
  / 'EMAIL ADDRESS:', wa_student-EMAIL,
  / 'ADDRESS', wa_student-STUDENT_ADDRESS,
  / 'PHONE NUMBER', wa_student-STUDENT_PHONENUM,
  / 'STATUS:', wa_student-STATUS,
  / 'MAIN SPONSERSHIP:', wa_student-MAIN_SPONSORSHIP,
  / 'FINANCIAL STATUS:', wa_student-FINANCIAL_STATUS,
  / 'ROOM NUMBER:', wa_student-ROOM_NO,
  / 'COUNTRY', wa_student-COUNTRY,
  / 'VEHICLE TYPE', wa_student-VEHICLE_TYPE,
  / 'VEHICLE NUMBER', wa_student-VEHICLE_NUMBER,
  / 'SUMMON', wa_student-SUMMON,
  / 'FATHERS NAME:', wa_student-FATHERS_NAME,
  / 'MOTHERS NAME', wa_student-MOTHERS_NAME,
  / 'FATHERS JOB:', wa_student-FATHERS_JOB,
  / 'MOTHERS JOB:', wa_student-MOTHERS_JOB,
  / 'SIBLING:', wa_student-SIBLING,
  / 'CONTACT INFO:', wa_student-STUDENT_HOMENUM.
```

```
endloop.
```

*academic 2

```
ELSEIF so_cust = '1002' and
  rb_ch01 = '' and
  rb_ch02 = 'X' and
  rb_ch03 = '' and
  rb_ch04 = '' and
  rb_ch05 = ''.
```

```
select *
from Z5313_utpstud into table it_student
where SID = SQ_CUST.
```

```
LOOP AT it_student INTO wa_student.
```

```
  uline.
  WRITE:/ sy-vline, 'STUDENT NAME:', wa_student-STUDENT_NAME.
  WRITE:/ sy-vline, 'STUDENT ID:', wa_student-SID.
  WRITE:/ sy-vline, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
  uline.
```

```
  WRITE: / 'MINOR:', wa_student-MAJOR,
  / 'STATUS:', wa_student-STATUS,
  / 'LAST SEMESTER RESULT:', wa_student-STUDENTRESULT,
  / 'EMAIL ADDRESS:', wa_student-EMAIL,
  / 'ADDRESS', wa_student-STUDENT_ADDRESS,
  / 'PHONE NUMBER', wa_student-STUDENT_PHONENUM.
```

```
endloop.
```

*financial 3

```
elseIF so_cust = '1002' and
```



```

    rb_ch01 = '' and
    rb_ch02 = '' and
    rb_ch03 = 'X' and
    rb_ch04 = '' and
    rb_ch05 = ''

SELECT *
from Z5313_utpstud into table it_student
where SID = SO_CUST.
LOOP AT it_student INTO wa_student.
    uline.
    WRITE:/ sy-vline, 'STUDENT NAME:', wa_student-STUDENT_NAME.
    WRITE:/ sy-vline, 'STUDENT ID:', wa_student-SID.
    WRITE:/ sy-vline, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
    uline.

    WRITE: / 'STATUS:',wa_student-STATUS,
            / 'MAIN SPONSERSHIP:',wa_student-MAIN_SPONSORSHIP,
            / 'FINANCIAL STATUS:',wa_student-FINANCIAL_STATUS.
endloop.

*hostel 4
elseif so_cust = '1002' and
    rb_ch01 = '' and
    rb_ch02 = '' and
    rb_ch03 = '' and
    rb_ch04 = 'X' and
    rb_ch05 = ''

select *
from Z5313_utpstud into table it_student
where SID = SO_CUST.
LOOP AT it_student INTO wa_student.
    uline.
    WRITE:/ sy-vline, 'STUDENT NAME:', wa_student-STUDENT_NAME.
    WRITE:/ sy-vline, 'STUDENT ID:', wa_student-SID.
    WRITE:/ sy-vline, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
    uline.

    WRITE:/ 'ROOM NUMBER:', wa_student-ROOM_NO.
endloop.

*security 5
elseif so_cust = '1002' and
    rb_ch01 = '' and
    rb_ch02 = '' and
    rb_ch03 = '' and
    rb_ch04 = '' and
    rb_ch05 = 'X'.

SELECT *
from Z5313_utpstud into table it_student
where SID = SO_CUST.
LOOP AT it_student INTO wa_student.
    uline.
    WRITE:/ sy-vline, 'STUDENT NAME:', wa_student-STUDENT_NAME.
    WRITE:/ sy-vline, 'STUDENT ID:', wa_student-SID.
    WRITE:/ sy-vline, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
    uline.

    WRITE:
    / 'VEHICLE TYPE', wa_student-VEHICLE_TYPE,
    / 'VEHICLE NUMBER', wa_student-VEHICLE_NUMBER,
    / 'SUMMON', wa_student-SUMMON.
endloop.

*2 n 3
elseif so_cust = '1002' and
    rb_ch01 = '' and
    rb_ch02 = 'X' and
    rb_ch03 = 'X' and

```

```
rb_ch04 = '' and
rb_ch05 = ''.
```

```
select *
from Z5313_utpstud into table it_student
where SID = SO_CUST.
LOOP AT it_student INTO wa_student.
  uline.
  WRITE:/ sy-vline, 'STUDENT NAME:', wa_student-sid.
  WRITE:/ sy-vline, 'STUDENT ID:', wa_student-STUDENT_NAME.
  WRITE:/ sy-vline, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
  uline.
  WRITE:/ 'MINOR:', wa_student-MAJOR,
  / 'STATUS:', wa_student-STATUS,
  / 'LAST SEMESTER RESULT:', wa_student-STUDENTRESULT,
  / 'EMAIL ADRESS:', wa_student-EMAIL,
  / 'ADRESS', wa_student-STUDENT_ADDRESS,
  / 'PHONE NUMBER', wa_student-STUDENT_PHONENUM,
  / 'VEHICLE NUMBER', wa_student-VEHICLE_NUMBER,
  / 'MAIN SPONSERSHIP:', wa_student-MAIN_SPONSORSHIP,
  / 'FINANCIAL STATUS:', wa_student-FINANCIAL_STATUS.

endloop.
```

```
*2 n 4
```

```
elseif so_cust = '1002' and
  rb_ch01 = '' and
  rb_ch02 = 'X' and
  rb_ch03 = '' and
  rb_ch04 = 'X' and
  rb_ch05 = ''.
```

```
select *
from Z5313_utpstud into table it_student
where SID = SO_CUST.
LOOP AT it_student INTO wa_student.
  uline.
  WRITE:/ sy-vline, 'STUDENT NAME:', wa_student-sid.
  WRITE:/ sy-vline, 'STUDENT ID:', wa_student-STUDENT_NAME.
  WRITE:/ sy-vline, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
  uline.
  WRITE:/ 'MINOR:', wa_student-MAJOR,
  / 'STATUS:', wa_student-STATUS,
  / 'LAST SEMESTER RESULT:', wa_student-STUDENTRESULT,
  / 'EMAIL ADRESS:', wa_student-EMAIL,
  / 'ADRESS', wa_student-STUDENT_ADDRESS,
  / 'PHONE NUMBER', wa_student-STUDENT_PHONENUM,
  / 'VEHICLE NUMBER', wa_student-VEHICLE_NUMBER.

endloop.
```

```
* 2 n 5
```

```
elseif so_cust = '1002' and
  rb_ch01 = '' and
  rb_ch02 = 'X' and
  rb_ch03 = '' and
  rb_ch04 = '' and
  rb_ch05 = 'X'.
```

```
select *
from Z5313_utpstud into table it_student
where SID = SO_CUST.
LOOP AT it_student INTO wa_student.
  uline.
  WRITE:/ sy-vline, 'STUDENT NAME:', wa_student-sid.
  WRITE:/ sy-vline, 'STUDENT ID:', wa_student-STUDENT_NAME.
  WRITE:/ sy-vline, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
  uline.

  WRITE:/ 'MINOR:', wa_student-MAJOR,
  / 'STATUS:', wa_student-STATUS,
  / 'LAST SEMESTER RESULT:', wa_student-STUDENTRESULT,
```

```

    / 'EMAIL ADRESS:',wa_student-EMAIL,
    / 'ADRESS',wa_student-STUDENT ADDRESS,
    / 'PHONE NUMBER',wa_student-STUDENT PHONENUM,
    / 'VEHICLE NUMBER',wa_student-VEHICLE_NUMBER,
    / 'ROOM NUMBER:', wa_student-ROOM_NO.
endloop.

```

*3 n 4

```

elseif so_cust = '1002' and
    rb_ch01 = '' and
    rb_ch02 = '' and
    rb_ch03 = 'X' and
    rb_ch04 = 'X' and
    rb_ch05 = ''.

select *
from Z5313_utpstud into table it_student
where SID = SO_CUST.
LOOP AT it_student INTO wa_student.
    ueline.
    WRITE:/ sy-vline, 'STUDENT NAME:', wa_student-STUDENT_NAME.
    WRITE:/ sy-vline, 'STUDENT ID:', wa_student-SID.
    WRITE:/ sy-vline, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
    ueline.

    WRITE: / 'STATUS:',wa_student-STATUS,
    / 'MAIN SPONSERSHIP:',wa_student-MAIN_SPONSORSHIP,
    / 'FINANCIAL STATUS:',wa_student-FINANCIAL_STATUS,
    / 'ROOM NUMBER:', wa_student-ROOM_NO.

endloop.

```

*3 n 5

```

elseif so_cust = '1002' and
    rb_ch01 = '' and
    rb_ch02 = '' and
    rb_ch03 = 'X' and
    rb_ch04 = '' and
    rb_ch05 = 'X'.

select *
from Z5313_utpstud into table it_student
where SID = SO_CUST.
LOOP AT it_student INTO wa_student.
    ueline.
    WRITE:/ sy-vline, 'STUDENT NAME:', wa_student-STUDENT_NAME.
    WRITE:/ sy-vline, 'STUDENT ID:', wa_student-SID.
    WRITE:/ sy-vline, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
    ueline.

    WRITE:/ 'STATUS:',wa_student-STATUS,
    / 'MAIN SPONSERSHIP:',wa_student-MAIN_SPONSORSHIP,
    / 'FINANCIAL STATUS:',wa_student-FINANCIAL_STATUS,
    / 'VEHICLE TYPE', wa_student-VEHICLE_TYPE,
    / 'VEHICLE NUMBER', wa_student-VEHICLE_NUMBER,
    / 'SUMMON', wa_student-SUMMON,
    / 'VEHICLE TYPE', wa_student-VEHICLE_TYPE,
    / 'VEHICLE NUMBER', wa_student-VEHICLE_NUMBER,
    / 'SUMMON', wa_student-SUMMON.

endloop.

```

*4 n 5

```

elseif so_cust = '1002' and
    rb_ch01 = '' and
    rb_ch02 = '' and
    rb_ch03 = '' and
    rb_ch04 = 'X' and

```

```
rb_ch05 = 'X'.
```

```
select *
from Z5313_utpstud into table it_student
where SID = SO_CUST.
LOOP AT it_student INTO wa_student.
  uLINE.
  WRITE:/ sy-vLINE, 'STUDENT NAME:', wa_student-STUDENT_NAME.
  WRITE:/ sy-vLINE, 'STUDENT ID:', wa_student-SID.
  WRITE:/ sy-vLINE, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
  uLINE.

  WRITE:
  / 'ROOM NUMBER:', wa_student-ROOM_NO,
  / 'VEHICLE TYPE', wa_student-VEHICLE_TYPE,
  / 'VEHICLE NUMBER', wa_student-VEHICLE_NUMBER,
  / 'SUMMON', wa_student-SUMMON.
endloop.
```

```
*3 n 4 n 5
```

```
elseif so_cust = '1002' and
  rb_ch01 = '' and
  rb_ch02 = '' and
  rb_ch03 = 'X' and
  rb_ch04 = 'X' and
  rb_ch05 = 'X'.
```

```
select *
from Z5313_utpstud into table it_student
where SID = SO_CUST.
LOOP AT it_student INTO wa_student.
  uLINE.
  WRITE:/ sy-vLINE, 'STUDENT NAME:', wa_student-STUDENT_NAME.
  WRITE:/ sy-vLINE, 'STUDENT ID:', wa_student-SID.
  WRITE:/ sy-vLINE, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
  uLINE.
  WRITE:/ 'STATUS:', wa_student-STATUS,
  / 'MAIN SPONSERSHIP:', wa_student-MAIN_SPONSORSHIP,
  / 'FINANCIAL STATUS:', wa_student-FINANCIAL_STATUS,
  / 'ROOM NUMBER:', wa_student-ROOM_NO,
  / 'VEHICLE TYPE', wa_student-VEHICLE_TYPE,
  / 'VEHICLE NUMBER', wa_student-VEHICLE_NUMBER,
  / 'SUMMON', wa_student-SUMMON.
endloop.
```

```
*2 n 4 n 5
```

```
elseif so_cust = '1002' and
  rb_ch01 = '' and
  rb_ch02 = 'X' and
  rb_ch03 = '' and
  rb_ch04 = 'X' and
  rb_ch05 = 'X'.
```

```
select *
from Z5313_utpstud into table it_student
where SID = SO_CUST.
LOOP AT it_student INTO wa_student.
  uLINE.
  WRITE:/ sy-vLINE, 'STUDENT NAME:', wa_student-STUDENT_NAME.
  WRITE:/ sy-vLINE, 'STUDENT ID:', wa_student-SID.
  WRITE:/ sy-vLINE, 'STUDENT PROGRAM:', wa_student-STUDENT_program.
  uLINE.
  WRITE:/ 'MINOR:', wa_student-MAJOR,
  / 'STATUS:', wa_student-STATUS,
  / 'LAST SEMESTER RESULT:', wa_student-STUDENTRESULT,
  / 'EMAIL ADRESS:', wa_student-EMAIL,
  / 'ADDRESS', wa_student-STUDENT_ADDRESS,
  / 'PHONE NUMBER', wa_student-STUDENT_PHONENUM,
  / 'VEHICLE NUMBER', wa_student-VEHICLE_NUMBER.
```

```

        endloop.
*****1002
*ERROR CHECKING
* 2 n 3 n 4 n 5
    elseif so_cust = '1001' and
        rb_ch01 = '' and
        rb_ch02 = 'X' and
        rb_ch03 = 'X' and
        rb_ch04 = 'X' and
        rb_ch05 = 'X'.

        message i001(text-001).

elseif so_cust = '1002' and
    rb_ch01 = '' and
    rb_ch02 = 'X' and
    rb_ch03 = 'X' and
    rb_ch04 = 'X' and
    rb_ch05 = 'X'.

    message i001(text-001).

elseif so_cust = '1003' and
    rb_ch01 = '' and
    rb_ch02 = 'X' and
    rb_ch03 = 'X' and
    rb_ch04 = 'X' and
    rb_ch05 = 'X'.

    message i001(text-001).

elseif so_cust = '1004' and
    rb_ch01 = '' and
    rb_ch02 = 'X' and
    rb_ch03 = 'X' and
    rb_ch04 = 'X' and
    rb_ch05 = 'X'.

    message i001(text-001).

elseif so_cust = '1005' and
    rb_ch01 = '' and
    rb_ch02 = 'X' and
    rb_ch03 = 'X' and
    rb_ch04 = 'X' and
    rb_ch05 = 'X'.

    message i001(text-001).

* ENTER STUDENT ID*****

    elseif so_cust = '' and
        rb_ch01 = 'X' and
        rb_ch02 = '' and
        rb_ch03 = '' and
        rb_ch04 = '' and
        rb_ch05 = ''.

        message i001(text001).

    elseif so_cust = '' and
        rb_ch01 = '' and
        rb_ch02 = 'X' and
        rb_ch03 = '' and
        rb_ch04 = '' and
        rb_ch05 = ''.

        message i002(zs0022).

```

```
elseif so_cust = '' and
    rb_ch01 = '' and
    rb_ch02 = '' and
    rb_ch03 = '' and
    rb_ch04 = 'X' and
    rb_ch05 = ''.
```

```
message i002(zs0022).
```

```
elseif so_cust = '' and
    rb_ch01 = '' and
    rb_ch02 = '' and
    rb_ch03 = '' and
    rb_ch04 = '' and
    rb_ch05 = 'X'.
```

```
message i002(zs0022).
```

```
elseif so_cust = '' and
    rb_ch01 = 'X' and
    rb_ch02 = 'X' and
    rb_ch03 = '' and
    rb_ch04 = '' and
    rb_ch05 = ''.
```

```
message i002(zs0022).
```

```
elseif so_cust = '' and
    rb_ch01 = 'X' and
    rb_ch02 = '' and
    rb_ch03 = 'X' and
    rb_ch04 = '' and
    rb_ch05 = ''.
```

```
message i002(zs0022).
```

```
elseif so_cust = '' and
    rb_ch01 = 'X' and
    rb_ch02 = '' and
    rb_ch03 = '' and
    rb_ch04 = 'X' and
    rb_ch05 = ''.
```

```
message i002(zs0022).
```

```
elseif so_cust = '' and
    rb_ch01 = 'X' and
    rb_ch02 = 'X' and
    rb_ch03 = 'X' and
    rb_ch04 = '' and
    rb_ch05 = ''.
```

```
message i002(zs0022).
```

```
elseif so_cust = '' and
    rb_ch01 = 'X' and
    rb_ch02 = 'X' and
    rb_ch03 = '' and
    rb_ch04 = 'X' and
    rb_ch05 = ''.
```

```
message i002(zs0022).
```

```
elseif so_cust = '' and
    rb_ch01 = 'X' and
    rb_ch02 = 'X' and
    rb_ch03 = '' and
    rb_ch04 = '' and
    rb_ch05 = 'X'.
```

```
message i002(zs0022).
```

```

elseif so_cust = '' and
    rb_ch01 = '' and
    rb_ch02 = 'X' and
    rb_ch03 = 'X' and
    rb_ch04 = 'X' and
    rb_ch05 = ''

    message i002(zs0022).

elseif so_cust = '' and
    rb_ch01 = '' and
    rb_ch02 = 'X' and
    rb_ch03 = 'X' and
    rb_ch04 = 'X' and
    rb_ch05 = 'X'.

    message i002(zs0022).

elseif so_cust = '' and
    rb_ch01 = '' and
    rb_ch02 = '' and
    rb_ch03 = 'X' and
    rb_ch04 = 'X' and
    rb_ch05 = 'X'.

    message i002(zs0022).

elseif so_cust = '' and
    rb_ch01 = '' and
    rb_ch02 = 'X' and
    rb_ch03 = '' and
    rb_ch04 = 'X' and
    rb_ch05 = ''

    message i002(zs0022).
elseif so_cust = '' and
    rb_ch01 = '' and
    rb_ch02 = 'X' and
    rb_ch03 = '' and
    rb_ch04 = '' and
    rb_ch05 = 'X'.

    message i002(zs0022).

else.
    message i002(zs0022).

*****ERROR CHECKING
endif.

end-of-selection.

```

Screenshot of Database

Table: Z5313_UTPSTUD Active

Dictionary: Display Table

Transparent table: Z5313_UTPSTUD Active

Short description: Student Data

Attributes | Fields | Currency/quant. fields

Fields	Key	Init.	Field type	Data	Lgh.	Dec.p.	Check table	Short text
SID	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ZSID	CHAR	6	0		Student id data element
FNAME	<input type="checkbox"/>	<input type="checkbox"/>	ZFNAME	CHAR	15	0		customer's first name
LNAME	<input type="checkbox"/>	<input type="checkbox"/>	ZLNAME	CHAR	15	0		customer's last name
MAJOR	<input type="checkbox"/>	<input type="checkbox"/>	ZMAJOR	CHAR	20	0		Major of student
YEAROFSTUDY	<input type="checkbox"/>	<input type="checkbox"/>	ZYEAROFSTUDY	CHAR	25	0		Year of Study
ICNUMBER	<input type="checkbox"/>	<input type="checkbox"/>	ZSTUDICNUMBER	CHAR	15	0		Studet IC number
GENDER	<input type="checkbox"/>	<input type="checkbox"/>	ZSTUDGENDER	CHAR	6	0		Student Gender
STATUS	<input type="checkbox"/>	<input type="checkbox"/>	ZSTUDSTATUS	CHAR	20	0		Student Status
PHONENUMBER	<input type="checkbox"/>	<input type="checkbox"/>	ZPHONE	CHAR	30	0		Data element for phone Number
RACE	<input type="checkbox"/>	<input type="checkbox"/>	ZRACE	CHAR	20	0		Race
RELIGION	<input type="checkbox"/>	<input type="checkbox"/>	ZRELIGION	CHAR	20	0		Religion

Data Browser: Table Z5313_UTPSTUD: Selection Screen

Number of entries

SID		to		
STUDENT_PROGRAM		to		
STUDENT_NAME		to		
MAJOR		to		
YEAROFSTUDY		to		
ICNUMBER		to		
MAIN_SPONSORSHIP		to		
GENDER		to		
STATUS		to		
STUDENTRESULT		to		
PHONENUMBER		to		
RACE		to		
RELIGION		to		
EMAIL		to		
BOD		to		
FINANCIAL STATUS		to		
COUNTRY		to		
SUMMON		to		

Table : Z5313_UFSTUD

Displayed fields: 12 of 30 Fixed columns:

2 List width 0250

STU	STUDENT PROGRAM	STUDENT NAME	MAJOR	YEAR/STUDY	NUMBER
1001	INFORMATION TECH.	AHMAD FUAD ABDULLAH	CORPORAATE MNAG.	4TH YEAR 2ND SEMESTER	851008-14-5817
1002	MECHANICAL ENG.	NUR ASLINAWATI ABDUL RAHIM	FACILITIES	4TH YEAR 2ND SEM	850212052648
1003	INFORMATION SYS.	RAHIM AZIZ	ACCOUNTING	3TH YEAR 2ND SEM.	861210-46-5987

Screenshot of selection screen

STUDENT ID 5001

Academic Status

Financial

Hostel

Security

Screenshot of output

List Edit Goto System Help

MAIN PROGRAM

STUDENT NAME: AHMAD FUAD ABDULLAH
STUDENT ID: 1001
STUDENT PROGRAM: INFORMATION TECH.

MINOR: CORPORAATE MNAG.
STATUS: PASS
LAST SEMESTER RESULT: PASS
EMAIL ADDRESS: HUHUU@YAHOO.COM
ADDRESS NO6, JALAN RAMBUTANG1 76547 SABAK BERNAM, SEL.
PHONE NUMBER 123562745
STATUS: PASS
MAIN SPONSERSHIP: PETRONAS
FINANCIAL STATUS: NONE
ROOM NUMBER: VSD1.1.1
COUNTRY MALAYSIA
VEHICLE TYPE KANCIL
VEHICLE NUMBER WRD 4233
SUNSON NONE
FATHERS NAME: ABDULLAH HASSAN
MOTHERS NAME JAMILAH MAHADIR
FATHERS JOB: ENGINEER
MOTHERS JOB: HOUSE WIFE
SIBLING: 5
CONTACT INFO: 365487952