Online Form with KPI Analyzer

by

Mohd Adzuan b Mamat @ Ali

Dissertation submitted in partial fulfilment of
the requirements for the
Bachelor of Technology (Hons)
(Information & Communication Technology)

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CERTIFICATION OF APPROVAL

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A project dissertation submitted to the
Information & Communication Technology Programme
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in partial fulfilment of the requirement for the
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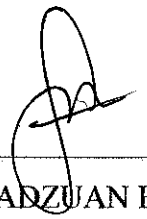
Approved by,

(ABDULLAH SANI BIN ABD RAHMAN)

UNIVERSITI TEKNOLOGI PETRONAS
TRONOH, PERAK
MAY 2011

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.



MOHD ADZUAN BIN MAMAT @ ALI

ABSTRACT

The Internet and network are two things that are evolving like mega tower all around the world. Through this, many people have take advantage and also manipulated it to enhance their business, system or education. But some of the people did not realize any of this. So as the student of University Technology of PETRONAS, the author has sense there is a part where the author can take advantage and manipulate the network, intranet and internet provided by UTP. Some of the request still be done by requesting using the manual form. With the network evolving, the online form should be the best way to enhance the system and process whereby it can save cost, time and energy. All the form can be filled from their personal computer or laptop and then the form will transferred to the next step within the network. The online form will be integrated with the KPIs analyzer where the system will analyze how long does it take for a department to respond to the form submitted. This will be a great way to determine the KPIs because the data will be surely accurate and no misjudge or unfair judgment will occur. The system which will base on the Microsoft SharePoint surely will give some advantage because the UTP are using Microsoft SharePoint as the based for the all UTP Portal. The author hopes that this project will help UTP in becoming the best university in the world and also will help the entire management department to reduce cost, time and energy.

ACKNOWLEGEMENTS

The author would like to acknowledge and extend his heartfelt gratitude to the following persons who have made the completion of this project possible. First and foremost, the author would like to thank his supervisor, Mr. Abdullah Sani bin Abd Rahman for the support and guidance he has provided the author during the course of the project. He has always believed in the author and the author capabilities in taking the challenges of completing this project.

Special thanks to the author's friends who were willing to spend their time to teach and assist the author on using the Microsoft SharePoint. Some of them have helped to increase the author's knowledge and understanding towards matters related to this project.

Last but not least, the author would like to thank my family for their endless support and encouragement throughout this project period and also in the completion of this final report.

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CHAPTER ONE
INTRODUCTION

1.1 BACKGROUND STUDY

Transaction document can be referred as relevant documents that are printed, inserted and mailed or electronically presented. These documents consist of a mixture of fixed and variable data. A web form is one of the transaction document that been used a lot in this mean time. A web form is an online form that existed on a webpage where it allows user to enter data where data will be sent to a server for processing.

Web forms can be an exchange to the manual forms as they are actually resembles the paper or database form in the internet. The users will filled out this forms by using the checkboxes, radio button or either text field. The data entered into this form later on will be sent and save at the server. As an example, a user can filled up the survey online form and the survey result will be stored at the server. Later on the data can be retrieved from the server to get the survey result.

There are no restricted languages to create the online form. It can be created by using HTML, Perl, PHP, Java, JavaScript or .Net/ASP.NET. The implementations of those languages will create the Graphic User Interface (GUI) for the interface, such as grids and themes, minimizing programming time, costs and risk.

A Performance Indicator or Key Performance Indicator (KPI) is a term which represented the measure of performance in the industry. KPIs are commonly used by the organization as to evaluate the success of a particular activity which it is engaged.

Success can be defined in term of making progress toward strategic goals, but often the success been recognize as the repeated achievements of some level of operational goal. Choosing the right KPIs depend on what is important to the organization. What is important often depends on how the departments or sections measure the performance. As an example, a sales department will give the good KPIs to their staff which archive the highest selling performance. So each sections or departments have their own goals which determine the KPIs that will be archive.

1.2 PROBLEM STATEMENT

Traditionally, all the forms are printed on the paper to fill up by the requestor. This type of form can been recognize as the manual form. The requestor will fill the form and then send it to the appropriate personnel or in charge person. If there is some approval section which need to been approved or signed by the appropriate personnel. So the requestor need to meet the approver and get the form signed by them and only by then the requestor can submit and the form will be entertained.

As to get the approval and to submit the form, there is a lot of time wasting and energy required. Sometimes, it required some cost as to travel around to get the approval. And by any chance, the approver is not around and the requestor needs to make an appointment which may delay the request. Some requests are important which need a fast feedback from the appropriate person. Sometimes, human being is not perfect which can lead to the form missing from the database because of misplace or miscommunication. So from this problem statement, some of the problem that appointed are:-

1. Time, cost and energy consuming in the traditional manual form workflow.
2. Delay of time for certain cases such as absence of the approver.
3. Cost and time consuming as to travel to the other workstation to get approver's approval and to submit the manual form.
4. Manual form disappear regarding to misplace or miscommunication.

KPIs analyzer which determines the performance of an employee always had been a problem to the leader of the department, section or project. Sometimes people will always questioning on how the leader determines the work to give the KPIs.

Some people will always have doubt with other KPIs, where they are not satisfied with the KPIs that given by the leader. There are people who works hard but received a low KPIs and vice versa. So unreliable KPIs analyzing will lead to misjudge and unsatisfied KPIs. The problems that can be pointed out are:-

1. Unreliable way of analyzing the KPIs.

2. Misjudge and unsatisfied KPIs.

1.3 OBJECTIVES

- To create an online form which can reduce the time, cost and energy consume.
- To create a system that can capture the performance which in this case the respond to the forms submitted.
- To create a system that can store the data in a secured place and easy to access for future revision.
- To maximize the usage of the internet.

1.4 SCOPE OF STUDY

The scope of study will revolve around programming on Microsoft SharePoint to design the online forms. This program offers a good platform to create an online form. This online form later on can be refined by using the Microsoft SharePoint Designer which gives the freedom to the programmer to integrate the SharePoint with other languages. To create an online form with a good interaction with the requestor and approver, some programming required.

As to enhance the online forms created with the KPIs analyzer, some programming languages such as JavaScript and ASP.NET need to involve. The result will later on can be view by digital or printed. Which this can be a reliable resource to evaluate the KPIs.

The interface is restricted to only the template provided by the Microsoft SharePoint, but by using the Microsoft SharePoint Designer, some modification through editing using the HTML code will enhance the interface. So the interface will be more users friendly and easy to be use by all range of requestor.

1.5 FEASIBILITY STUDY

"Feasibility study is the analysis of specific aspects in the project environment to help determine whether to proceed with the project. The developer uses it to uncover important risks associated with the project." (Dennis, Wixom & Tegarden, 2005) With regards to this project, a technical and operational feasibility analysis has been conducted.

1.5.1 Technical Feasibility

The project is feasible technically, although there are some risks.

Users' risk regarding familiarity with the software application is medium

- Users are from all type of background which mean some with IT background and some without IT background.
- Majority of users that will use have a basic knowledge with the online application which can guide them on using the software.

Developer's risk regarding familiarity with the technology is medium

- Developer has developed the online forms to his internship company which the developer knows how to start the project using the mentioned software.
- Developer has no experience in integrating KPIs analyzer with the online forms.
- Developer needs to discover new programming language as to complete the project.
- Developer needs to corporate with the appropriate personnel as to accomplish the project.

The project size is considered medium.

- The project timeframe cannon exceed the third quarter of the year.
- Number of features and functions are set and limited.
- Software requires integration with other programming languages.

and a great mobile experience mean that anyone can access and share content, in the office or on the go.

With SharePoint Composites, people can work with data from other systems as if it lived in SharePoint. Create, read, update, delete and search the data using external lists. Work online with the browser or on Microsoft Office. People can work offline in Microsoft SharePoint Workspace and synchronize it changes when reconnect.

SharePoint Composites helps people to centralize and manage business solutions so that people can get their jobs done and can save time and effort. For example, people can:

- Centralize Access databases and Excel workbooks and deploy them from SharePoint.
- Provide controlled access to company data.
- Deploy safe Sandbox Solutions to SharePoint without risking the health of the platform.
- Time and effort constraints saved by focus on higher IT priorities.

(Source www.sharepoint.com)

2.1.1 Microsoft SharePoint List

For this project, the developer focus more on one of the Microsoft SharePoint features which is SharePoint List. In this feature, the SharePoint will create an online form by using the ASPX pages. Each list type generally has a set of display, edit and new form ASPX pages (DispForm.aspx, EditForm.aspx, and NewForm.aspx) that are provisioned when list s are provisioned. These ASPX pages are provisioned into the "content space". In other words, they are not located in %ProgramFiles%\Common Files\Microsoft Shared\web server extensions\14\TEMPLATE\LAYOUTS, and the do no operate through the /_layouts virtual directory. For document libraries, these pages are instead provisioned within a hidden subfolder of the list called forms. For other SharePoint lists, the pages are provisioned under the list root folder. Each ASPX pages contains a Microsoft.SharePoint.WebPartPages.ListFormWebPart object that serves to render the form. *(Source www.sharepoint.com)*

2.2 MICROSOFT SHAREPOINT DESIGNER

This is the software that will be used as to make the workflow of the online forms and also to implement the coding as to integrate the KPIs Analyzer. Microsoft SharePoint Designer (formerly known as Microsoft Office SharePoint Designer) is a specialized HTML editor and web design freeware for creating or modifying Microsoft SharePoint sites and web pages. It is a part of Microsoft SharePoint family of products. It was formerly a part of Microsoft Office 2007 families of products, but was not included in any of the Microsoft Office suites.

SharePoint Designer and its sister product, Microsoft Expression Web are successors of Microsoft FrontPage. While Expression Web serves as the full-featured successor to FrontPage, SharePoint Designer features focuses on designing and customizing Microsoft SharePoint websites. For instance, it only includes SharePoint-specific site templates. It retains more FrontPage features than Expression Web, such as web components, database, marquee, hit counter, navigation bars, map insert, etc. Although SharePoint Designer 2007 (this first version of this product) could be used as a generic HTML editor, SharePoint Designer 2010 (the subsequent version) may no longer operate in absence of Microsoft SharePoint Server or Microsoft SharePoint Foundation.

SharePoint Designer shares its codebase, UI and HTML rendering engine with Expression Web, and does not rely on Internet Explorer's Trident engine.

The first version of this product, SharePoint Designer 2007, was a commercial software product. On March 31, 2009 however, SharePoint Designer 2007 was made available as a freeware. On April 24, 2009, Microsoft released SharePoint Designer Service Pack 2. On April 21, 2010, SharePoint Designer 2010 was released and made available for download. *(Source www.sharepoint.com)*

2.3 KEY PERFORMANCE INDICATOR

Key Performance Indicator: is an industry jargon term for a type of Measure of performance.[...]. Used to evaluate the success for some activities or job. Sometimes success is defined in terms of making progress toward strategic goals,[...] *(Source Carol Taylor Fitz-Gibbon (1990), "Performance Indicator")*

From this quote we can see that the indicator could be the time. This is because in this project, we are targeting the people who respond quickly with the request is the one who making progress toward strategic goals.

2.4 RELATED WORK

Existed Online Forms.

-A product from Process Maker® has been chosen as to compare to the project.

-Provide software that has some similarity with the project.

-Provide software that can create a form and the form will be processes with the workflow with the help of the extension.

-Provide an analyzer within the form created.

2.5 ADVANTAGES OF USING MICROSOFT SHAREPOINT

- This software has been deployed in UTP.
- This software not just provides single purposes such as creating form but can be use for other purposes.
- Has the capability to change the interface with the help of Microsoft SharePoint Designer.
- Can be integrated with JavaScript.
- The data can be export into spreadsheet as the documentation purposes.

- The software provide the offline usage where the changes will be update when the server is online
- Form can be created from the end-user computer rather than created in the server.
- All the data from the same template of creating the form can be integrated with each other.
- The developer has experienced in using the software to create form with workflow.

CHAPTER THREE
METHODOLOGY

3.1 RESEARCH METHODOLOGY

For this project, the developer has chosen Rapid Application Development (RAD). The RAD approach to software development has its roots in interactive prototyping and computer-aided software engineering (CASE), both of which is used to speed the development of prototypes. RAD is the best method because of the constraint scope and good use tools and application program interfaces can be used.

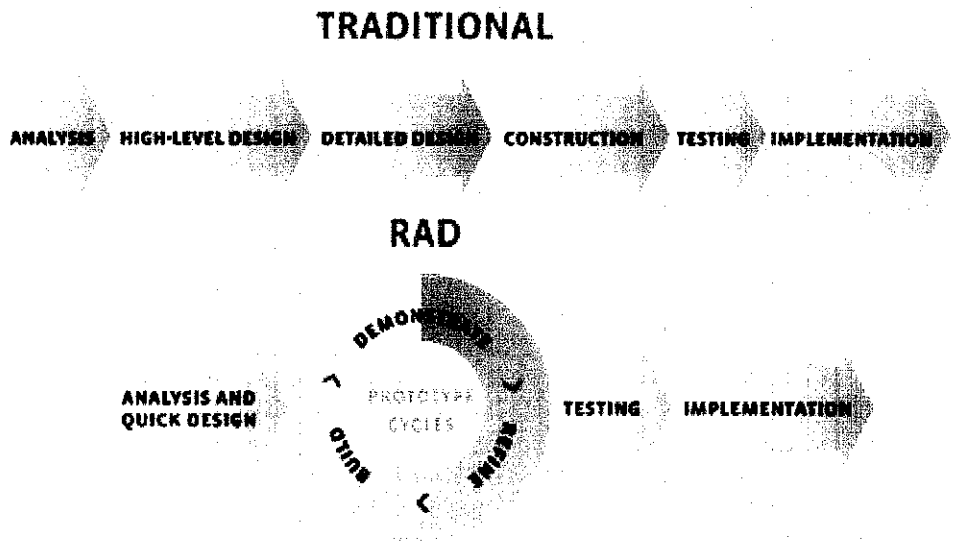

Figure 3.1

3.2 PROJECT ACTIVITIES

In this section, the author will explain how the project activities will be carried out as the author start to work on with the project. By referring to the methodology that has been chosen, the author will explain on how the project is carried out.

3.2.1 Analysis and Quick Design

Research methodologies were implemented during the analysis stage of the cycle, which mean it does include the literature review, observation and research. As the purpose of this stage is to investigate the current situation regarding the project and also for the

collection of system requirements, the result from the analysis, a draft of the initial design was made to have an overall view of the system.

3.2.2 Prototyping Cycles

As the RAD method was chosen because the development of this project can be separated into three main parts which are the project first phase which is creating the online form itself. Then the second phase which is the workflow of the form and last but not least the third phase which is integrating and implementing of the KPI analyzer into the online form.

3.2.3 Testing

After completing the final prototype version of the system, testing is conducted to ensure the system is reliable and can be use. It also needed as to detect any bugs or errors regarding the system. This test will be conducted by different group of people with the different background. This is needed as to make sure the feedback from the user can be the source of improvements and enhancement in the future.

3.2.4 Implementation

Implementation is the last step after the author finished the project. The project will be judge by several panels and after get the approval this project will be published. After this project is finished and implemented, the author will keep on track with it as to enhance the usability and the effectiveness of this online form.

3.3 PROJECT MILESTONES

3.3.1 First Milestone

The first milestone of the system will be the implementation of the software in the author's hardware. Three personal computers are needed to complete this project. Those three computers include the server, the user and also the editor.

The server computer will be installed with the Microsoft SharePoint Server 2007 and also Microsoft SharePoint. The second computer which is the editor computer will be installed with the Microsoft SharePoint Designer, and Microsoft SharePoint itself. The end-user/client computer doesn't need to be installed anything because the user computer will connected to the server which will be hosting the SharePoint webpage.

3.5.2 Second Milestone

The second Milestone in creating this system will be preparing the form. The node (computer) which be involve in this phase will be the server and also the editor. The author will create and edit the form from the editor's computer. This phase will be only creating the form itself. A form which will be copy from one of the manual form existed will created. This is to prove that the manual form can be change into the online form. After the form has been created, the author will proceed to the next milestone.

3.5.3 Third Milestone

The third milestone will be implementing the workflow into the form and also update the interface of the form. This will require the uses of the Microsoft SharePoint Designer. Using the SharePoint Designer, the author will use one of the features provided which is workflow. Using this workflow, the author will create a step which the step will started with some indicator such as created by time or date and it will prompt the workflow.

After the implementation of the workflow is done, the author will change the look and also the visibility of the text field. This is required as to maintain the data will remain save and unchanged by other people. The interface will be created to be more user-friendly and highlight some of the key element for the form as to improve the usability. After the third phase is finish, the project proceeds to the fourth milestone.

3.5.5 Fourth Milestone

The fourth phase will be the last phase of creating the form which the form will be integrated with the KPIs Analyzer. To succeed this integrator, the author has manipulated one of the field that provided in the Microsoft SharePoint Form which is the Calculated Field. In this field, the author has the power to create formula which will calculate base on the formula.

As the indicator of the KPIs will be calculating the time from the request being sent to the approver until the approver respond to the request, so the indicator will capture the time between request being sent and the request being approve. By this, the time capture will be save in the new column and being stored into the database.

3.4 GANTT CHART

The developer had prepared the Gantt chart for the research. This Gantt chart will help the author to have proper planning for the research in build ability. The Gantt chart consists of activities and the duration or period to complete the task or activities.

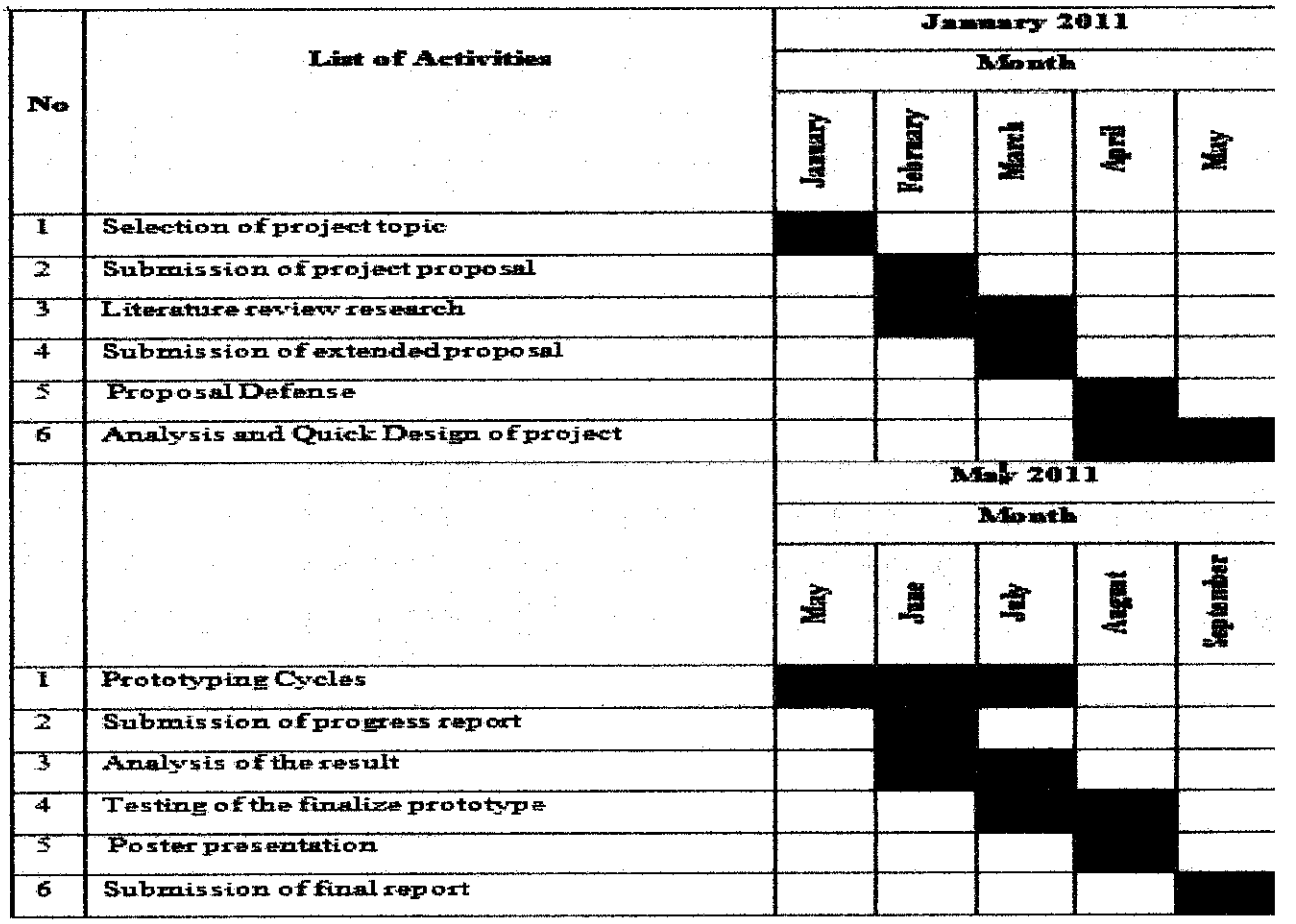

Figure 3.2

3.5 TOOLS

In creating and completing this project, the author has recognized some tools that required in assisting the author. The author will explain each of the tools required as to give understanding why those tools are required.

3.5.1 Hardware

Hardware is one of the most important things in starting and completing this project. As this is an IT project, it requires the most important hardware which is computer. As for this project, the author should have more than one computer because there will be server, user, and a computer for the author himself as to create and editing the project.

3.5.3 Software

This is one of the tools which are really important. To accomplish this project, the author has chosen Microsoft SharePoint 2007 as the platform to create the online form. Then the author also needed Microsoft SharePoint Designer as to create the workflow and also editing in Graphical User Interface (GUI). To hold the database the author needs Microsoft SQL Server 2008.

CHAPTER FOUR
RESULT AND DISCUSSION

In this section, the author will explain the progress in building and the end-result of the project. This chapter will be explained starting from the system architecture being used until the Online Form with KPI Analyzer finish.

4.1 SYSTEM ARCHITECTURE

In this sub-chapter, the author will explain on how the system architecture. After that the analysis and design for the system will be covered on the next sub-chapter. The system is to have the Client/Server System which all the request and the work will be send to the Server first than the server will respond with the data received.

4.1.1 Client/Server

This type of system has been chosen as the best way to handle this project. All the data will be retrieved via the server. This also to maintain the confidentiality and privacy of the data on the request form sent.

The Microsoft SharePoint 2007 is providing an extension to setup the server. As to create the server, the author will setup the extension for the server configuration on one of author's hardware. The server will be setup and connected to the author's personal computer for the editing purpose and also connected with the other computer which will be responding as the user.

All the editing will be on another extension of Microsoft SharePoint 2007 which is Microsoft SharePoint Designer. This extension provides the advance user of the Microsoft SharePoint 2007 the power to edit the default features provided. The Microsoft SharePoint Designer provides the advance user editing tool and programming panel as to enhance the features. It allows the user to edit the source code and also control the workflow of the form.

The Microsoft SharePoint Designer also provides the user to edit the Graphical User Interface (GUI) using the source code. This is one of the features that important because the author has the power to enhance the interface of the form and the system which will lead to more user-friendly interface. This is important as the user will respond with the interface first. A user-friendly interface will lead the user to increase the usability of the software.

The database will be held using the Microsoft SQL Server where it will be linked to the Microsoft SharePoint Server. During the installation of the SharePoint Server, the step will require to include together the database being used which in this case the author uses the Microsoft SQL Server.

4.1.2 Analysis and Design

In this section the author will describe how the network architecture of the system. The description will include some sketch to help the explanation. The system that will be based on the Client/Server architecture which has been describe in the sub-chapter 3.5 which is Proposed System.

The Client/Server Architecture means that all the work or data will travel from the request from the client and will be responding by the server. The server will later on respond back to the client and send the data to the next client (approver). The server will prompt an email to the approver and the requestor as to respond for the request.

Each time the request has been sent, the server will capture the time of the request and the stored in the database. After that, the request will be forward to the approver. The time from the email sent to the approver until the approver respond back will be capture and stored again in the database. This entire step will be implemented by manipulating the features provided by the Microsoft SharePoint Server, Microsoft SharePoint Designer, and also Microsoft SharePoint 2007.

After the approver has respond to the request, emails will be prompted to the next approver or if the current approver is the last approver for the request, an email will be send back to the requestor as respond that the request has been approved. If the approver wants to reject the request, they need to include together the reason of why the request is being rejected. The text field for the reason of rejecting will be a compulsory field which the approver cannot proceed the from without typing any reason. This is to ensure that there is reasonable reason for the request to be rejected. This is a step to enhance the effectiveness of the KPIs Analyzer.

To explain more on how the system will work the author includes together the graph:

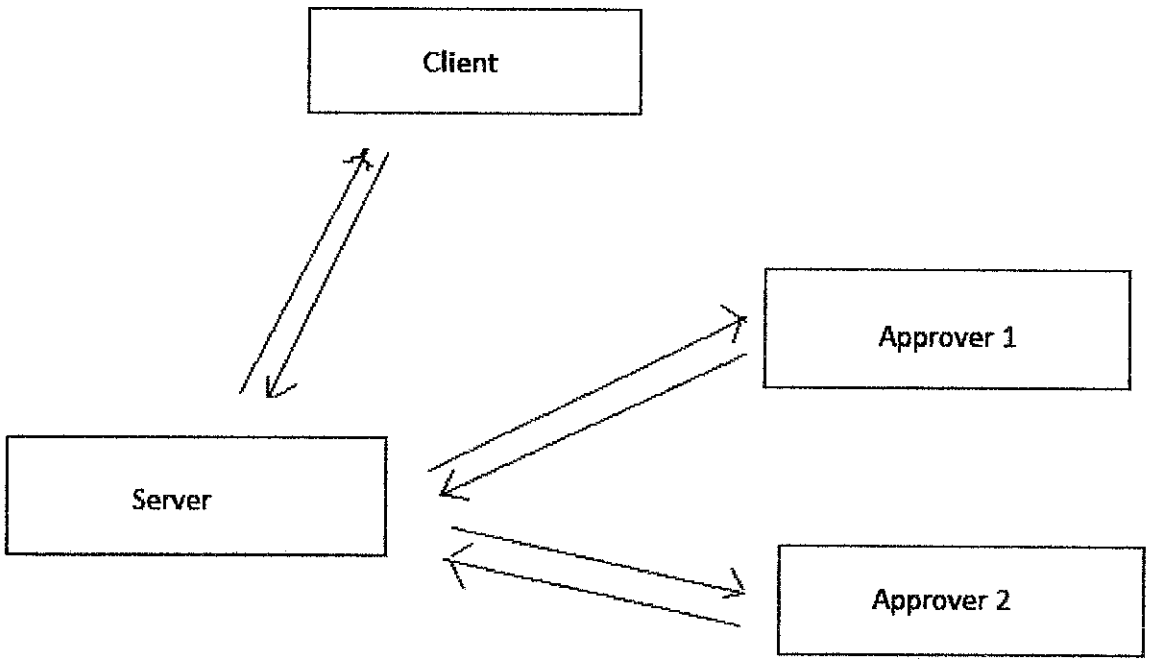

Figure 4.1

The sketch on Figure 4.1 showing the Client/ Server architecture where all the request and respond will go through the server and the server will determine the next step.

The pseudo code below will explain in detail how the system will be working.

1.0.0 Start (requestor fill up online form and request)

2.0.0 Server Respond (server will send an email to appropriate person to approve the form and notify the requestor that the request has been submitted)

3.0.0 Approver (approver will receive an email from the server and in the email included the link to the request form page)

3.1.0 Approver Approve

3.1.1 Server Respond

3.1.2 Next Approver (second approver receive email from the server)

3.1.3 If Approver is the last approver proceed to the next step or if not repeat 3.0.0

3.2.0 Approver Reject

3.2.1 Server Respond

3.2.2 Requestor (server will send an email stated that the request rejected by the approver)

4.0.0 Last Approver

4.1.0 Approver Approve

4.1.1 Server Respond

4.1.2 Requestor (Requestor received email stated that request has been approved)

4.2.0 Approver Reject

4.2.1 Server Respond

4.2.2 Requestor (server will send an email stated that the request rejected by the approver)

This pseudo code has given the draft on how the system will respond accordingly to the respond from the approver.

4.2 PROJECT DELIVERABLES

On this topic, the author will explained how the work being done in finishing this project. As in the methodology section, the author had mentioned there will be four main milestones in finishing this project. So the project deliverable will explain based on those milestones.

4.2.1 Installation (first milestone)

So for this project, the author has downloaded the required software toward finishing it. The software that have been downloaded are such as the Microsoft SharePoint Server 2007(SharePoint.exe), Windows SharePoint Services 2007 (WSS.exe), Internet Information Services 7.5 (ISS7.5.exe), Microsoft SharePoint Designer 2007 (Sharepointdesigner.exe), and also Microsoft SQL Server 2008 R2 Express Edition (SQLExpress.exe). That software's are required and its job will be explained later on.

Microsoft SharePoint Server 2007

This is the heart of this project where it provides the server for the SharePoint portal where all the workflows and tasks will be based on this server. When the user and the admin want to access the SharePoint website, it will be based on this server. So for this project, this software has been installed in the author's personal computer. As to make it compatible with the operation system that being used by the author, the Windows SharePoint Services 2007 is required. So the author has assign the address for the website hosted in this server is http://tiger-pc:22793/default.aspx. Figure 4.2 is the main page for the website hosted on the server.

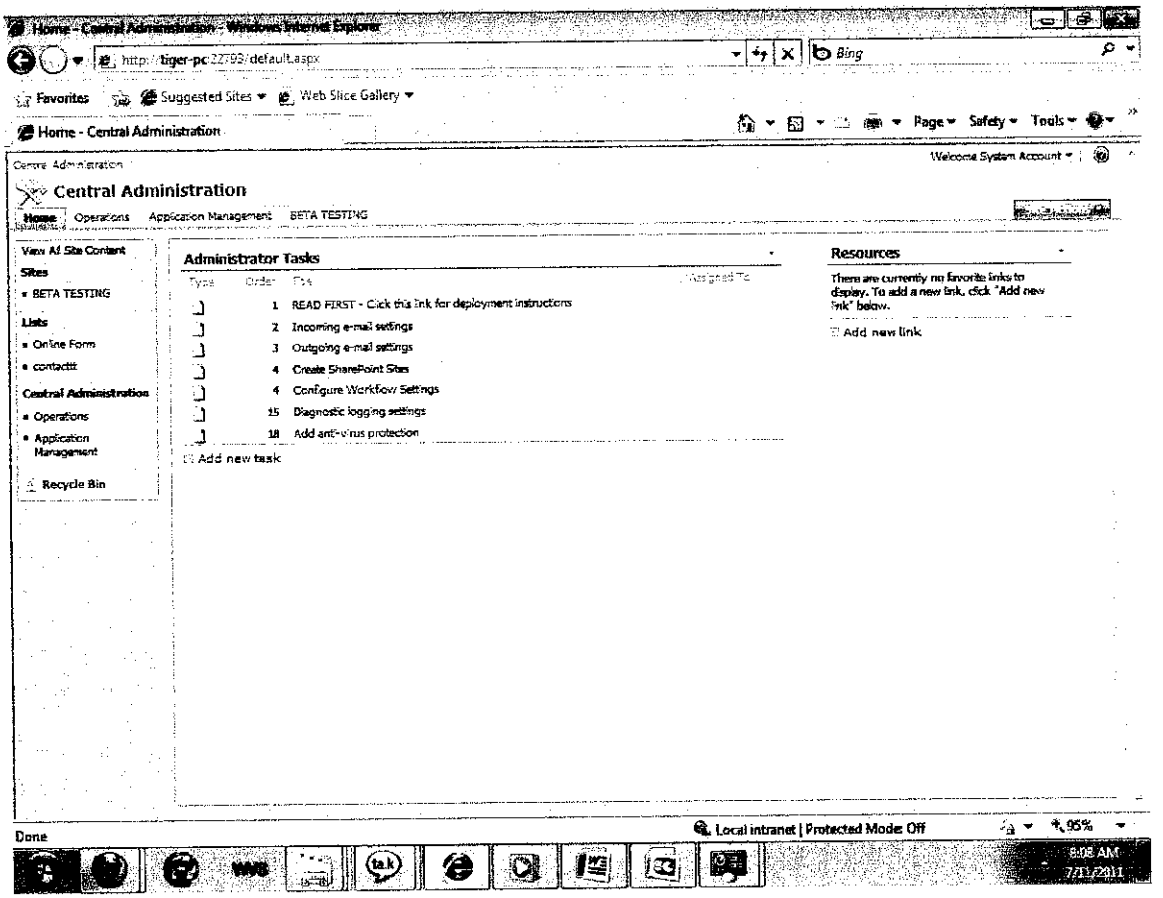

Figure 4.2

Windows SharePoint Services 2007

This is the second software needed where the function of this software is to make the current operating system used by the author compatible with the SharePoint Server. This software will enable the server to host the website. After the installation of this software, it will added a new features in the Control Panel > Administrative Tools > SharePoint 3.0 Central Administration. After we clicked on this features, the server will automatically hosting the webpage. So the address assigned before will be valid to be use right away. Picture of the new feature can be seen at the picture in Figure 4.3.

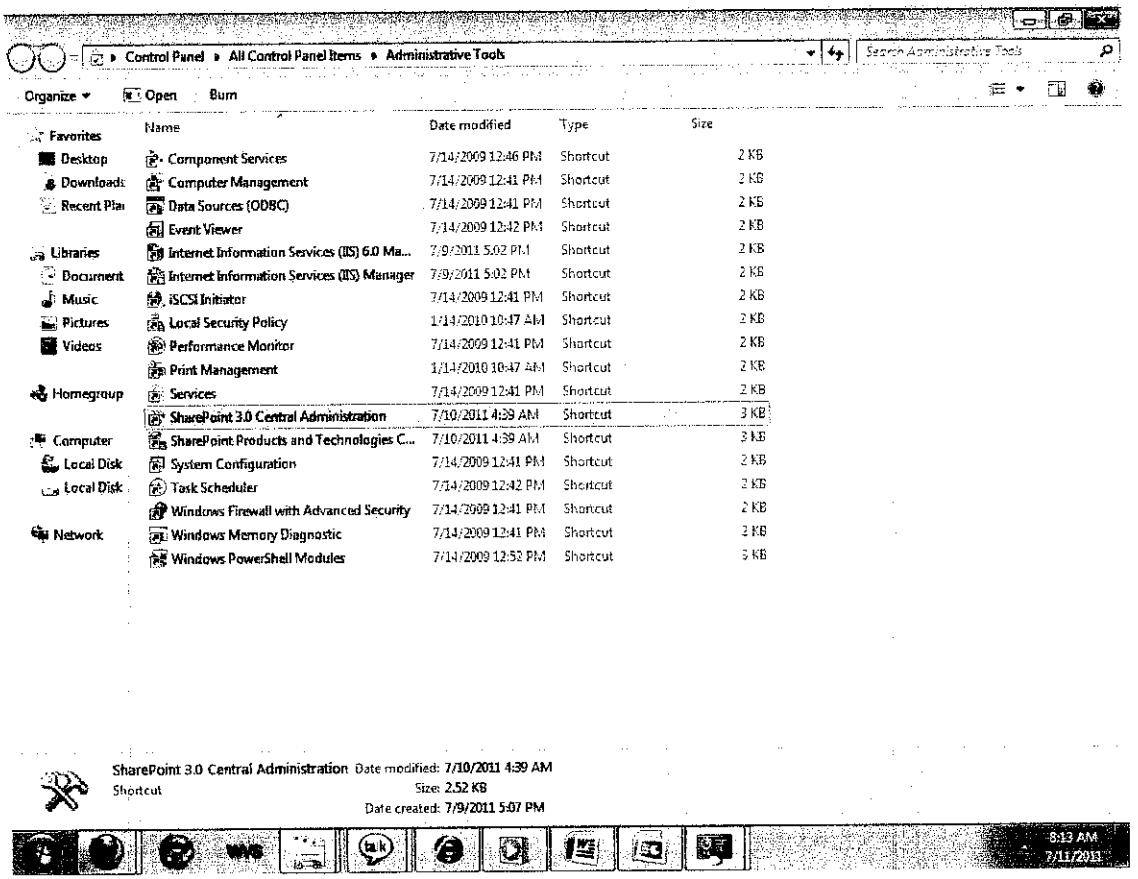

Figure 4.3

Internet Information Services 7.5

The IIS 7.5 is the software which will enable certain features that disabled by windows by default. So the author has installed this software as to enable the web server hosting on the personal computer. By installing this software, the personal computer now can support hosting the HTTP, HTTPS, FTP, FTPS, SMTP and NNTP. By installing this software, it will added some new features in the Control Panel > Programs > Turn Windows Features On or Off. Figure 4.4 is the picture with the new features added.

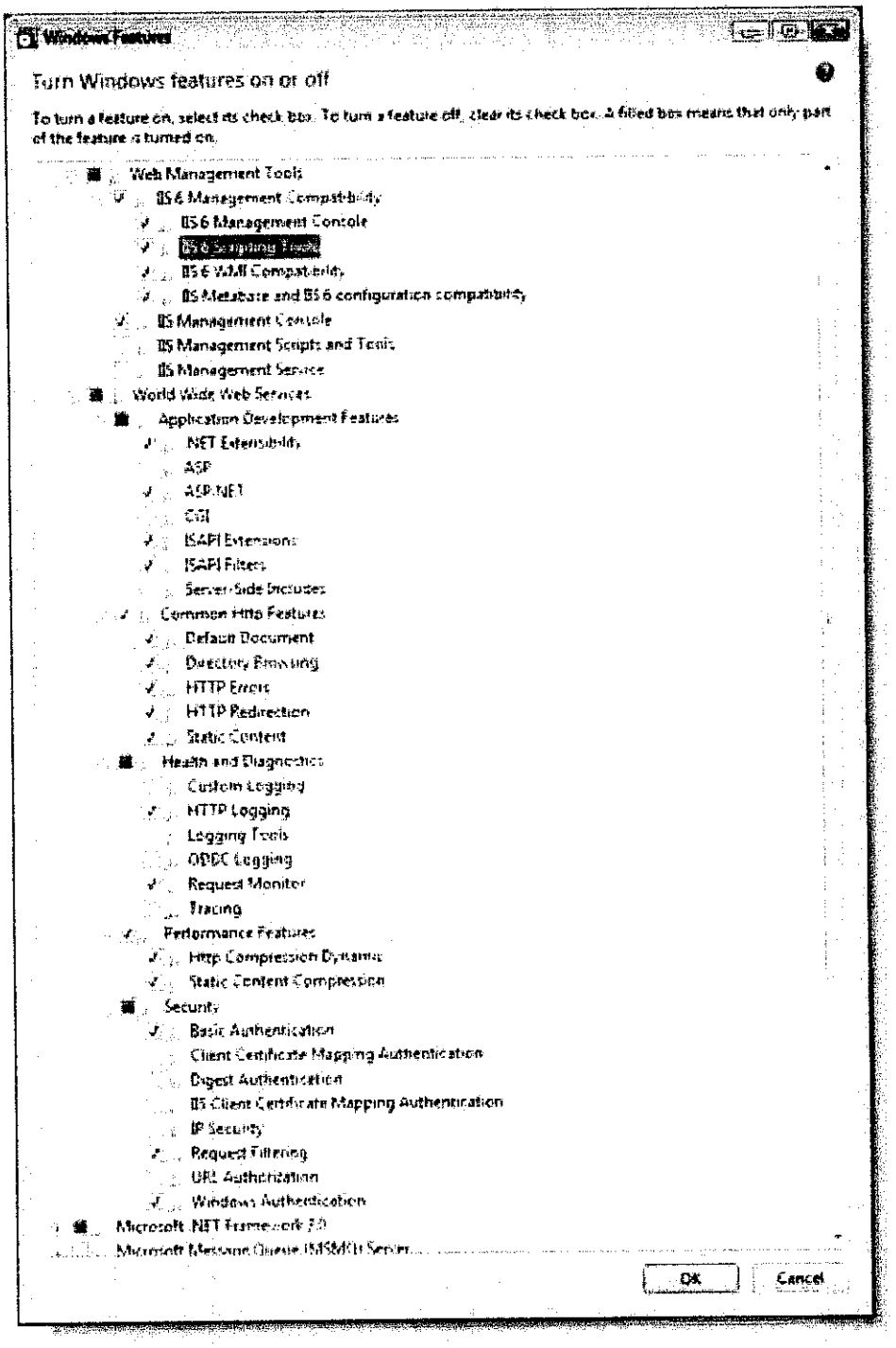
Windows Features
Turn Windows features on or off
To turn a feature on, select its check box. To turn a feature off, clear its check box. A filled box means that only part of the feature is turned on.
Web Management Tools
IIS 6 Management Compatibility
IIS 6 Management Console
IIS 6 Scripting Tools
IIS 6 WMI Compatibility
IIS Metabase and IIS 6 configuration compatibility
IIS Management Console
IIS Management Scripts and Tools
IIS Management Service
World Wide Web Services
Application Development Features
.NET Extensibility
ASP
ASP.NET
CGI
ISAPI Extensions
ISAPI Filters
Server Side Includes
Common HTTP Features
Default Document
Directory Browsing
HTTP Errors
HTTP Redirection
Static Content
Health and Diagnostics
Custom Logging
HTTP Logging
Logging Tools
ODBC Logging
Request Monitor
Tracing
Performance Features
HTTP Compression Dynamic
Static Content Compression
Security
Basic Authentication
Client Certificate Mapping Authentication
Digest Authentication
IIS Client Certificate Mapping Authentication
IP Security
Request Filtering
URL Authorization
Windows Authentication
Microsoft .NET Framework 3.5
OK
Cancel

Figure 4.4

Microsoft SharePoint Designer 2007

This software is the other important software which using this software, the author will create the workflow and manipulate it capability to create the KPIs Analyzer. The SharePoint Designer also can be the web editor for the webpage hosted where it can improve the Graphical User Interface by editing through it. So this software is one of the important software that needs to be highlighted. Figure 4.5 is the picture of the software.

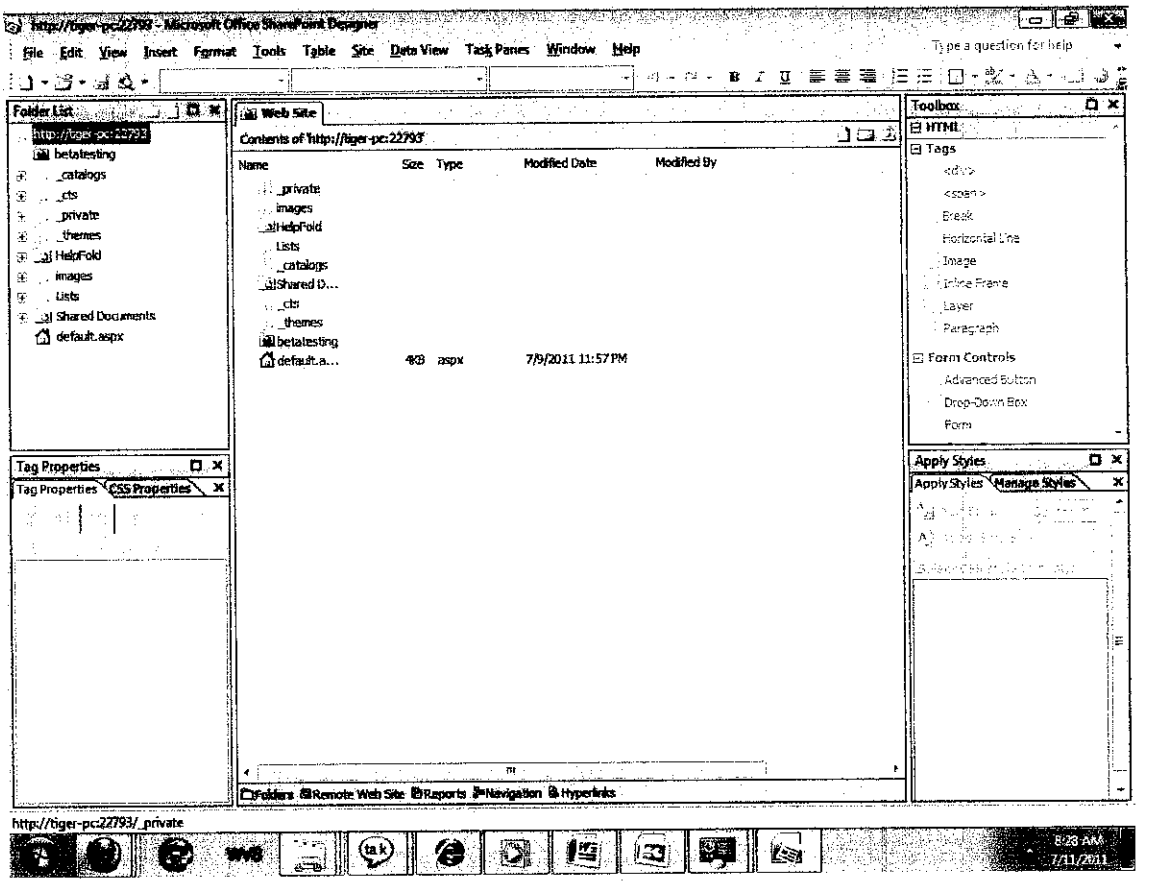

Figure 4.5

Microsoft SQL Server 2008 R2 Express Edition

This software required by the author as to store the data from the Microsoft SharePoint Server 2007. The server need to save their data to a SQL server and the author has chosen the software as the database. The SQL server is needed as it one of the server that provide the structured query language (SQL), a database computer declarative language designed for managing data in relational database management system

(RDBMS). SQL Database Server provide the features such as data insert, query, update and delete, schema creation and modification, and data access control.

4.2.2 Creating and editing the form (second milestone)

After the installation phase, the author has been progressing by creating the form. The author has started with the project by creating the online form portal in the SharePoint Server. The tab for the Online Form portal can be seen on Figure 4.6.

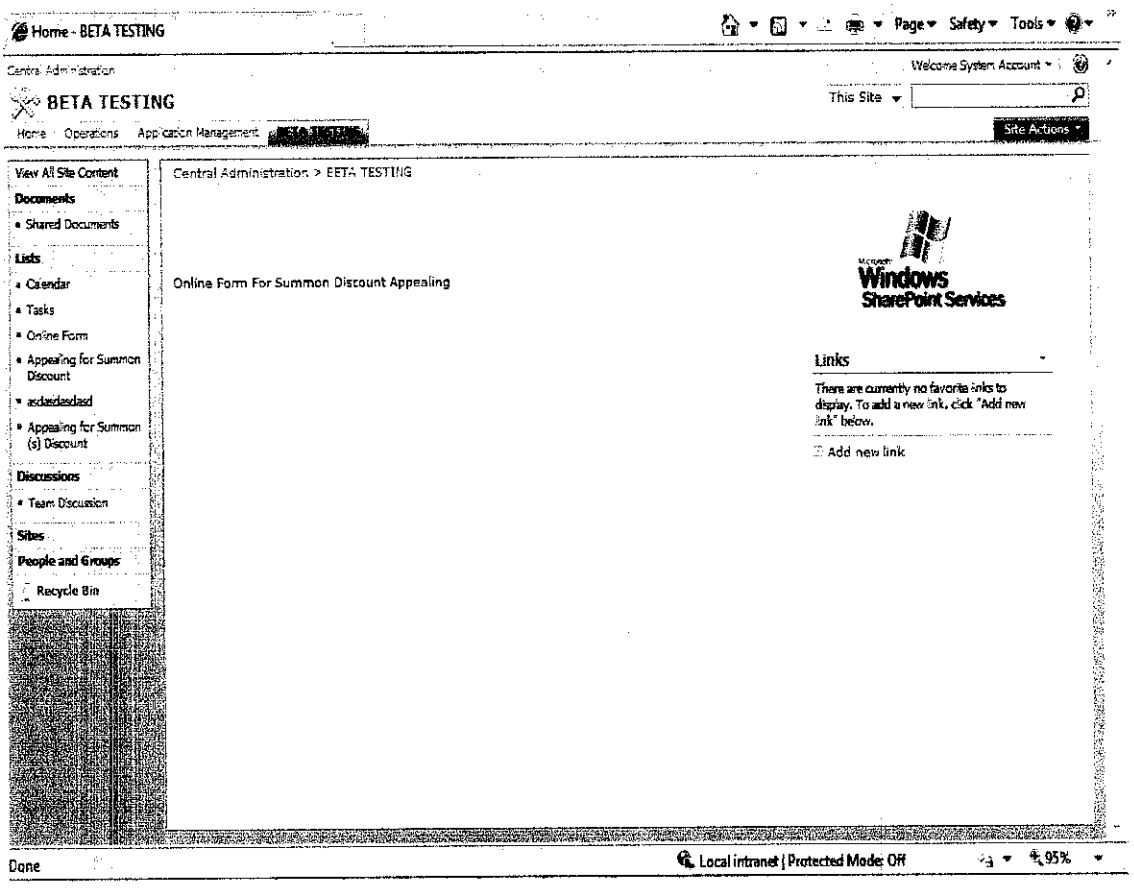

Figure 4.6

The author has create the basic online form and started to edit the form using the Microsoft SharePoint Designer 2007. The basic online form and the webpage being edit using the SharePoint Designer can be seen in the Figure 4.7.

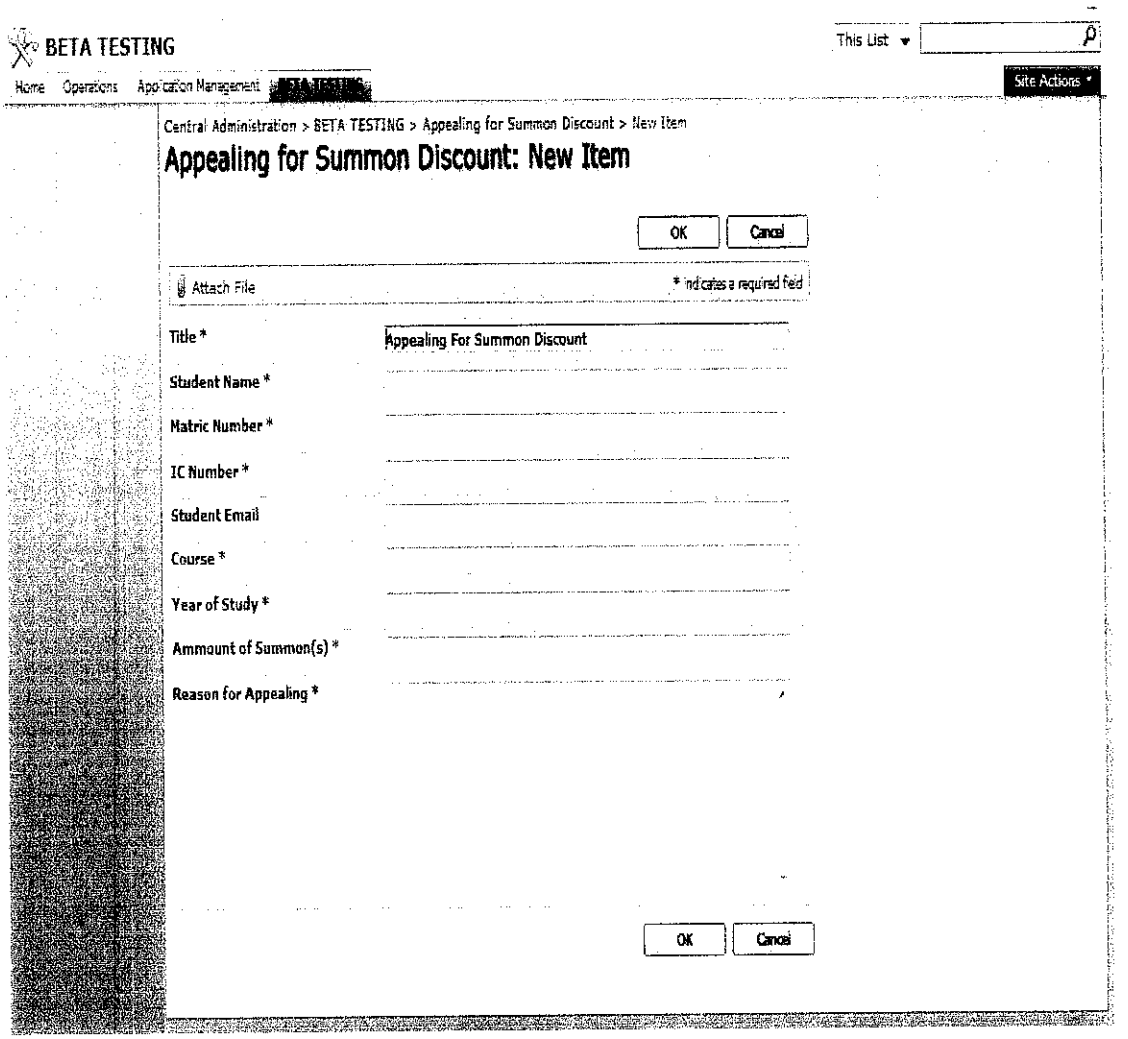

Figure 4.7

In this online for we can see that the form will gather the information for the form. The gathered data will post to server and the server will save it in the database. So the data saved can be view for the future revision.

To describe more for better understanding, lets say we put the data in the online form and submit it to be progress.

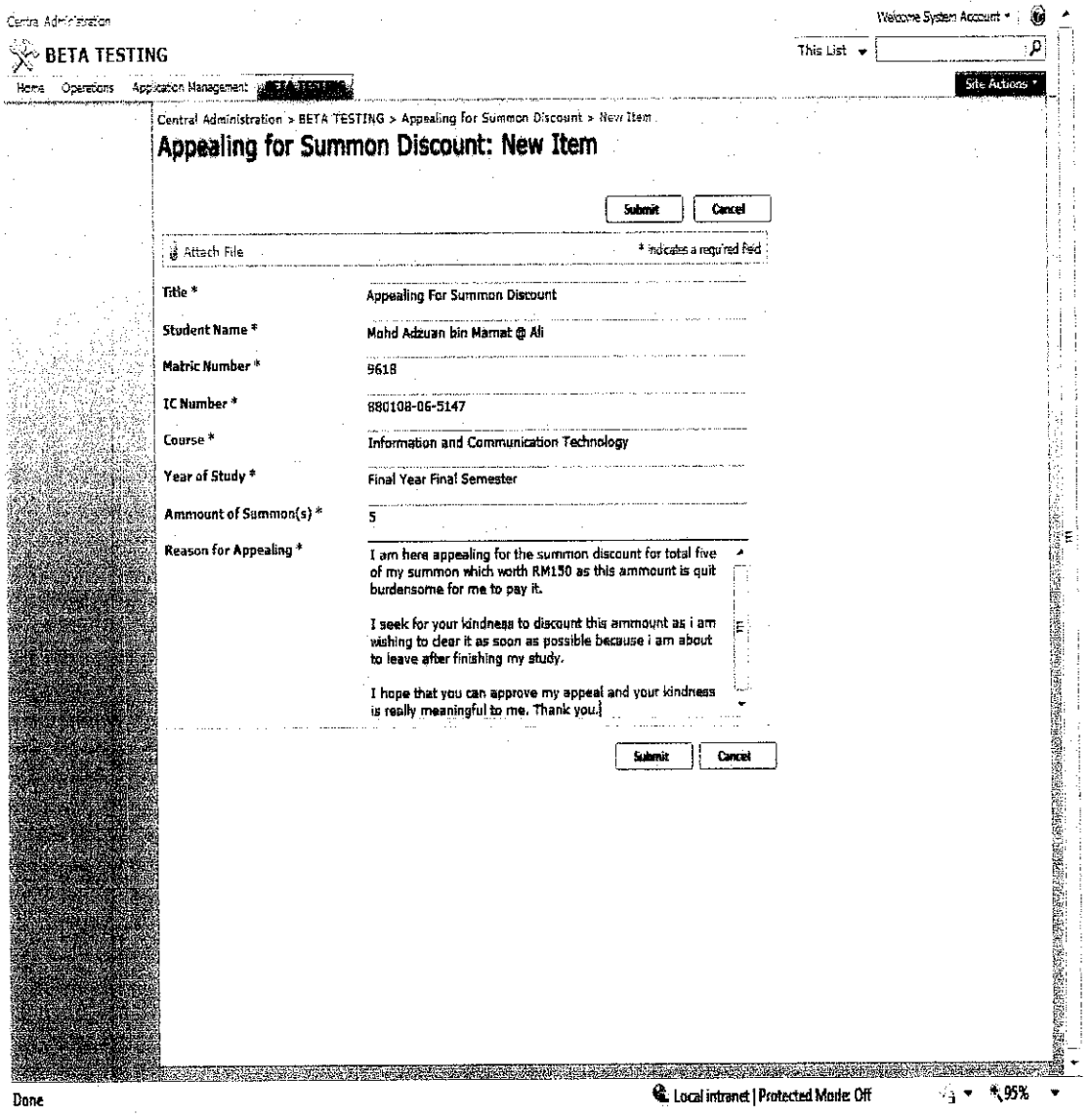

Figure 4.8

As we can see in Figure 4.8 we have entered all the data and the form now is ready to be submitted. After the form has been submit, all the data will be save on the server which can be viewed as the picture in Figure 4.9.

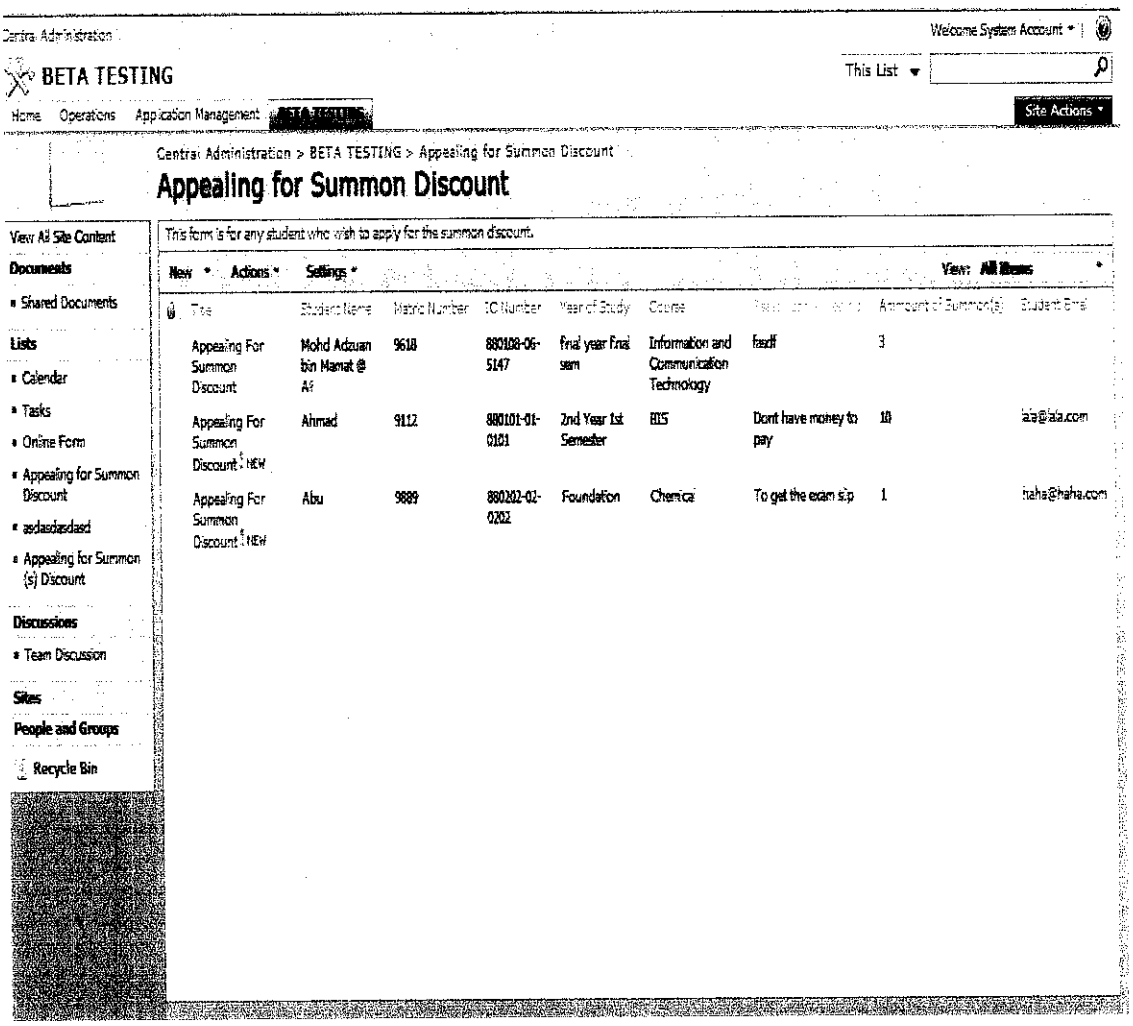

Figure 4.9

As we can see all the request being submitted has been stored in the database above. The data save can also be sort according to course or matric number. This data from the database can be print out in the Microsoft Excel format which it is very convenient for the checking or for the documentation.

4.2.3 Creating the workflow (third milestone)

In this part, the author will explained how the author edit the workflow as to get the online form being sent from the requestor to the approver. To start editing the workflow, the author need to use the Microsoft SharePoint Designer. The picture in Figure 4.10 below show the online form open through the Microsoft SharePoint Designer.

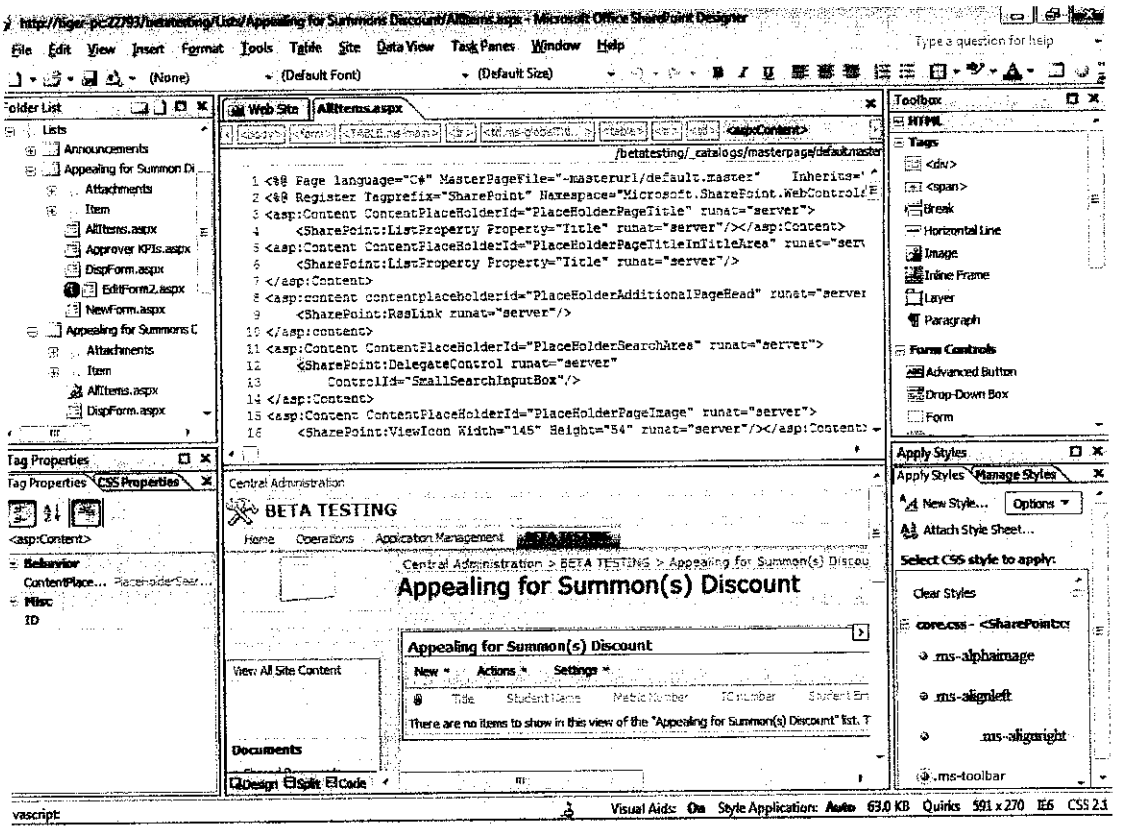

Figure 4.10

So to create the workflow, the function is already in the Microsoft SharePoint Designer. It can be found under the File Tab. The picture in Figure 4.11 shows the workflow function.

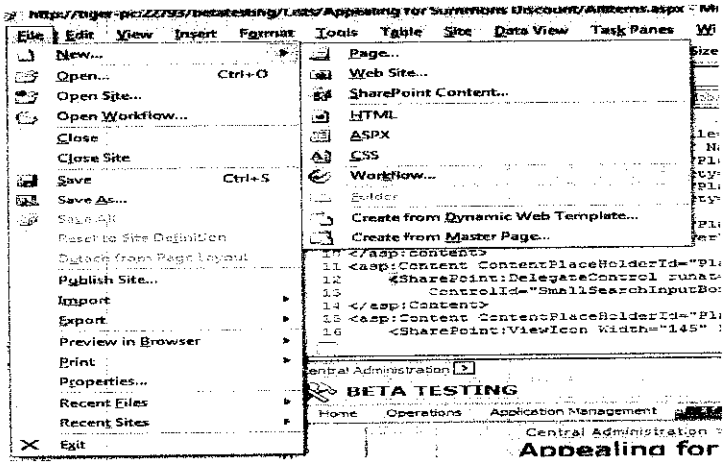

Figure 4.11

So from here the author will create the new workflow for the online form created. In the workflow the author will put the desire input as to start the workflow. As an example, the workflow will started when there is a new request. The picture in Figure 4.12 show the shows the author tick on the box which state that the workflow will run automatically after the new request has been created.

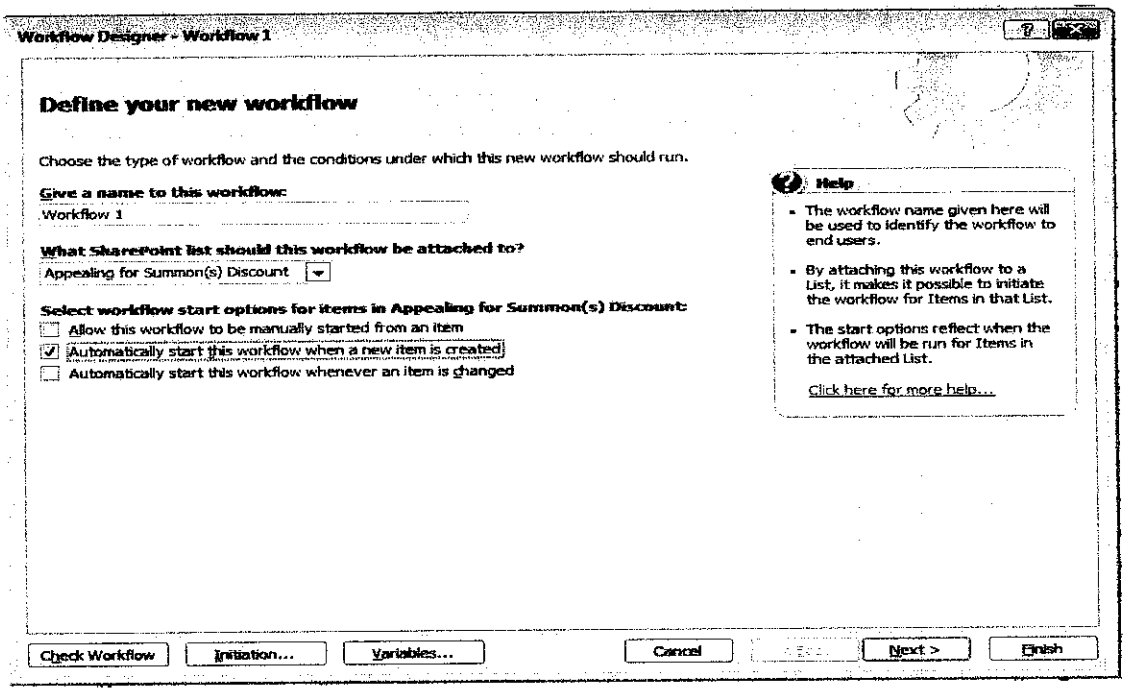

Figure 4.12

So after that the author will decide what will happen after the workflow have started. So for this online form, the workflow will be sending an email to the approver saying that there is a new request to be respond. Figure 4.13 is the picture showing the advance workflow created.

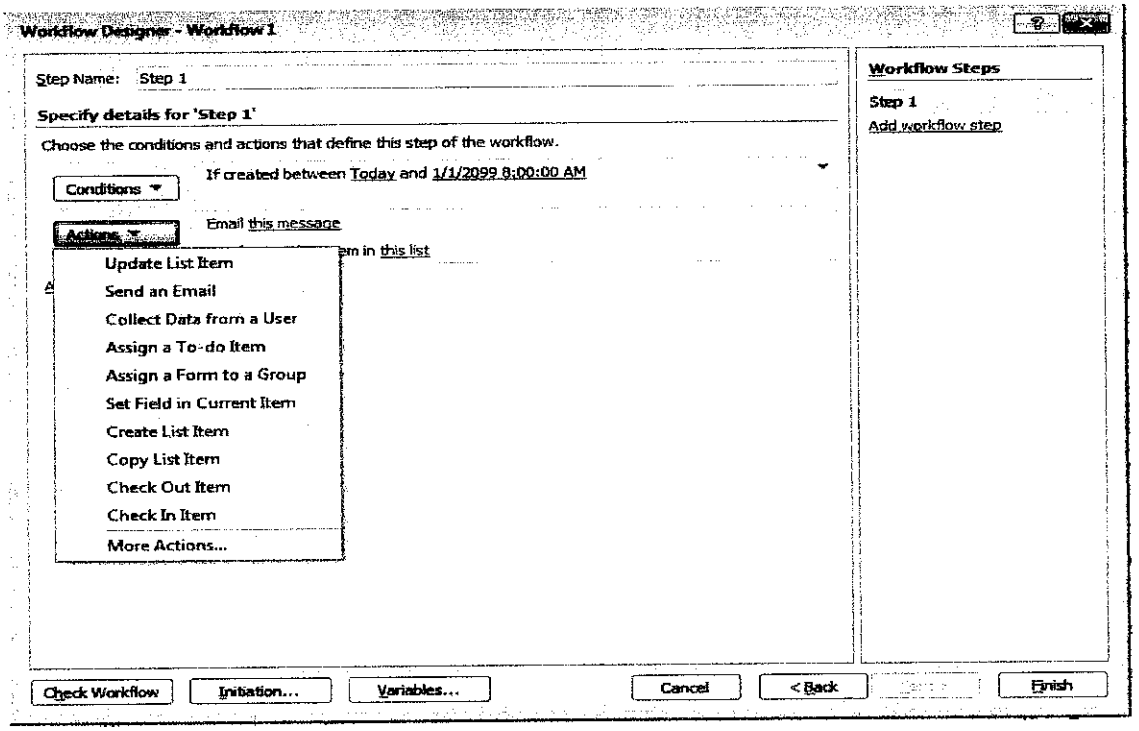

Figure 4.13

So the author has decided to first prompt an email to the approver to notice the approver that there is the new request and the approver need to respond to it. So this is the email that will be received by the approver (Figure 4.14).

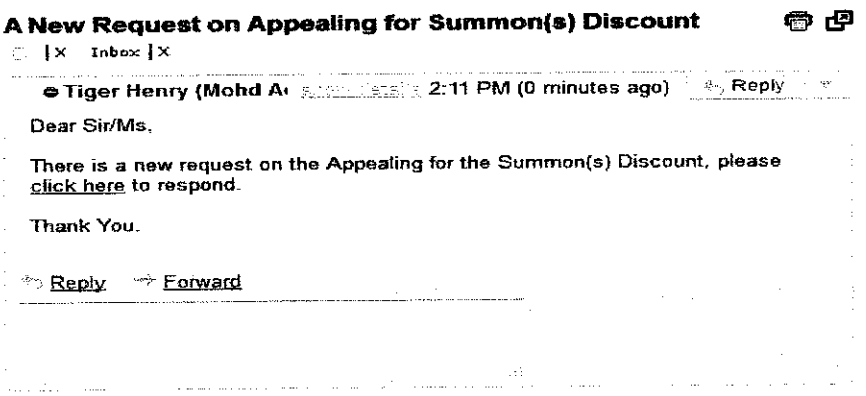

Figure 4.14

As we can see, the email prompted has notified the approver that there is a new request on the online form created. So the approver will have to click on the link included together in the email to respond to the request. After the approver click on the link, he/she will be brought to the approval section of the online form. The picture in Figure

4.15 below showing the approval section for the approver.

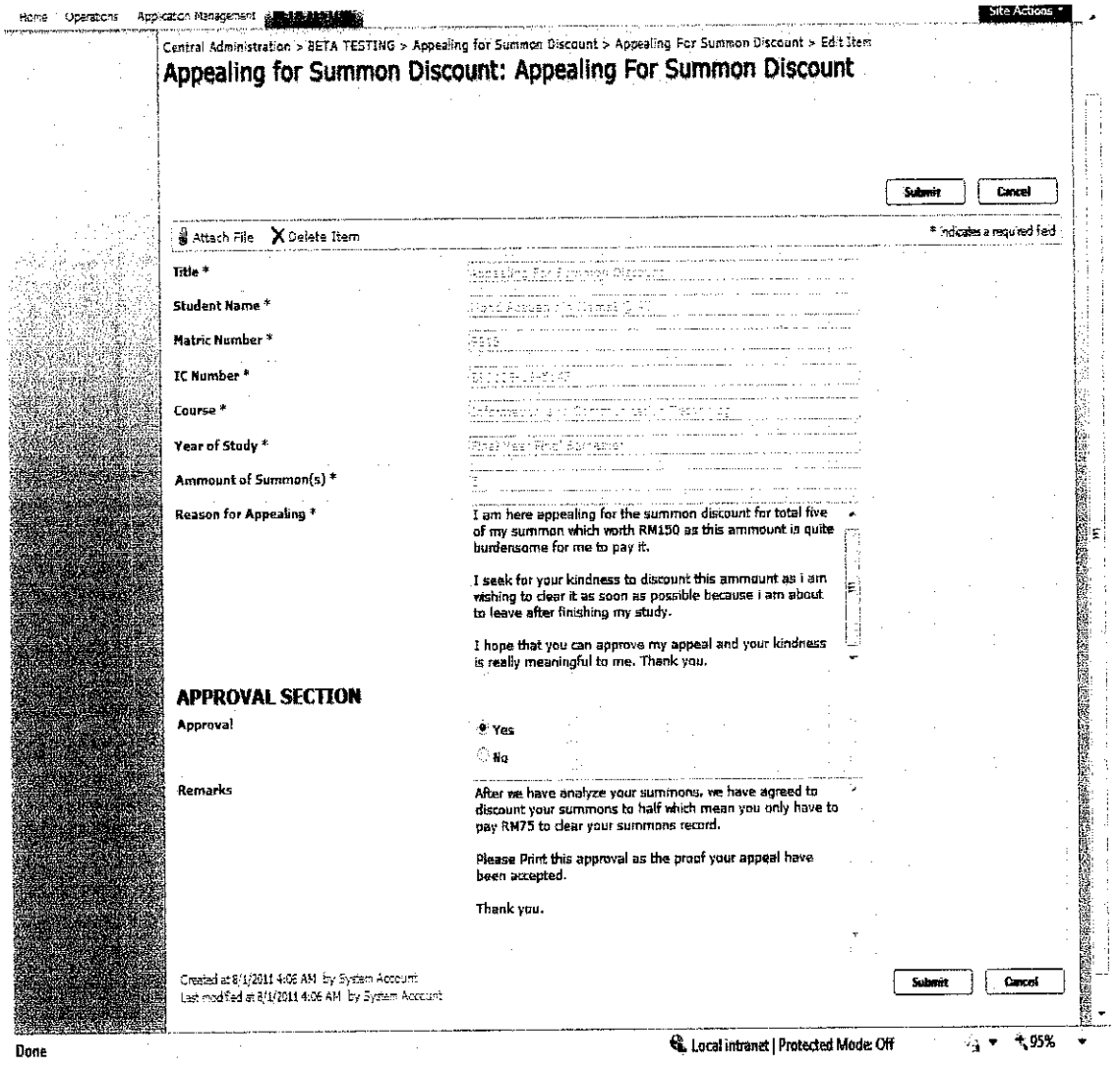

Figure 4.15

As we can see the approver can respond to approve or not the request. They also can put some remarks as to respond to the request. After the approver submits the approval, an email will be prompted to the requestor to notify that the request has been approve or rejected. The image on the Figure 4.16 showing the email that will be received by the requestor.

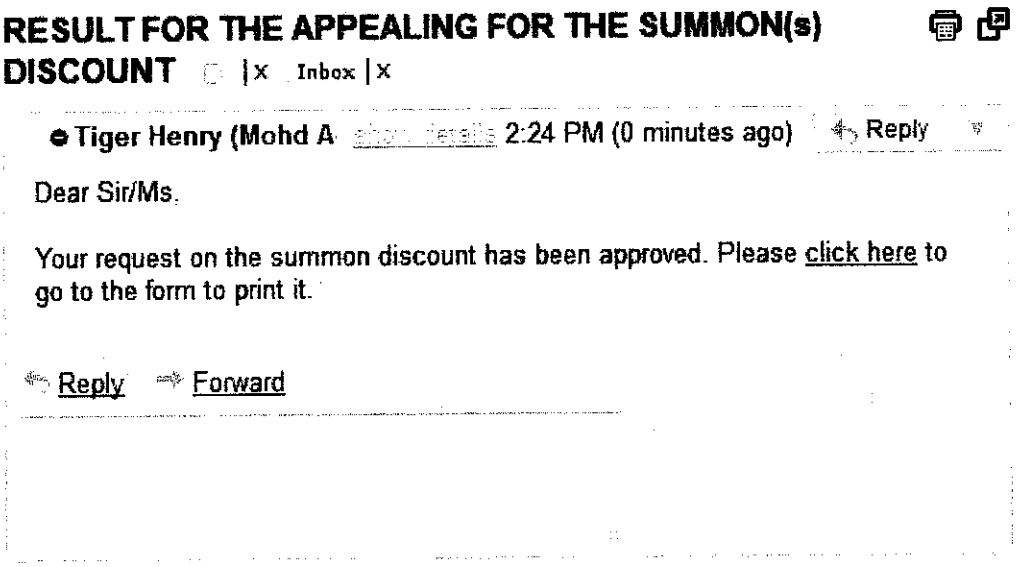

Figure 4.16

In this email we can see that the result for the request have been included together. So there will be a link to approved request. The link will bring the requestor to the full detail of the form with
the approval with it. The picture on the Figure 4.17 shows the full detail of the form that can be print.

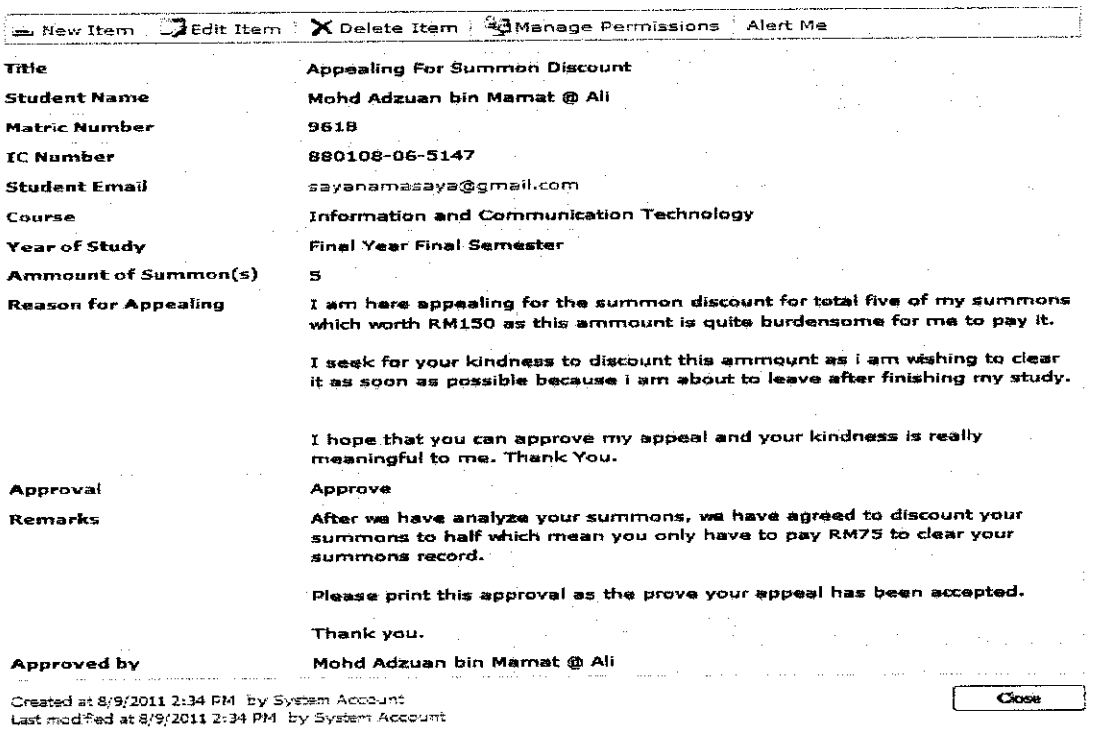

Figure 4.17

Otherwise if the request is rejected, the approval section that we can see from the picture before will state "Rejected".

From the explanation above, the author has conform that the reader will get the idea on how the workflow of this online form. The same things goes if there is two or more approver, the online form will travel from each approval phase through the email that will be prompted to each approver. But if one of the approver in the workflow rejects the request, the workflow will stop and notify the requestor immediately.

As stated in the milestone in the methodology section, the author also will improvise the User Interface Design. As we can see from the picture showing the homepage of the SharePoint for the Online Form is quite dull. So the author has improvised the main page but in the same time maintain the tidiness, cleanliness and also the professional look. The next picture on the Figure 4.18 will show how the new Online Form main page.

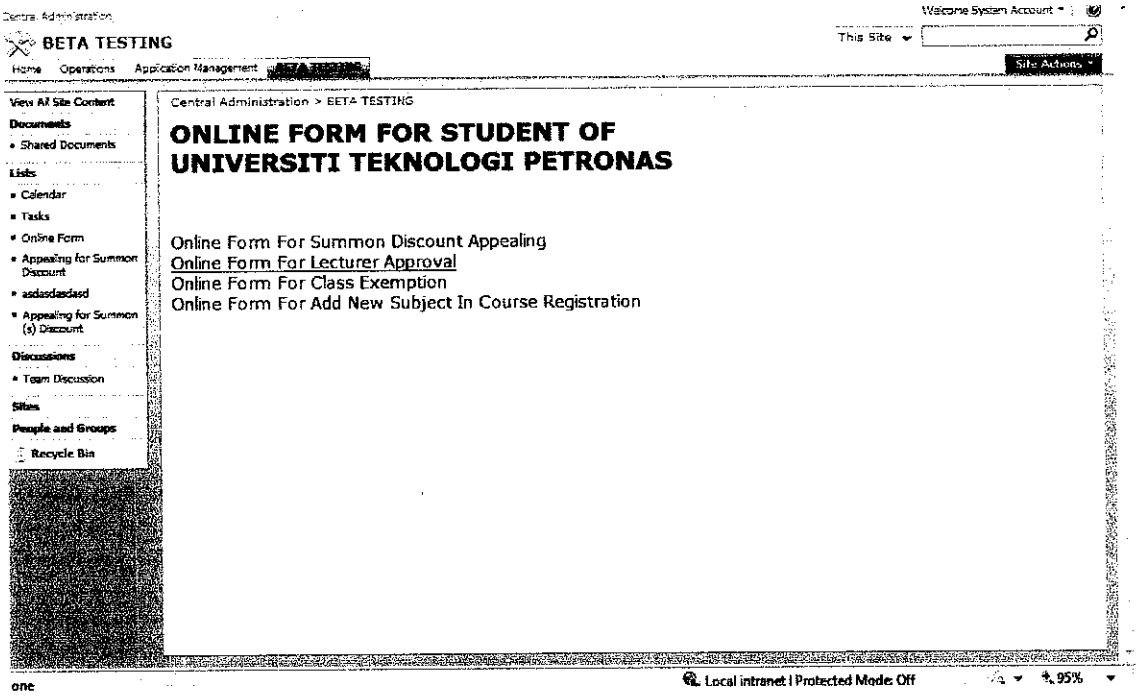

Figure 4.18

So there is the end of the third milestone and the author will proceed to the final milestone which is creating the KPI analyzer.

4.2.4 Creating the KPI Analyzer

For the KPI Analyzer, the author will manipulate the data string in the Online Form which is the created date and time of the request and the modified date of the Online Form. This mean that the created date is the time when the request being made and the modified date and time is the time when the approver respond to the request.

To get the value, the author has used one of the field offers in the form created which is the "Calculated Value" field. In this field the author can put the formula to count the time taken by the approver to respond to the request. The picture Figure 4.19 shows the created and modified date and time for each request.

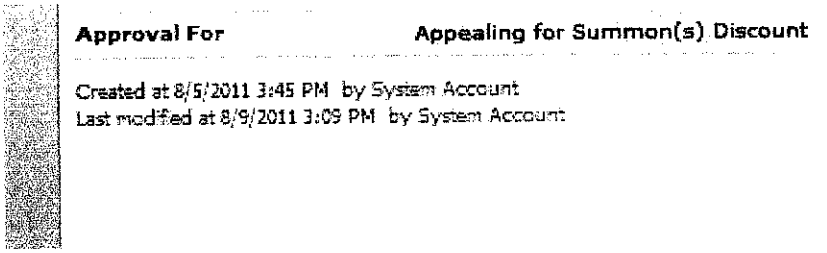

Figure 4.19

After the request and the approval have been made, it will update the KPI Analyzer section and send the time of created and modified of the form. So after the KPI Analyzer section has been informed about the time and date, it will calculate the time taken for the approver to respond to any request. The picture in Figure 4.20 shows the result after the KPI Analyzer has counted the time.

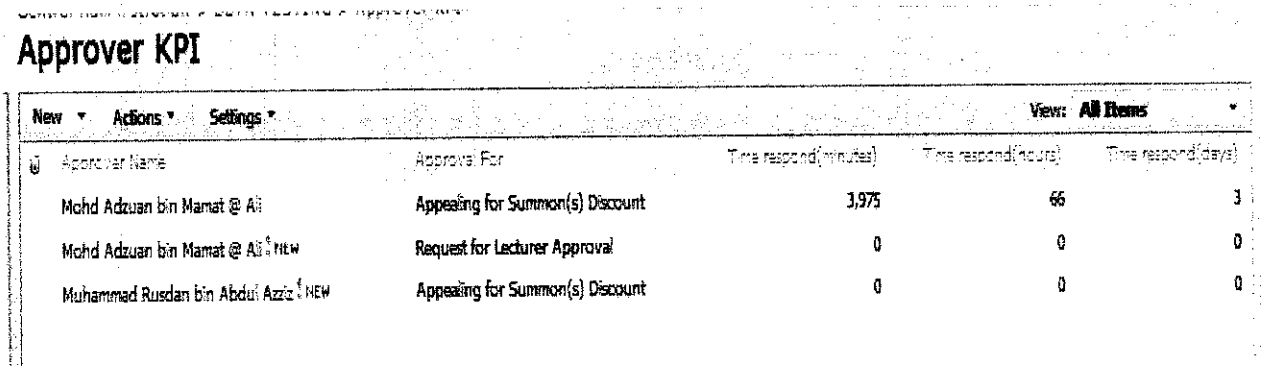

Figure 4.20

As we can see, the time has been calculated and we can now justify on how a person respond to each request that has been submitted to them and in this case we can analyze their KPI. So this is the basic idea on how to analyze the KPI through this analyzer.

4.3 Problem and Modification

In creating the workflow in the SharePoint designer, the author has detected that the email wouldn't prompt by the server to the email. The root for this problem has been recognized by the author where the UTP internet connection needs proxy as to connect to the internet and as by default the server and the webpage of the SharePoint connected to each other just in the Local Host. So for the modification the author will try to connect the server to the UTP's Proxy.

CHAPTER FIVE
CONCLUSION

As for the conclusion, the author believe that this project will be a successful project and will help enhance the flow of the form and can replace the traditional way of submitting the form which is by manual.

With this enhancement, the author believed that it will help either the requestor or the approver to save the time, cost and also energy consumed in requesting or approving request. Furthermore, the KPI analyzer which integrated within it will help a lot as to get the better KPI analyzing and more justified because the data that will be captured is proved and trusted.

As for any organizations that has been use the Microsoft SharePoint as their organization portal, this could be a way to optimize their purchase of the software which it is not only can reduce time, cost and energy consumed but also will give a lot of help to the management team to manage the form handling.

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