

AN ONLINE INVENTORY SYSTEM FOR IT FACILITATING COMPANIES

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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.

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CERTIFICATION OF APPROVAL

An Online Inventory System For IT Facilitating Companies

By

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ABSTRACT

The purpose of developing an Online Inventory system for IT Facilitating Companies is to accommodate the facilitating companies with their inventory and to allow the staff members of the company or other growing companies which are in need of basic tools to built up a successful business; to easily take certain inventory items on loan with a simple interface provided for user with the notified (email) system; which can enable both administrator and user to handle requests. The problems that were analyzed are such that manual records keeping leads to misplacing the important documentation, slow processing of request for the items to be on loan, the user is not able have details of their own booking request neither the history of request submitted etc., However, the objective of this project to provide an interface for users to process their requesting of items to be on loan for certain events and manage the request etc., and for administrator to manage and handle the inventory items, accounts, notify users, requests and their status. The methodology used for this project is Incremental, which has the frame work of both combinations linear and iterative; therefore, it is ideal for the project. To conclude, the system is implemented successfully.

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CHAPTER: 1

INTRODUCTION

The project is titled as an Online Inventory System for IT Facilitating companies, which operates with the company's inventory items and booking or loan of certain inventory items by the staff members of the company for events; to be processed through a web developed interface. The interface is built for both the user-side and the administrator-side with different modules to operate with. This project is mainly focused on the facilitating companies, which are the type of companies who provide facilities such as hardware and software for other small companies or for their own staff members to achieve in the business or the events which are being held by the company itself. The reason why this project is very crucial is because the items stored in the inventory of a company are the investment of the company. Once a staff member or another small company plans to book the items from the company's inventory, it is necessary to keep track of the owner who requests for the items and other details such as time, date the items were taken and the due date for the items to be returned and so forth. Therefore, for the facilitating companies, I analyzed that if they do have certain mechanism of providing only certain amount of inventory items to the staff members or other small beginning companies, then this system should help them to keep track of their inventory items and the items that are on loan as well the reports of every possible

1.1 Background

An Online Inventory System is basically providing the facilitating companies with the aid of having no manual record keeping. This illustrates that all the records of items on loan, items being request; items in the inventory will be web-based. This system is particularly more efficient, reliable and an Online information availability for the user-side as the book for the items. The web-interface will allow easy management and tracking of

items in the inventory for the administrator and keep track of items going in and going on loan from the inventory. It will also have a wider and better supervision for facilitating companies with the basic and dependable functionality which particularly needs no external help. In addition to that, there will be instant notification for approval/rejection of loan request through email to user from the administrator.

1.2 Problem Statement

There are a few problems that were analyzed while the requirements were gathered. The statements are shown below:

- i. Manual records keeping for items on loan is inefficient and unreliable as it can easily be misplaced.
- ii. It takes a lot of files and storage area to ensure all the previous records are kept.
- iii. Slow procedure of processing Loan request of items and may take days to fulfill the request.
- iv. No instant notification (email) to notify the users of their status of request or soft copy evidence for their own record keeping.
- v. Mostly, the number modules or system developed in one of the facilitating companies which I have encountered has very less modules and it is not reliable as there is no report preview, back-up storage and tracking users with what type of items on loan is stored.

1.2.1 Problem Identification

The problems were identified by visualizing the administrator as they find it difficult to keep track of the items in the inventory of the company. The paper work, known as the record of loaned items is kept in a file where there is a possibility of misplacement. The management of the inventory items is also need to be managed as there are a lot of problems faced when it comes to an inappropriate data or the data

they rely on is out-dated. Furthermore, there is no instant access for users other than manually contacting the administrator to inform about their request.

1.2.2 Significant of the Project

A web-based inventory system's records can be digitally stored and operate, with it being time saver for Admin as there is no need for manual reports. The interface built is user-friendly. It is more efficient and reliable to keep older records and history. The web-based Inventory System is more convenient for the user to book/loan items. The data is formatted and easily approachable. It connects to the database which allows us to choose different type of queries, data report etc. It is private and confidential for both Users and Admin operations as users are not allowed to access inventory items or other user accounts while Admin does not book/loan items. The system also provides Automatic Notification to notify the user, if their request is approved or rejected via. Furthermore, Admin is able to manage the inventory items stored in database, through the interface.

1.3 Objective

To develop a web-based Inventory System for specifically the facilitating companies on how to keep track, manage and value their assets. It is a new method of providing a platform for both types of users; Administrator and User to communicate and achieve their tasks efficiently. Last but not least, to test the efficiency and usability of the modules on the web browser.

1.4 Purpose

The purpose of this project is to allow the User (Staff) to book/loan items from the inventory items list. They are allowed to send a request which is then either approved or rejected by the Administrator. Basically, this project is an interface between the User and the Admin to communicate effectively and efficiently and providing the user and Administrator with information.

TABLE 1. Shows the Purpose of Project

User-Side	Administrator-Side
✓ To ease in management of their Account.	✓ To Ease in Handling Registered Accounts.
✓ To ease in Booking/Loan Request for Items.	✓ To provide efficient functionality to respond to Request.
✓ To ease in providing Feedback	✓ To provide Ease in Management of Inventory Items Stored.
✓ To check Stock Availability of Items	✓ To provide Ease in Searching and Checking Stock of Items in Inventory.
✓ View Summary of Requests and their Status	✓ To Notify User if the Item has been returned, Delayed or On Loan.
✓ View Items Assigned, after Request has been accepted.	✓ To Print Report Of each accepted Request.

1.5 Scope of Study

The An Online Inventory System involves both the User-side and the Admin-side. Before the users access their modules, there is a Main Page, where the user chooses either Administrator or Staff member.

TABLE 2. Scope (modules) of the project

<u>User-side Modules</u>	<u>Administrator-side Modules</u>
1. Login Page 2. Home Page 3. Account Management 3.1 Change Password 3.2 Change other details 4. Booking/ Loan 4.1 Booking Form 4.2 Check Available Items 5. Summary 5.1 View Summary 5.2 View Item Status 6. Feedback 6.1 Form	1. Login Page 2. Home Page 3. Account Management 3.1 Change Own password 3.2 Manage/Amend User Accounts 4. Inventory Access 4.1 Amend Inventory Items 4.2 Search Items By Specification 4.3 Check Stock Amount 4.4 Auto-Inventory Count Item Check 5. Request Management 5.1 Approve/Decline Request 5.2 Change Status of Request 5.3 Declined Requests 5.4 Previous Records 5.5 Late Pending Returns 5.6 History of Requests 6. Feedback Review 6.1 View

1.6 The Relevancy of the Project

This Project will help the Facilitating Companies to be able to loan their items stored in their inventory and keep track of items available, on loan, delayed, items with defaults, managing, countable and summarizing of inventory as there could be thousands of items stored, which could apply a lot of human work.

1.7 Feasibility of the Project within the Scope and Time Frame

The project is to be delivered with its functionality by the 20th November 2012. The scope of the project has been certainly modified due to time constraint. The module functionality remains the same.

CHAPTER: 2

LITERATURE REVIEW AND/OR THEORY

A.N Mustafizul Karim, Mohd Fadli Saad, Mahbubul Haque (2011), explains the importance of a web-based system of managing inventory in a university setting to help various laboratories to keep an update on the status of their tools and equipments. By providing a model, and putting a web-based inventory system in place in five different laboratories of an Engineering Department in a large public university in Malaysia. Furthermore, it is developed using PHP and MySQL as a backend database with SCC implemented for the interface. Siong, S et al (2008) reported about the development and application of a web based, low cost, user friendly inventory analysis tool for stock availability optimization and enhanced delivery performance in the National Heart Center Singapore. The authors contended that by gathering all up-to-date information, the tool could effectively track the level of re-order, replenishment and safety stock of finished goods within minutes, thereby lowering inventory cost and keeping forecasting error under control. Another author in the same journal, Otis, R. J. et al (2004) has described about a web-based performance management and inventory system that includes site evaluation and design tools for onsite wastewater treatment regulation. The code was built on the concept of performance management comprising not only treatment performance of systems themselves, but also that of system owners, practitioners and regulators, each having defined roles, responsibilities and performance expectations. Another author, Blauth and Ducati (2010), in the journal says presented a web-based system of open-source coding for monitoring, research and management of grape production in a particular state in Brazil by integrating spatial information from remote sensing images, GPS measurements and inventory data. This system, as argued by the authors, would allow both monitoring of grape production and investigations either on regional land and soil cover, or in other applications derived from image classification.

Tarkan Tan and Osman Alp (2005), deal with an integrated approach to inventory and flexible capacity management under non-stationary stochastic demand and set-up costs. In this journal paper, the crucial problem discussed is how to cope with volatility in demand with holding safety of stocks in the traditional remedy for handling the stochasticity in demand. In addition to that, another problem is with the inventory management that can be transformed into a typical inventory concave or convex production cost. Therefore, the development of their Dynamic programming model to formulate the analysis and concluded several problem parameters where flexibility is important. In the same journal, Atamatürk and Hochbaum (2001) discusses about an integrated capacity and inventory management problem under a finite planning horizon and deterministic demand where trade-offs between capacity expansions, subcontracting, production, and inventory holding are exploited.

According to Esra Çınar and Refik Güllü (2011) at MSOM Annual Conference, discusses an inventory model with capacity flexibility in the existence of advance capacity information. In this conference paper, the planning and managing of inventory/production systems are divided in two main strategies to manage the uncertainty: 1) Gradually building inventory to hedge against possible future shortages, or 2) Temporarily increasing the capacity by purchasing extra capacity. Therefore, the consideration of Advance Capacity Information (ACI) with flexible capacity was considered. Related papers were also reviewed; Angelus and Porteus (2002) study a case where capacity can be reduced as well as added, at exogenously set unit prices, and show that a target interval policy is optimal. The additional temporarily acquired capacity is also referred to as contingent capacity. Tan and Alp (2009) considered a periodic review, in terms of temporary workers, from an external labor supply agency. Therefore, the renewal reward theory enables them to derive optimality equations for the order-up-to levels in a fairly compact fashion.

Gregely Mincsovcics, Tarkan Tan and Osman Alp (2006), deal with an integrated problem of inventory and flexibility capacity management under non-stationary stochastic demand consideration, where the constant lead time is associated with the acquisition of contingent capacity. In this journal, they state that the system cost may decrease by managing the capacity as well as the inventory in a joint function. Therefore, they prove the decision-making functions under consideration are convex and provide an optimal policy for operational decisions to find the optimal permanent capacity level.

Chien-Wen Shen, Heng-Chi Lee, Chio-Chun Cheng and Ching-Chih Chou (2011), researched on applied various data mining approaches which enabled them to investigate the innovations of data processing technologies for inventory management based on the database of the United States Patent and Trademark Office. One of the objectives is to find the core technologies by evaluating the patent citation matrix and patent strength. In this journal, the data processing of inventory management involves the electrical apparatus and its corresponding method that performs operations with significant data change or calculations in the processing of inventory records as cited by United States Patent and Trademark Office (2010). Such enhancement is the computerized procedures for establishing, maintaining or updating inventory records. For example, an inventory management system can automatically determine which items in the Just-in-Time inventory may need to replenish most likely as cited by Johnson and Momyer (1998) or usage of linear programming engine to choose the priority of customer orders and arrange limited inventory accordingly by Treichler, Yuk and Bresticker (2008). The methodology used is Data Mining, Data Collection, and Finding of Data Mining. However, the inventory management is critical for supply chain participants, understanding and monitoring the development trend and context of data processing technologies for inventory management would benefit participants to enhance their competitive advantage.

A. Burns (1991), reviewed recent results in the application of scheduling theory to hard real-time systems where he considers inherent characteristics of real-time systems that their requirements specification includes timing

information in the form of deadlines. Hard real-time systems are those that have crucial deadlines. Two views as to how a system can be guaranteed to meet its deadline: i) to develop and user an extended model of correctness (and refinement), and ii) the other focuses on the issue of scheduling by Joseph and Goswami(1988). The purpose of this journal is to review current state of scheduling theory as it can be applied to real-time systems. One of the crucial challenges of next generation is to develop an appropriate scheduling algorithm of real-time systems cited by Stankovic (1988). The use of semantic models is to describe properties of real-time systems by Joseph and Goswami (1988). In discussion on scheduling algorithms in simple uni-processor systems, where resources, process precedence constraints an arbitrary process timing constraints were not initially considered. Furthermore, other aspects of realistic hard real-time system were concluded and solution to perform adequate hard real-time scheduling was addressed.

S.L. Adeyemi and A.O. Salami (2010), deal with an tool of optimizing resources in manufacturing industry where to imperatively manage inventories efficiently is so to avoid the costs changing production rates, overtime, sub-contracting, unnecessary cost of sales and back order penalties during periods of peak demand. The main objective of this journal is to determine whether or not inventories in the Nigeria Bottling Company, Ilorin Plant can be evaluated and understood using the various existing tools. The tools such as the Economic Order Quantity (EOQ) model, which is the fundamental inventory decision model and collection and analyzing of data to have meaningful interpretations of research took place. Lastly, the analysis of having a positive relationship between inventory and production cost is mentioned.

Osman Alp and Tarkan Tan (2008), deals with the problem of determining the permanent capacity level in a make-to-stock environment under non-stationary stochastic demand with the option of a temporary increase of capacity via contingent resources such as temporary labor or overtime

production was considered. The methodology used is dynamic programming model to represent this problem, where the possibility of incurring distinct fixed costs to initiate production and to order contingent capacity is also incorporated. They also have multi-period problem analyzed and concluded certain computations.

Helder Adão, Rui Antunes, and Frederico Grilo (2008), describes the project and development of very low-cost and small electronic prototype, especially designed for monitoring and controlling existing home automation alarm system. Several type so hardware implementations were done to prove that it is possible to obtain an extremely low-cost alarm system control and monitoring solution for homeowners and with the a common browser, it is possible to use PDA or a Smartphone to remotely control many home alarm systems. On p. 154, the example under Software Interface Application elaborates dynamic web page which will function to immediately inform the user when an alarm sounder event triggers and allows them to disarm remotely or arm the control panel. The software user are Dreamweaver 8 and Notepad++ to develop the web pages and for editing the JavaScript Language.

Daniel Olmedilla, Enrique Frías-Martínez, and Rubén Lara (2010), researches that web profile analysis on the WWW and in the mobile world research has focused on navigation logs belonging to a web portal, there is a knowledge that no paper analyzing the navigation of uses in a broader sense, having all their session activity independently of the portal or website they access. In this journal, the advantage is that a handset typically corresponds to a single person, as opposed to desktop computers. Furthermore, this journal provides insights of large number of domains and accesses graphs and overview of the information contained in mobile navigation logs, but allows for much more advanced analysis.

F.I. Anyasi and P.A. Otubu (29th August 2009), deal with the emergence of mobile banking technology systems that has implications for the general discussions about mobile telephony in the development world. This journal

also underscores how, occasionally, innovations emerge from unexpected places and have the capability of reconfiguring the significance of a technology to its users. Other than that, the economic factor has also been considered.

Manoj P. K. (2011) deals with an overall review on Just-In Time (JIT), and its major features, benefits, key pre-requisites and also the status of its adoption. The JIT production system offers good prospects for enhancing operational efficiency and productivity through minimization of inventory. Furthermore, JIT is yet to pick up momentum in a significant way in Indian manufacturing companies, probably due to high level of bottleneck in obtaining critical inputs, some less stringent forms of JIT being practiced. Due to the cut-throat competition in the industry globalization pressures, an emerging management philosophy like JIT has become imperative for survival growth for any manufacturing company, rather than just an option.

Amit Chauhan, Reecha Ranjan Singh, Sangeeta Agrawal, Saurabh Kapoor, S. Sharma (August, 2011), deals with SMS based remote control for home appliances is beneficial for the human generation, because mobile is a most recently used technology nowadays. Therefore, they elaborate that mobile phone usage is based on the control system which is simple and cost-effective. To make it more convenient, the requirements such as landline phone with extension card can also be used to notify user.

Richard Pibernik and Prashant Yadav (19th January 2008), deals with a Make-to-Stock order fulfillment system facing random demand with random due date preferences from two classes of customers. This journal shows a developed integrated approach for reserving inventory in anticipation of future arrivals from high priority customers and for order promising in real-time. This research is based on 2 distinct features: a) explicitly model uncertain due date preferences of the customers; b) considering multiple receipts in the planning horizon that can be utilized to fulfill customer orders;

and c) choose to utilize a service level measure for reserving inventory rather than estimating short- and long- term implications of order promising with a penalty cost function. This model assists manufacturers in reserving inventory for future high priority demand and determining order acceptance/rejection for incoming orders.

Jui-Chang and Chao-Yu Chou (2008), discusses on importance of inventory management in production control. The inventory management with statistical process control on simulation and evaluation shows a developed real-time inventory decision support system by using the individual control charts for monitoring the inventory levels and market demands. They describe that a real-time inventory system decision system is proposed by incorporating Western electric run rules in to the decision rules of the system. They also mentioned the time series monitoring the individual control charts as a tool to monitor the inventory level. A simulation was carried to investigate the effects on proposed inventory decision system and to verify the effectiveness of the system. A study continued by Aggarwal (1974) and Silver (1981), mentions a development of an effective inventory management systems to reduce. However, they discuss that a few concepts or techniques are suggested for monitoring diagnosing the performance of inventory management systems. A study was done by, Pfohl et al. (1999) who deals with the development of real-time inventory decision support system by using the traditional Shwehart control charts for inventory level and demand, whereby, a series of decision rules are provide to aid the inventory manager to determine the time and the quantity to order. Furthermore, this journal mentions 4(four) Inventory Decision Rules and 3 (three) Demand Decision rules. Then, a simulation study was conducted to compare the system performance of the proposed inventory decision system with the system presented by Pfohl et al. (1999). In this simulation, a few patterns were analyzed and discussed in the results section.

Tony Wild (2004), writes in a book about the Improving the inventory record accuracy. Tony explains how certain major improvements in the efficiency

in inventories can proceed with better communication and with low inventories in need of time and more accurate data. The major challenge mentioned is the data accuracy problem at both the physical management and the computerized management as it has to be continuously improved to increase the standards of their business and company to be beneficial inside and outside of company.

Tony Wild (2004) discusses in text on improving the inventory record accuracy about benefits that can be achieved when the records are accurate. He elaborates that accuracy has only become important since the development of integrated information systems has come to the era. When the data are required by other people, then accuracy is essential. With an integrated system information is used continuously for a wide variety of tasks, and the need for exact data is very great.

Tony Wild (2004) discusses in improving the inventory record accuracy about the causes of inaccurate records. He explains that inventory needs a continuous maintenance if the records are to be kept accurate.

Tony Wild (2004) elaborates in another chapter in improving the inventory records accuracy, about the structures to avoid inaccuracy in the records. In this chapter, the author explains certain ways in which the business/company can reduce the inventory reduction approach and also mentions that checking is easy when there is no inventory. The author basically mentions that if the inventory is not so necessary, then don't owe one and if there is a necessity, then improve the accuracy through simplifying, layout and eliminating errors.

Tony Wild (2004) discusses on another chapter in improving the inventory record accuracy, about Inventory checking. The author elaborates that to gain the highest amount of accuracy, the inventory count should be done. Counting the equipment, weight, size etc., should be taken in to account in order to obtain the most accuracy in records.

Rob Williams (2006) discusses in a book based on Real-time Systems Development, about introduction to Real-Time systems. Williams elaborates that the Real-time processing normally requires both parallel activities and fast response. In fact, the term 'real-time' is often used synonymously with 'multi-tasking' or 'multi-threading', although this is not strictly correct: small real-time systems, as used in dedicated equipment controllers, can perform perfectly adequately with just a simple looping program.

Rob Williams (2006) elaborates in a chapter of Real-time Systems Development, about implementing a simple real-time system and demonstrating it can be implemented using round robin, cooperative scheduling. And with aid of introducing the extra facilities of interrupt service routines, a reasonable real-time embedded system can be easily achieved. In addition to that, the problem of resource sharing, or critical data is also discussed within the context of cooperative scheduling.

Rob Williams (2006) illustrates in a chapter of Real-time systems development, about the types of input and output hardware and data that should be used is also a very critical area because routine desktop computing is efficient enough to hide the complexity, structure and dynamics of the program. The real-time programmer has to be aware of the hardware, in terms of port address mapping and register functionality. In addition to that, Interrupt processing introduces further complexity for the programmer, including critical data protection and relative timing issues.

Rob Williams (2006) explains in a chapter of Real-time systems development, about the structures design for real-time systems. Williams briefly explains that Structured Analysis and Design is thought left behind in comparison to Object-oriented Design methods, it still retained the popularity in real-time systems, to gain the improved performance of the system. Furthermore, Finite State Machines (FSM), data-flow diagrams and entity relations diagrams are unified with in real-time Yourdon (the original Structured and design method).

Rob Williams (2006) illustrates in a chapter of Real-time Systems development, about the UML for real-time systems. Williams explains that UML is a graphical language available to describe systems by expressing the construct and relationships. Two types of relationships are includes: static and dynamic. However, for the real-time systems, the availability of state charts and sequence diagrams fulfills the requirements that describe run-time dynamics for real-time systems development.

Rob Williams (2006) explains in a chapter of Real-time Systems Development, about the importance of system integrity in real-time systems. Particularly, the awareness amongst the developers about the type of tools and techniques needed to design and realize more reliable software is very important. The major concept of system integrity other than reliability is useful when it is self-recovered, then the component failure and the achievable feature of a modern computer systems. For reliable system, the reuse of well-tested software component is always recommended but porting software has a problem of its own. Other than that, problems such as run-time bugs are often easily traced back to failures of determination of system requirements.

Rob William (2006) discusses in a chapter of Real-time Systems Development, about the significance of selecting the type of programming language to code for the Real-time systems. In addition to the importance of language, the compiler to run the complex code is also very central point for the developer to consider because it can be very time consuming.

In the case study on natural sapphire by Transpacific Software Pvt Ltd. (2009), discusses that keeping the view of inventory to stock up, arrange and efficiently tracking of inventory has to be by featuring products on the website in the form of jewelry as the major Gemstone enthusiast. The backing up by Real time inventory and order management systems helped to shorten the path from desk to door for the company where they had to make up for the potential orders which will eventually pile up large amount of inventory items. In this case, the industry holds 100 types of gemstone are

being sold online. Therefore, the industry had a real-time inventory management system which led to inefficiency in the sales activities. However, they planned to develop an online shopping engine and back it up with the Real-time inventory management system. Then the study discusses further on managing the backend of the website. As a website skeleton has started to surface the team, the concentration drew further on the logic of backend of inventory management application. It provides the features for storing and tracking information for a matrix that had more than 10 types of Gemstones, which were supporting 22 shapes and were distributed across 7 different jewelry categories. Eventually, the future drives of real time synchronization engine to synchronize the inventory with on-line e-commerce web site. The synchronization facilitates in any type of new item that has been added to the inventory to get reflected on web site within seconds. The application marked its success with backing the website and online shop with updated information in Real time. In addition to that, streaming of activities was taken into consideration where the online shop became a hit, and extensive amount of orders started pouring. This showed that having an online database inventory system helped in a massive amount.

CHAPTER: 3

METHODOLOGY

3.1 Research Methodology

- ✓ Journals
- ✓ Case Study
- ✓ Conference Papers
- ✓ Books: i. Improving Inventory Record Accuracy
ii. An Online System Developments

3.2 Project Methodology

The methodology chosen for my project is Incremental methodology. It is because this methodology consists of framework which has both combination linear and iterative occurrence amongst the phases of the methodology. To elaborate further, the designing and implementing & testing phase can be concurrently executed. There are 7 main processes that occur in the methodology, as shown in the figure below:

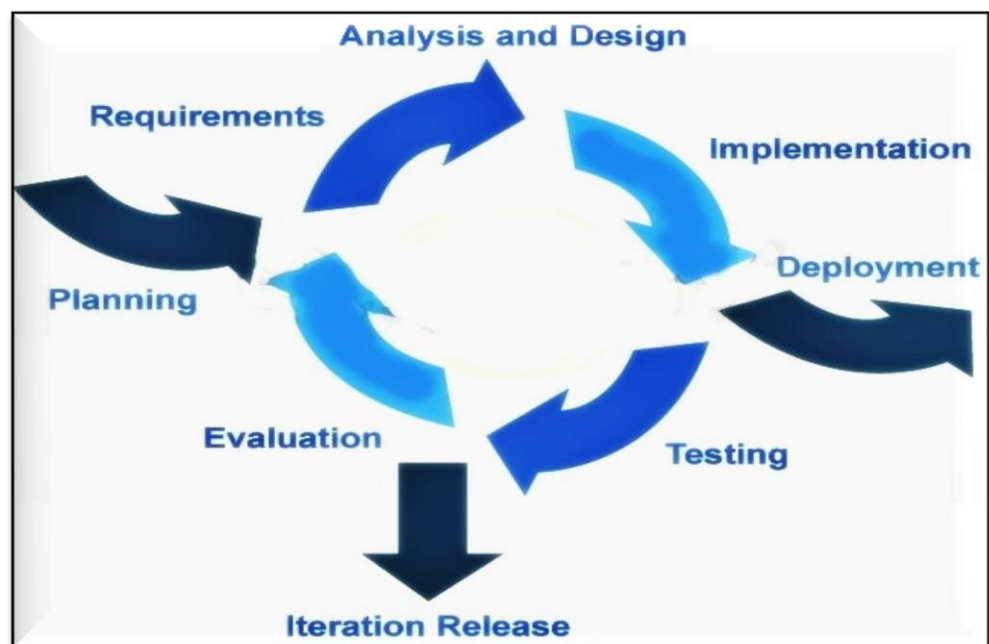


FIGURE 1. Incremental Methodology

3.2.1 Planning

Initial planning is a phase where the decision had to be made on what type of project to be selected and what will be the main content of the project. The first plan contained a real-time code to be implemented and sms notification to be used and demonstrate. However, the period to develop the previous scope was not suitable, therefore, the scope had been changed. Finally, the scope and objective that has been required is planned in this phase. Once it was decided, the 1st phase, planning, refers to how the combining of the system planning and system analysis phase can be achieved. The purpose of the project, the target audience, the major contents, the project scope, constraints and system requirements, as well as key issues in the project are also analyzed under the planning phase. This has all been established in the FYP1 time period.

3.2.2 Requirements

As the planning phase completed, the 2nd phase, Requirement, whereby, all the information was gathered into a site map form to easily view the number of modules to be designed. During the planning phase, I decided what type of technologies I will be using, the tools listed such as software, hardware, and the interactive forms etc., all the data gathering (literature review), researching and readings also took place in this phase to clarify for a better requirement lists.

One of the company's inventory systems was analyzed and compared to how it can be better, reliable and efficient. This occurred during my internship period.

Below are the Site Maps diagrams, designed to show clearer image of modules. The flow charts for both admin-side and user-side, Website Map Diagrams and Database diagrams of the system have also been developed.

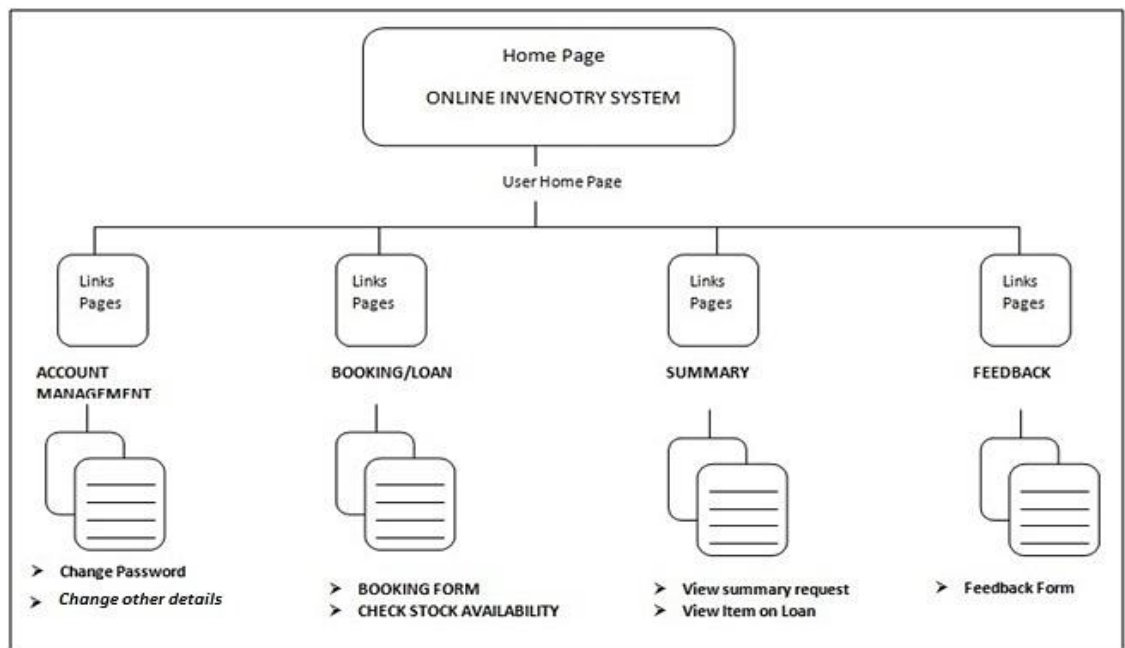


FIGURE 2. User-side site map diagram

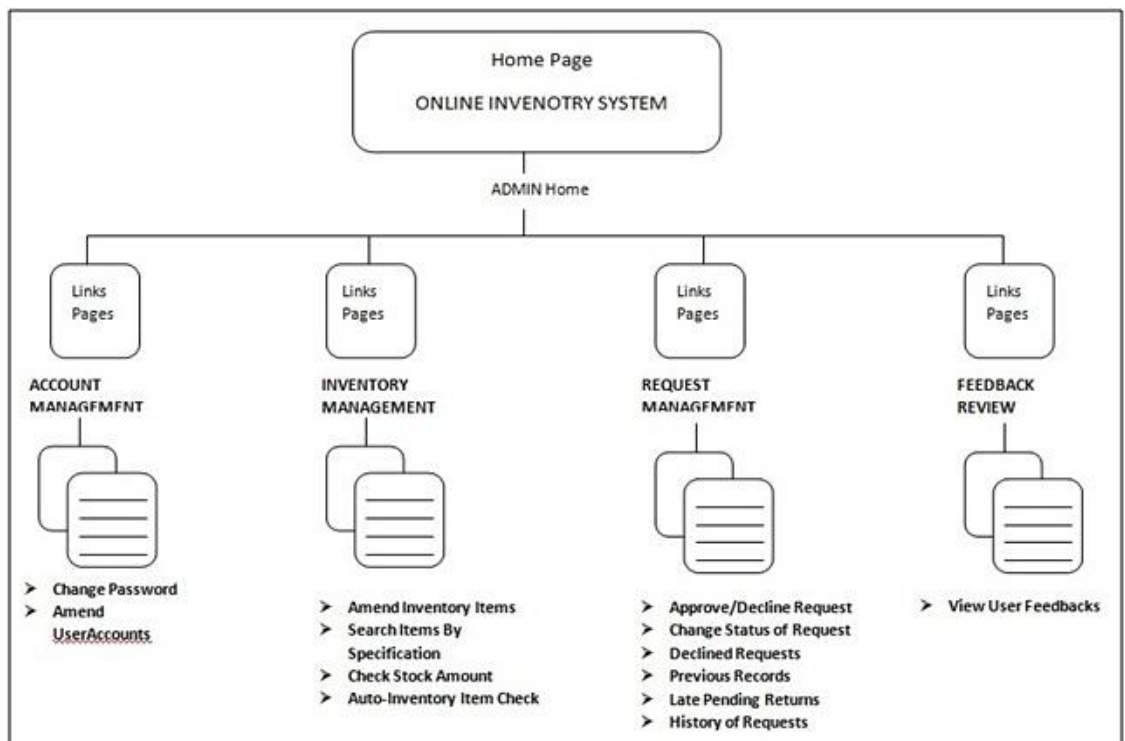


FIGURE 3. Site map Diagram for Admin-side

3.2.3 Analysis & Design

Drawing from the information gathered up until the Phase 2, it's time to determine the outlook, layout and design of my site. Here, the key factor taken into consideration is the target audience. The audience aimed is the corporate related, therefore, the interface is needed to be simple and corporate-look. As a designer, I created 3 prototypes for my website. This was typically designed on Microsoft word, and then improved to design as built-in templates in Adobe Dreamweaver HTML coding and finally, the finalized design for the template to be used for the project. Both the User-side and Admin side have same interface

This phase gives the opportunity to express your likes and dislikes on the site design. In addition to that, it allows the communication between both the user and the web designer to match their needs and taste. It is important that I work closely to the user to exchange ideas until the final design have been achieved..

3.2.4 Implementation

Designing and Implementation phase is concurrently running as the modules are designed and their functionality is implemented. So the system is developed and maintained at the same time. User logs in using the user name and password, which is then verified in database. If it is successful, it proceeds to home page and the user is able to use the functionality of the system. Functionality that is implemented under the user-side is account management, booking request, summary viewing and feedbacks.

Technically, a successful web site requires an understanding of front-end web development and back-end development. The coding involved was:

- I. SQL (Structured Query Language)
- II. PHP(Hypertext Pre Processor)
- III. CSS (Cascading Style Sheet)
- IV. HTML (Hypertext Mark-up Language)

- V. Web server (WAMP: MYSQL, APACHE)
- VI. JavaScript

Furthermore, the email notification is operated by using the Google domain, which is placed under my Gmail account. The settings are changed under the settings of my Gmail account and phpmailer class is used to send emails through local host.

3.2.5 Testing

After each increment, regression testing should be conducted. During this testing, faulty elements of the software can be quickly identified because few changes are made within any single increment.

As the implementation is one cycle, the testing occurs concurrently. When the user logs in, the database is verified using PHP code and validation java scripting. In addition to that, the validation, verification of form and data that is submitted into the database server, debugging and over-lapping code is fixed at this section.

After the system has been completed, it has been tested uncountable times to ensure no error occurrence. However, a few problems were faced when the Email notification module was implemented. Problems such as the Wamp Server refused to activate the openssl php directory, so I had to re-install a new version of Wamp Server. Then once it was installed, the problem was eventually solved by running the module a number of times. Other problems that occurred during the testing phase are the back-end problems such as updating database table with values entered at the interface and the values that I planned to store on the URL of the page for my approval module. However, the problems that were faced have been solved. Testing phase continues until the final day of presentation.

3.2.6 Evaluation

This is based on discussions with the supervisor and obtaining feedbacks, a plan was developed for the next increments, and modifications are made accordingly. Often, some of the features in the initial planning are removed from the scope of a project in the planning or analysis phase. In addition, many bugs are found in the implementation and testing phase that have been cleared and verified completely. The system is evaluated on its interface, and also the functionality.

3.2.7 Deployment

As the interface and functionality works completely, it is being deployed and tested for further confirmation on its reliability.

3.3 Gantt Chart

In the Gantt Chart (Figure 5), the red line indicates the progress of the project. There are Four (4) dates visible in the chart, which indicates the Milestone of the project.

		Task Name	Duration	Start	Finish	Predecessors
1		<input type="checkbox"/> An Online Inventory System For Facilitating Comp	46 days	Tue 18-09-12	Tue 20-11-12	
2		<input type="checkbox"/> Development and Implementation of modules	46 days	Tue 18-09-12	Tue 20-11-12	
3		<input type="checkbox"/> User-side modules functionality	21 days	Tue 18-09-12	Tue 16-10-12	
4		Designing and amend functionality	20 days	Tue 18-09-12	Mon 15-10-12	
5		Progress Report	1 day	Tue 16-10-12	Tue 16-10-12	4
6		<input type="checkbox"/> Admin-side Functionality	25 days	Wed 17-10-12	Tue 20-11-12	
7		Designing and amend functionality	24 days	Wed 17-10-12	Mon 19-11-12	4
8		Setting Ozeki Server Configuration (in process)	1 day	Tue 20-11-12	Tue 20-11-12	7
9		FYP II Pre-Sedex	1 day	Wed 21-11-12	Wed 21-11-12	8
10		Testing and Evaluation of Project	9 days	Thu 22-11-12	Tue 04-12-12	3,6
11		Dissertation	1 day	Wed 05-12-12	Wed 05-12-12	9
12		<input type="checkbox"/> Evaluation	12 days	Thu 06-12-12	Fri 21-12-12	
13		Viva	1 day	Thu 06-12-12	Thu 06-12-12	11
14		Final Testing/Verification/Validation	10 days	Fri 07-12-12	Thu 20-12-12	13
15		Final Dissertation	1 day	Fri 21-12-12	Fri 21-12-12	13,14

FIGURE 4. Project activities during FYP II

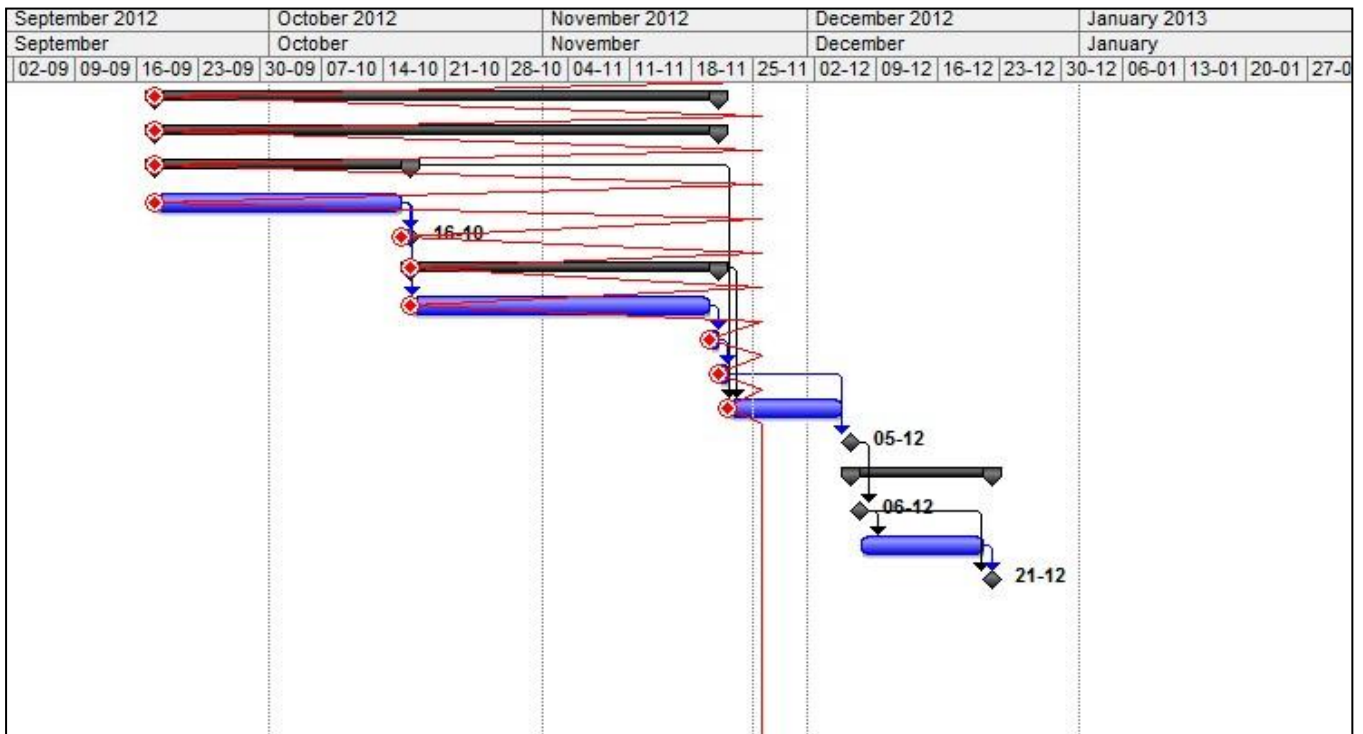


FIGURE 5. Gantt Chart

3.4 Key Milestone

TABLE 3. Key Milestones

Tasks/ Activities	Milestones
1. Development and Designing Interface and Functionality <ul style="list-style-type: none"> ▪ Progress Report 	Week :1 – 6 Week : 1 – 4 (User-Side modules) Week : 4 – 6 (Admin Side Module) Week 6 (Submit Progress Report)
2. Analyzing and Testing <ul style="list-style-type: none"> ▪ FYPII Pre-Sedex 	Week :7 –10 Week: 10 (Poster Presentation)
1. Refining and Documentation <ul style="list-style-type: none"> ▪ Dissertation 	Week: 11 Week: 11(Final Draft-soft copy report)
4. Deliverables <ul style="list-style-type: none"> ▪ Viva ▪ Final Dissertation 	Week: 12 – 14 (FYP 2) Week: 12 (Viva) Week: 14(Final Dissertation)

3.5 Tools

Hardware:

- A laptop
- Broadband
- Mouse
- Keyboard

Software:

- Adobe Dreamweaver Cs5
- Adobe Photoshop Cs5
- Photoscape
- Mozilla Firefox/Google Chrome Browser
- Gmail account (Google mail function for my email notification)
- Wamp server (5.3.13) –MySQL server, Apache
- Front end: Web browser, PHP and HTML (Code), Mobile Interface
- Back End : SQL database

3.6 Related Diagram For Illustration of Project

3.6.1 User-side Flow chart

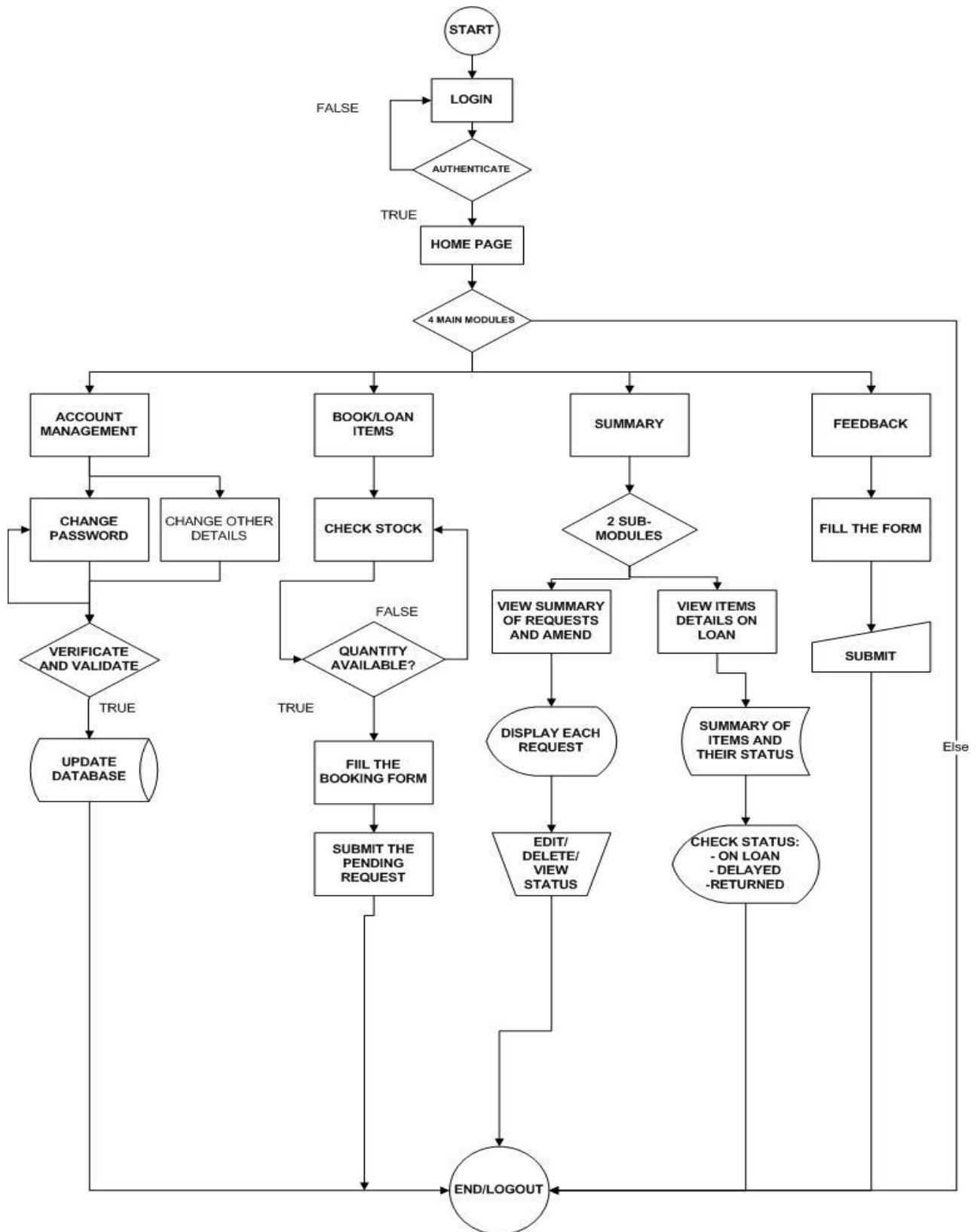


FIGURE 6. User-Side Flow Chart

3.6.2 Admin-side Flow chart

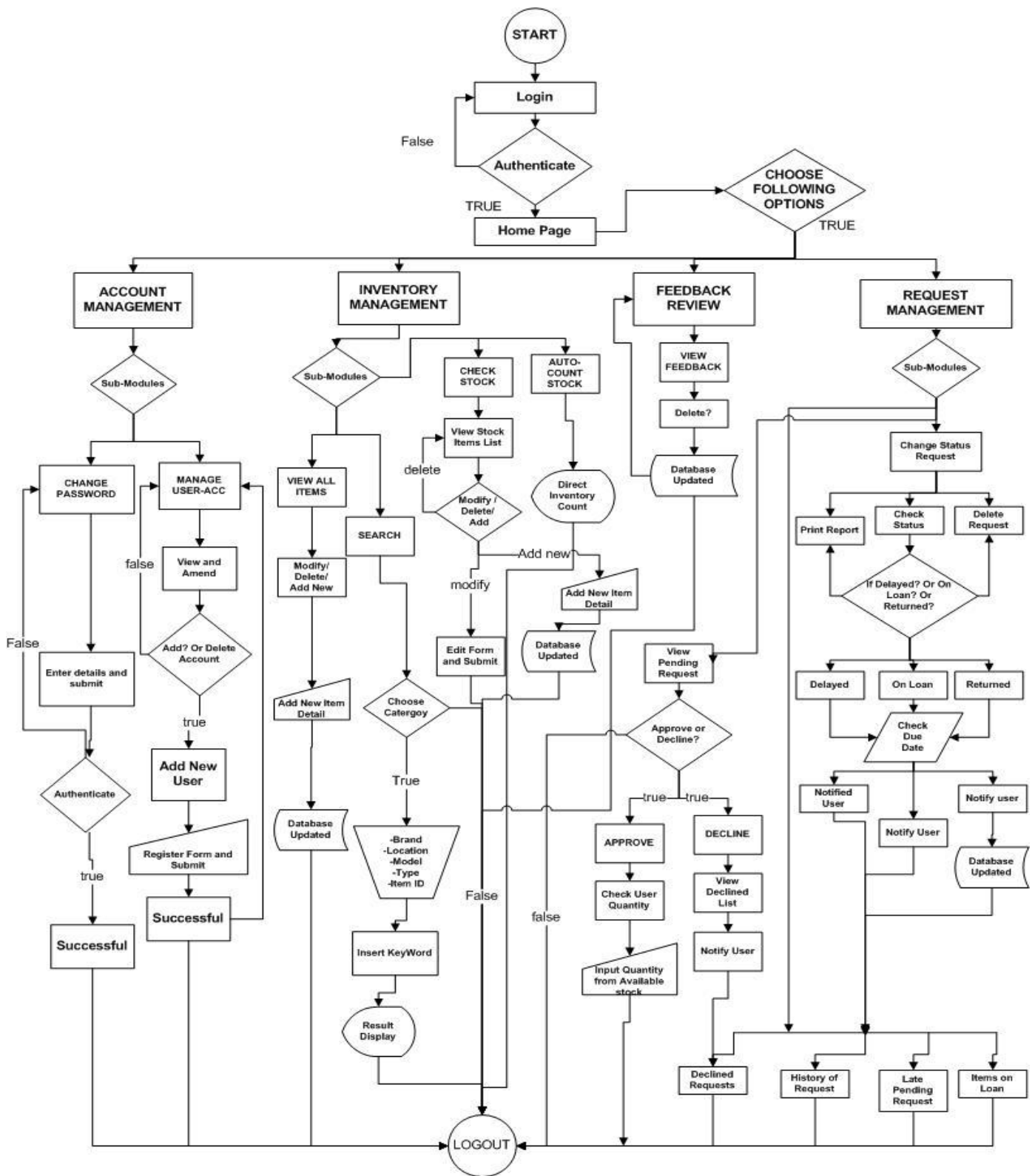


FIGURE 7. Admin side Flow chart

3.6.3 Database Entity Relationship Diagram of User-side

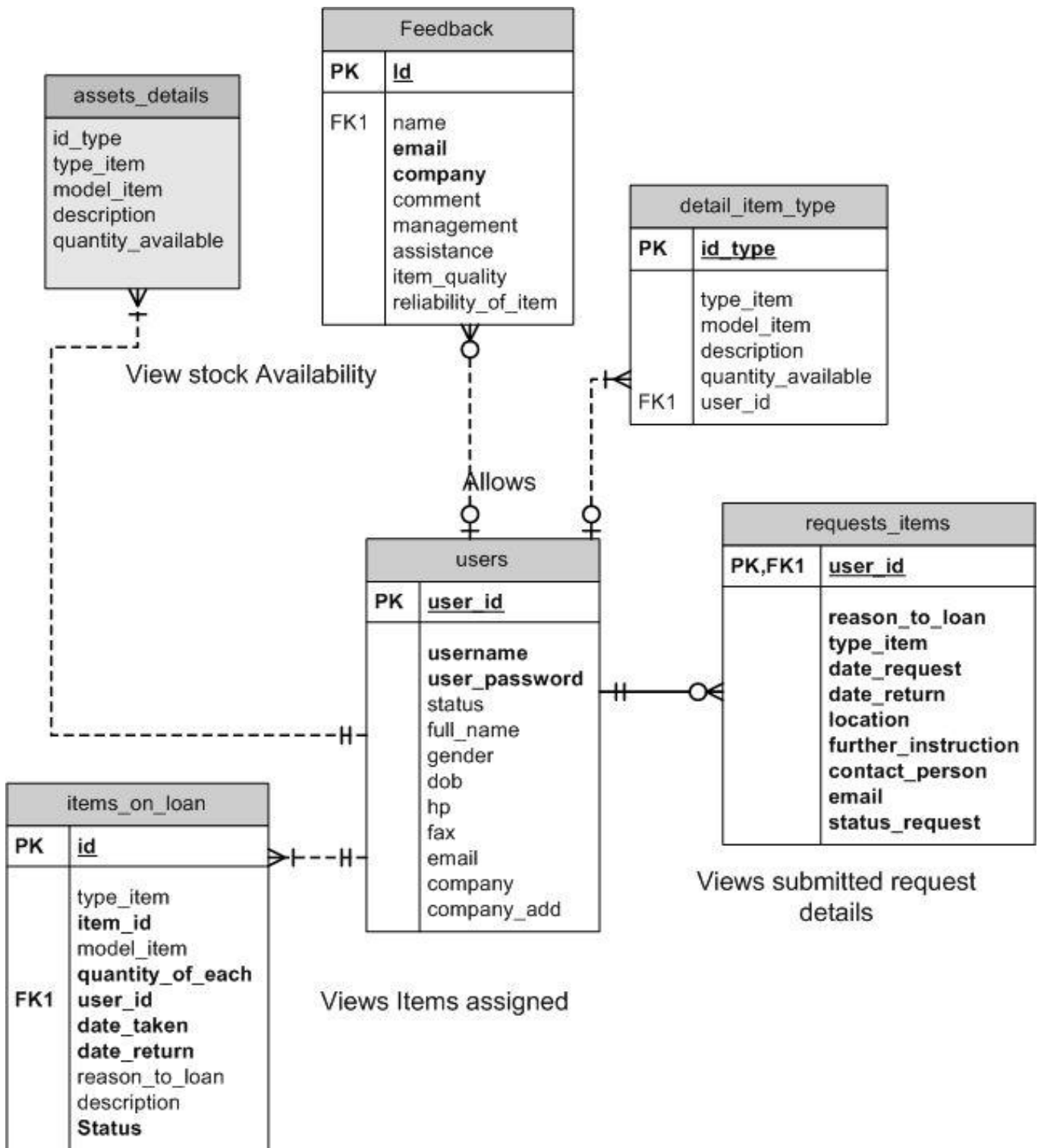


FIGURE 8. User-Side Database Entity Relationship Diagram

3.6.4 Database Entity Relationship Diagram of Admin-side

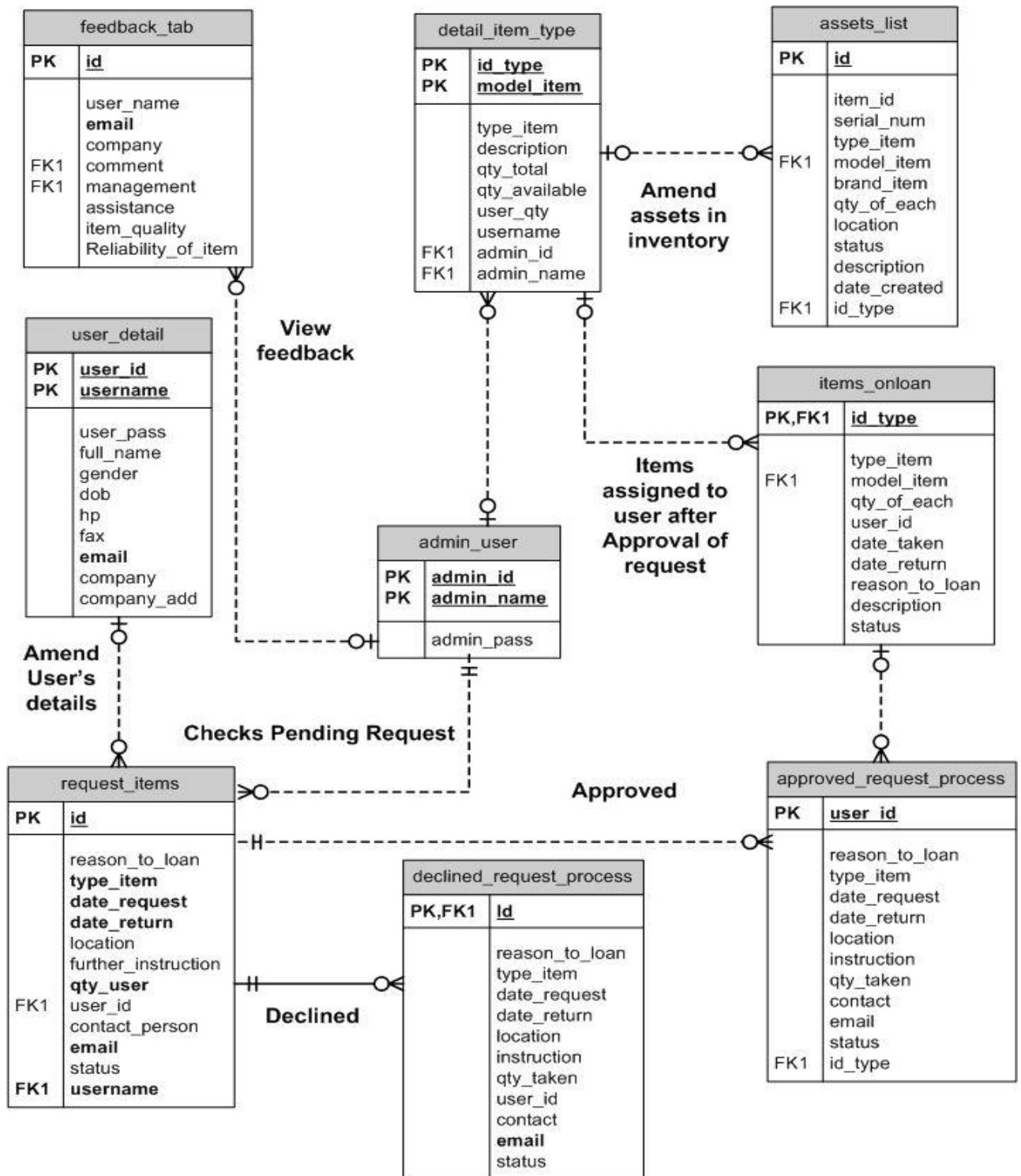


FIGURE 9. Admin side Database Entity Relationship Diagram

3.6.5 Unified Modeling Language Diagram(UML)

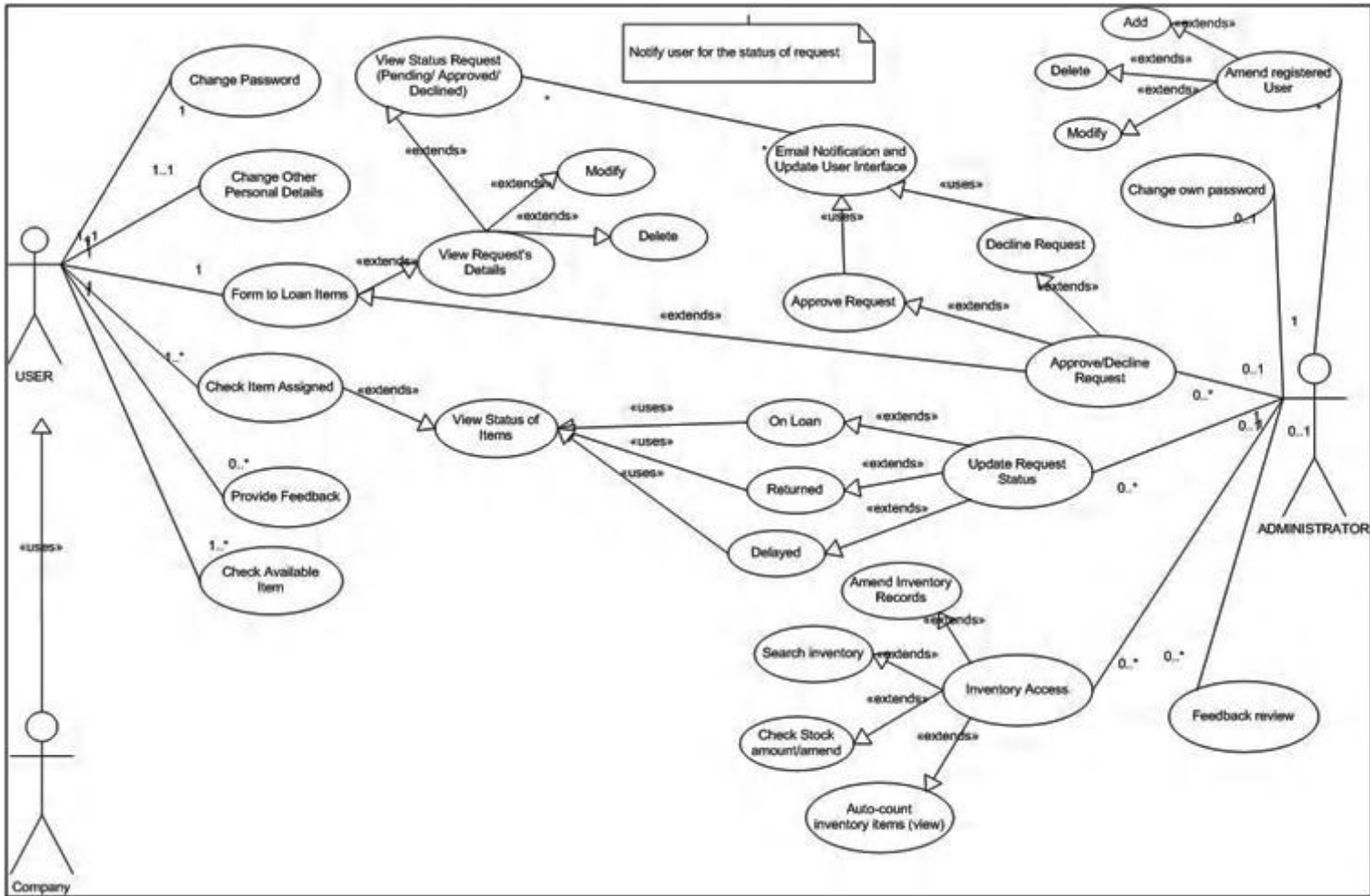


FIGURE 10. UML Diagram For User and Admin Operations

3.6.6 Web Site Map Diagram (User Side)

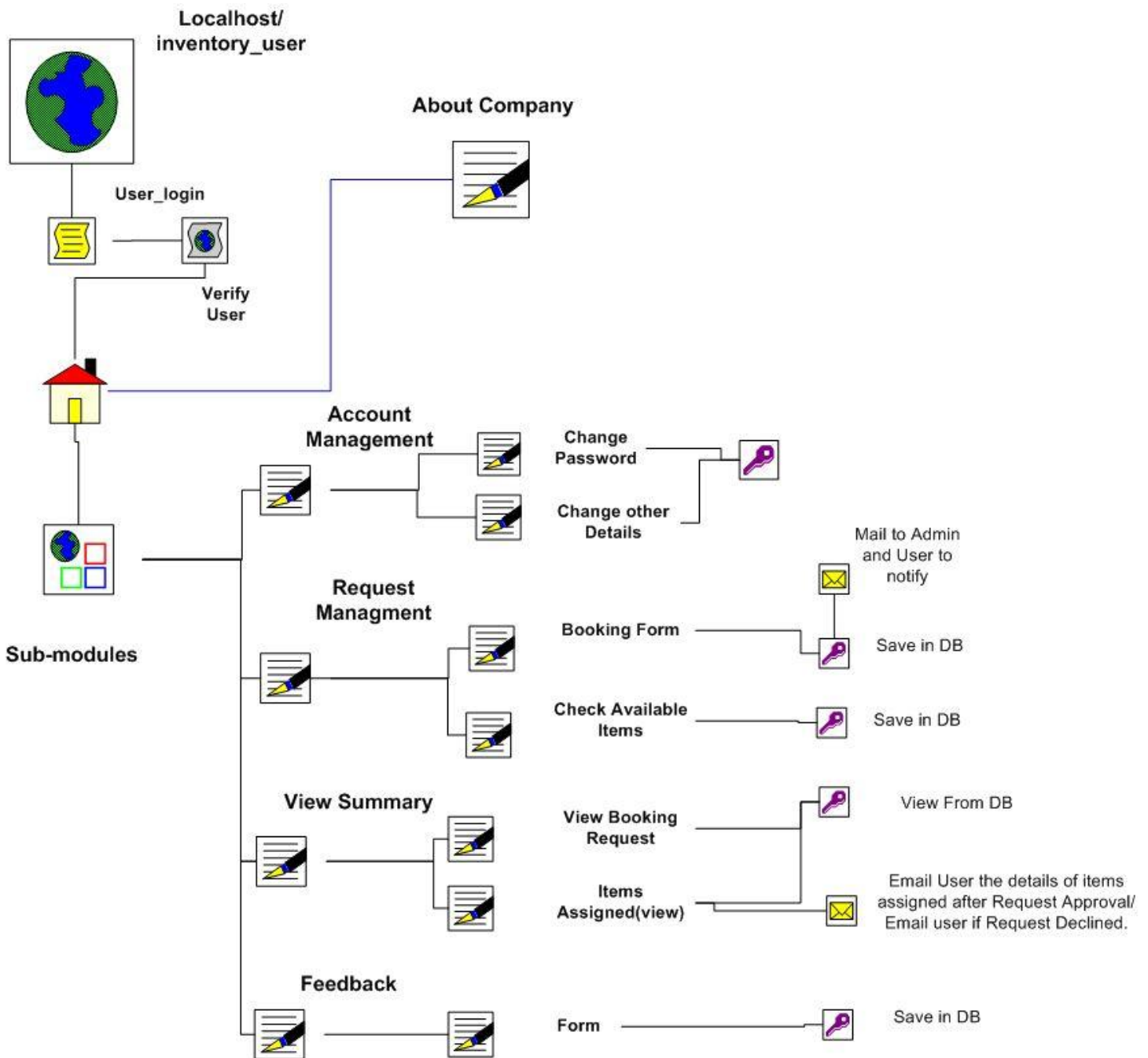


FIGURE 11. Web Site Map Diagram (User-side)

3.6.7 Web Site Map Diagram (Admin-side)

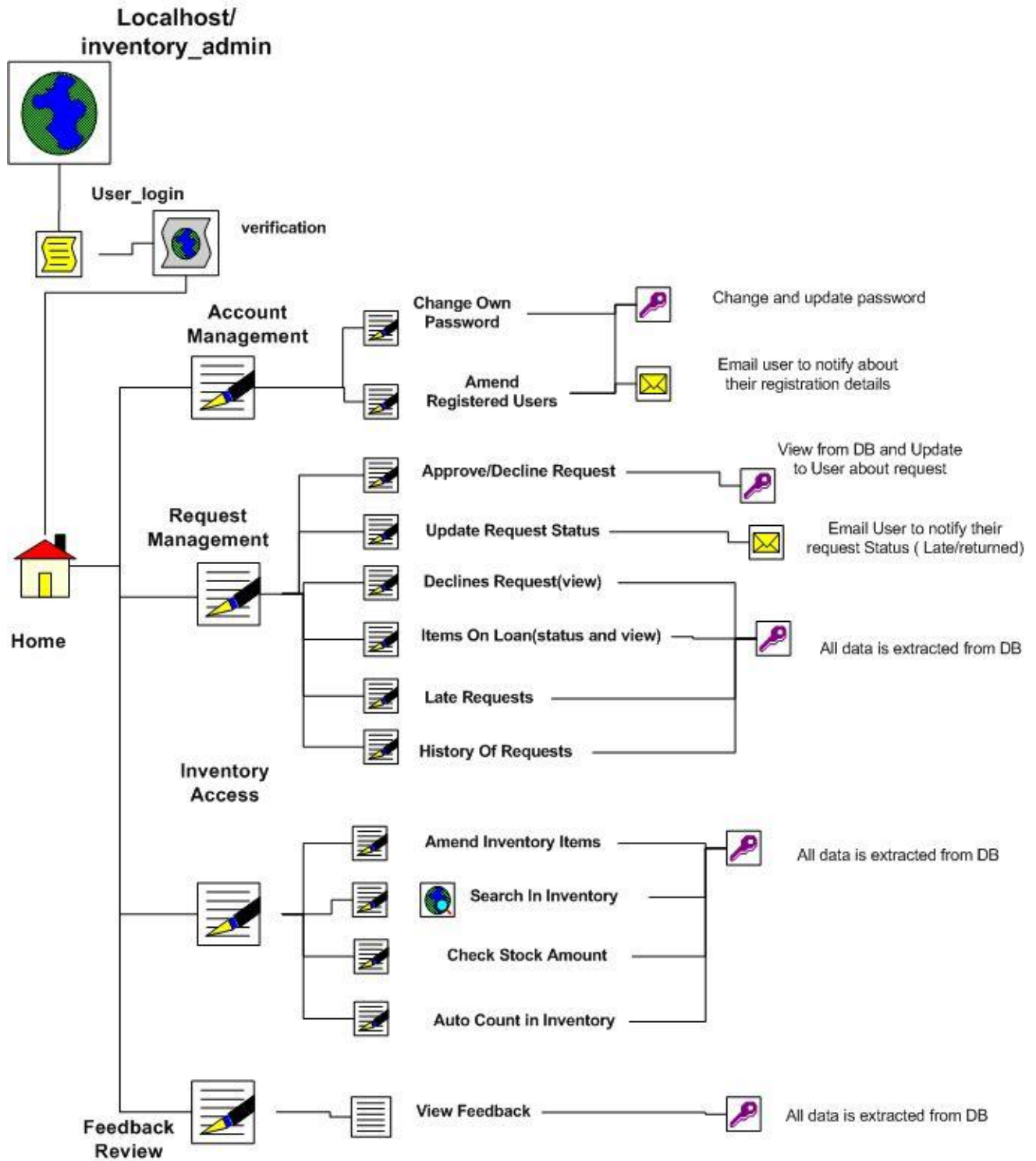


FIGURE 12. Web Site Map Diagram (Admin-side)

4.1.2 User-side Interface

The image shows a web interface for an online inventory system. At the top, there is a header with the text "AN ONLINE INVENTORY SYSTEM FOR IT FACILITATING COMPANIES". Below the header, the main content area displays "Welcome User, Please Login". In the center, there is a login form with two input fields: "User name:" containing the text "miff09" and "Password:" with masked characters. Below the password field are two buttons: "Reset" and "Login".

FIGURE 14. Login Page

After the login page is successful, it proceeds to Home Page (Appendix 1-1). Modules such as Account Management, where user is able to change their own password and their other details is also attached in the (Appendix 1-2, 1-3); Feedback form module interface is shown in (Appendix 1-4). User is also able to check the availability of items by clicking on the Check Available item (Figure 15). Next, we focus on the Request Item Form (Figure 16), where the user fills in all the details required. After the user has submitted the loan item form, they are able to view summary of submission. In this summary of request form (Figure 17), they are able to delete a request, modify details, and view the status (Pending/Approved/Rejected). After a request is approved, the user is assigned with the items by the admin. These items are viewed in the interface shown in (Figure18), the items are filtered by specific user and the user is able to view the status of the items (On Loan, Returned, and Delayed).

AN ONLINE INVENTORY SYSTEM FOR IT FACILITATING COMPANIES

Logout

[HOMEPAGE](#) [ACCOUNT](#) [REQUEST ITEMS](#) [VIEW SUMMARY](#) [FEEDBACK](#)

You Are Here » [Homepage](#) » [Request Items](#) » [Check Available Items](#)

Available Items

The Total Records are: 20

No.	Item type	Item Model	Item Description	Available Quantity
1	Desktop	Dell Studio One	-dsifsdfrjksfd	20
2	Desktop	Corei7	-	21
3	Peripheral	Panasonic TH-P42X28k	2 recorded.	-1
4	Peripheral	LCD Projector	2 recorded.	2
5	Peripheral	CanonScan LIDE	recorded 4	4
6	Peripheral	Alter Lansing MX5021	-	1
7	Software	After Effects CS4 9	1 recorded	1
8	Software	Sony Vegas Pro 9	1 recorded	1
9	Software	Sony Sound Forge 10	1 record	1
10	Peripheral	Corsair Ram	-	2
11	Peripheral	Kingston Ram	-	14
12	Peripheral	SyncMaster 2333SW	-	41
13	Peripheral	Wacom	-	6
14	Peripheral	Satellite M100	toshiba laptop	1
15	Desktop	Mac	Mac Pro 3	1
16	Desktop	HP Z200	-	11
17	Desktop	HP 2311F	-	11
18	Desktop	Dell Optiplex 745	-	109
19	Peripheral	Canon	-	1
20	Desktop	Dell1221	Laptop	11

FIGURE 15. Available Item Module Interface

Logout

HOME PAGE ACCOUNT REQUEST ITEMS VIEW SUMMARY FEEDBACK

You Are Here » [Homepage](#) » [Request Items](#) » [Booking Form](#)

Please Fill in the following details

Reason to Loan	:	<input type="text" value="Reason 001"/>
Type of Item	:	<input type="text" value="Laptop"/> <small>If you choose others, Please Specify:</small> <input type="text"/>
Quantity	:	<input type="text" value="5"/>
Date of Request	:	<input type="text" value="30-11-2012"/> <input type="button" value="calendar"/>
Date Of Return	:	<input type="text" value="04-12-2012"/> <input type="button" value="calendar"/>
Event Location	:	<input type="text" value="Event001"/>
Contact Number	:	<input type="text" value="019=2393392"/>
Email Address	:	<input type="text" value="angel_luver88@yahoo.com"/>
Further Details of Items?	:	<input type="text" value="No further Details"/>

FIGURE 16. Request Item Form

AN ONLINE INVENTORY SYSTEM FOR IT FACILITATING COMPANIES

[Logout](#)

[HOME PAGE](#) [ACCOUNT](#) [REQUEST ITEMS](#) [VIEW SUMMARY](#) [FEEDBACK](#)

You Are Here » [Homepage](#) » [View Summary](#) » [Booking request Details](#)

The Total Records Of your Requests are: 8

#	Reason to Loan	Item Type	Date Requested	Date Return	Location	Quantity	Amend Request	Status
<input type="checkbox"/>	New444	Desktop	25-10-2011	27-10-2011	lab 20-03-17	5	Modify Request	Pending
<input type="checkbox"/>	Evetn_new333	Laptop	25-10-2011	03-11-2011	lab	2	Modify Request	Approve
<input type="checkbox"/>	dec1	Laptop	15-12-2011	21-12-2011	LANGKAWI	4	Modify Request	Approve
<input type="checkbox"/>	test	Laptop	26-11-2012	29-11-2012	ipoh	10	Modify Request	Approve
<input type="checkbox"/>	X1	Desktop	26-11-2012	29-11-2012	X1111	2	Modify Request	Pending
<input type="checkbox"/>	testin2	Laptop	29-11-2012	08-12-2012	event9	9	Modify Request	Pending
<input type="checkbox"/>	testing3	Desktop	01-12-2012	19-12-2012	eventttt	9	Modify Request	Pending
<input type="checkbox"/>	Reason 001	Laptop	30-11-2012	04-12-2012	Event 001	5	Modify Request	Pending

[Delete](#)

FIGURE 17. View Summary Of Booking Request

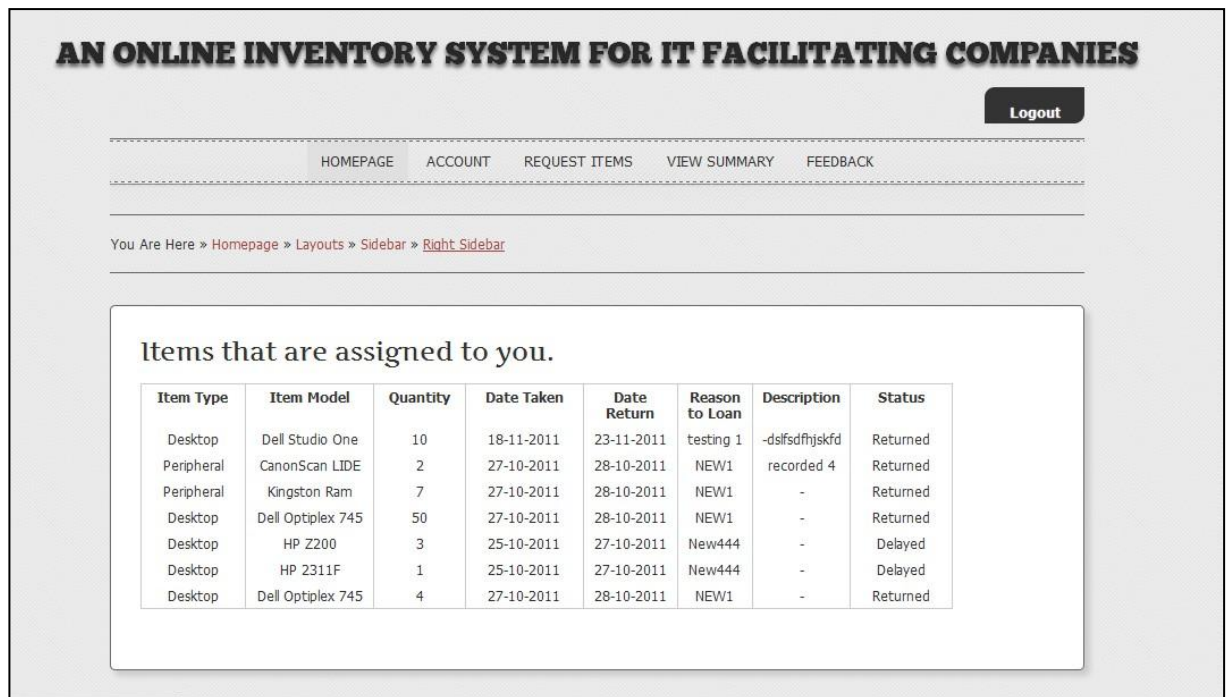


FIGURE 18. View Summary Of Items Assigned

4.1.3 Admin-side Interface

The administrator logs in the system (Appendix 2-1) and reaches a Home Page module (Appendix 2-2). Below figures are the important modules that need more concentration. In the Account Management module, the admin is able to change their own password (Appendix 2-3) and amend the users who are registered (Figure 19). Next, the Request Management module is where the Approve/Decline of request operation occurs (Figure 20), updating the request status (On Loan/ Returned / Delayed) and notifying the user by email and on the interface at user side (Figure 21), view declined request details (Appendix 2-4), view details of items that are on loan (Appendix 2-5), view late request details (Appendix 2-6) and view the history of all returned items and request details (Appendix 2-7). Following that, in Inventory Access module, there are sub-modules such as Amend Inventory Record (add/delete/modify) the items in the inventory (Figure 22), Search through the inventory with specification (Figure 23), Check the Stock amount in total (Add/Modify/Delete) in (Figure 24) and an Auto Count of inventory items as a reference (Appendix 2-8). Lastly, the Feedback module views the feedbacks from the user.

AN ONLINE INVENTORY SYSTEM FOR IT FACILITATING COMPANIES

Logout

HOME PAGE ACCOUNT MANAGEMENT INVENTORY ACCESS REQUEST MANAGEMENT FEEDBACK REVIEW

You Are Here » [Homepage](#) » [Account Management](#) » [View All Registered Users](#)

Registered Users

Register a New user?



The Total Number of Users is : 4

#	Full Name	Username	Password	D.O.B	Gender	Company	Handphone	Fax	Email
<input type="checkbox"/>	aina huwaina	aina	aina	06-02-1987	F	Xdc	014-920398293	03-029388383	angel_luver88@yahoo;com
<input type="checkbox"/>	red green	red	red	09-01-1988	M	ssssssssssssssss	018-9283838	03-9283928	bright_star09@msn.com
<input type="checkbox"/>	Mifrah Ahmad	miff09	miff	25-09-1991	F	ABC	019-29283844	03-93848392	lookatmuahirock@gmail.com
<input type="checkbox"/>	xx	xx	xx	13-04-1988	F	ccc	019-9203939	04-39393	angel_luver88@yahoo.com

Delete

FIGURE 19. Registered Users Module

In this module, the Admin is able to Add New User, and Notify the User by Email, which contains the details of the user. After the user is registered, the use is able to access User-side modules.

AN ONLINE INVENTORY SYSTEM FOR IT FACILITATING COMPANIES

Logout

[HOMEPAGE](#)
[ACCOUNT MANAGEMENT](#)
[INVENTORY ACCESS](#)
[REQUEST MANAGEMENT](#)
[FEEDBACK REVIEW](#)

You Are Here » [Homepage](#) » [Request Management](#) » [Check Pending Request](#)

The Total Number Of Pending requests is:10

Please take note that you can only operate one request at a time.

No.#	Reason To Loan	Type of Item	Date Request	Date Return	location	Insturction	Quantity	Requester	Contact	Email	Approve	Decline
1	event7	ieeke	15-10-2011	19-11-2011	ileoeeke	jfidfdjf	4	red	012929292929	bright_star09@msn.com	<input type="radio"/>	<input type="radio"/>
6	event 8	kedkw	29-11-2011	30-11-2011	jejeje	jejejeje	6	red	012-10292910	angel_luver88@yahoo.com	<input type="radio"/>	<input type="radio"/>
7	New444	Desktop	25-10-2011	27-10-2011	lab 20-03-17	nswd	5	miff09	01829292	bright_star09@msn.com	<input type="radio"/>	<input type="radio"/>
8	event10	Desktop	21-10-2011	28-10-2011	ksdk	njsndfjnjwef	6	aina	0192929292	lookatmuahirock@gmail.com	<input type="radio"/>	<input type="radio"/>
13	reason2	Data cable	27-11-2012	29-11-2012	event2	event2 reason 2	5	red	019-92837282	lookatmuahirock@gmail.com	<input type="radio"/>	<input type="radio"/>
17	reason	Laptop	28-11-2012	28-11-2012	Even1	please be it Dell	4	red	012-384747322	lookatmuahirock@gmail.com	<input type="radio"/>	<input type="radio"/>
18	X1	Desktop	26-11-2012	29-11-2012	X1111	xcf	2	miff09	018-9909000	lookatmuahirock@gmail.com	<input type="radio"/>	<input type="radio"/>
20	testin2	Laptop	29-11-2012	08-12-2012	event9	jjjjjjjj	9	miff09	019-8293992	lookatmuahirock@gmail.com	<input type="radio"/>	<input type="radio"/>
21	testing3	Desktop	01-12-2012	19-12-2012	eventttt	jjjjj	9	miff09	016-9283922	lookatmuahirock@gmail.com	<input type="radio"/>	<input type="radio"/>
22	Reason 001	Laptop	30-11-2012	04-12-2012	Event 001	No Further Details	6	miff09	019-92837472	angel_luver88@yahoo.com	<input type="radio"/>	<input type="radio"/>

Reset

request

FIGURE 20. Approve/Decline Module

AN ONLINE INVENTORY SYSTEM FOR IT FACILITATING COMPANIES

Logout

[HOME PAGE](#)
 [ACCOUNT MANAGEMENT](#)
 [INVENTORY ACCESS](#)
 [REQUEST MANAGEMENT](#)
 [FEEDBACK REVIEW](#)

You Are Here » [Homepage](#) » [Request Management](#) » [Update Status Request](#)

The Total Number of Items On Loan are/is : 4

Delete	ID	Item_ID	Item Type	Item Model	Quantity on Loan	Staff Incharge	Date Taken	Date Return	Reason to Loan	Description	Email	Status	Report	Item Return
<input type="checkbox"/>	21	1	Desktop	Dell Studio One	6	miff09	30-11-2012	04-12-2012	Reason 001	-dsifsdhjskfd	angel_luver88@yahoo.com	On Loan	Print	Select One
<input type="checkbox"/>	20	21	XX	XXX	6	red	27-11-2012	30-11-2012	reason3	XXXX	lookatmuahirock@gmail.com	On Loan	Print	Select One
<input type="checkbox"/>	17	1	Desktop	Dell Studio One	10	miff09	26-11-2012	29-11-2012	test	-dsifsdhjskfd	0	Delayed	Print	Select One
<input type="checkbox"/>	19	3	Peripheral	Panasonic TH-P42X28k	4	miff09	15-12-2011	21-12-2011	dec1	2 recorded.	miff@mail.com	On Loan	Print	Select One

FIGURE 21. Request and Items On Loan(Returned/Delayed) Details.

The Total Number of Items On Loan are/is : 4

Delete	ID	Item_ID	Item Type	Item Model	Quantity on Loan	Staff Incharge	Date Taken	Date Return	Reason to Loan	Description	Email	Status	Report	Item Return
<input type="checkbox"/>	21	1	Desktop	Dell Studio One	6	miff09	30-11-2012	04-12-2012	Reason 001	-dsifsdhjskfd	angel_luver88@yahoo.com	On Loan	Print	Select One
<input type="checkbox"/>	20	21	XX	XXX	6	red	27-11-2012	30-11-2012	reason3	XXXX	lookatmuahirock@gmail.com	On Loan	Print	Select One Returned Delayed

FIGURE 22. Showing the options of Status for Figure 21.

AN ONLINE INVENTORY SYSTEM FOR IT FACILITATING COMPANIES

Logout

[HOMEPAGE](#)
 [ACCOUNT MANAGEMENT](#)
 [INVENTORY ACCESS](#)
 [REQUEST MANAGEMENT](#)
 [FEEDBACK REVIEW](#)

You Are Here » [Homepage](#) » [Inventory Access](#) » [View/Amend Inventory records](#)

View Page: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

#	No.	Item ID	Serial Number	Item Type	Item Model	Item Brand	Item Quantity	Item Location	Item Specification	Inserted Date	Modify
	1	kprk/IT/PC-DellStudioOne-02	sn2	desktop	Dell Studio One 19	Dell	3	asdsdsad	Core 2Duo E8400,4GB RAM	2011-05-04	
	2	kprk/IT/PC-DellStudioOne-03	sn3	desktop	Dell Studio One 19	Dell	1	labhweee	Core 2Duo E8400,4GB RAM	2011-05-04	
	3	kprk/IT/PC-DellStudioOne-04	sn4	desktop	Dell Studio One 19	Dell	1		Core 2Duo E8400,4GB RAM	2011-05-04	
	4	kprk/IT/PC-DellStudioOne-05	sn5	desktop	Dell Studio One 19	Dell	1		Core 2Duo E8400,4GB RAM	2011-05-04	
	5	kprk/IT/PC-DellStudioOne-06	sn6	desktop	Dell Studio One 19	Dell	1		Core 2Duo E8400,4GB RAM	2011-05-04	
	6	kprk/IT/PC-DellStudioOne-07	sn7	desktop	Dell Studio One 19	Dell	1		Core 2Duo E8400,4GB RAM	2011-05-04	
	7	kprk/IT/PC-DellStudioOne-08	sn8	desktop	Dell Studio One 19	Dell	1		Core 2Duo E8400,4GB RAM	2011-05-04	
	8	kprk/IT/PC-DellStudioOne-09	sn9	desktop	Dell Studio One 19	Dell	1		Core 2Duo E8400,4GB RAM	2011-05-04	
	9	kprk/IT/PC-DellStudioOne-10	sn10	desktop	Dell Studio One 19	Dell	1		Core 2Duo E8400,4GB RAM	2011-05-04	
	10	kprk/IT/PC-DellStudioOne-11	sn11	desktop	Dell Studio One 19	Dell	1		Core 2Duo E8400,4GB RAM	2011-05-04	



FIGURE 23. Amend Inventory Records Modules

AN ONLINE INVENTORY SYSTEM FOR IT FACILITATING COMPANIES

Logout

[HOMEPAGE](#) [ACCOUNT MANAGEMENT](#) [INVENTORY ACCESS](#) [REQUEST MANAGEMENT](#) [FEEDBACK REVIEW](#)

You Are Here » [Homepage](#) » [Inventory Access](#) » [Search In Inventory](#)

Search in inventory items.

Please Select a category for your search:

Search :

Select One

- Select One
- Item Location
- Item Model
- Item Brand
- Type of Item
- Item ID

Reset

FIGURE 24. Search Modules, to search through the items in the inventory by specifications

AN ONLINE INVENTORY SYSTEM FOR IT FACILITATING COMPANIES

Logout

HOME PAGE ACCOUNT MANAGEMENT INVENTORY ACCESS REQUEST MANAGEMENT FEEDBACK REVIEW

You Are Here » [Homepage](#) » [Inventory Access](#) » [Check Stock Amount](#)

Below shows the Type of Items and their Quantity.
If you would like to add a new Type of Item:



[View All](#) | **View Page:** 1 2 3

#	No.	Item type	Item Model	Item Description	Total Quantity	Avaiable Quantity	Edit
	1	Desktop	Dell Studio One	-dsifsdhjskfd	30	20	
	2	Desktop	Corei7	-	24	21	
	3	Peripheral	Panasonic TH-P42X28k	2 recorded.	5	0	
	4	Peripheral	LCD Projector	2 recorded.	2	2	
	5	Peripheral	CanonScan LIDE	recorded 4	4	4	
	6	Peripheral	Alter Lansing MX5021	-	4	1	
	7	Software	After Effects CS4 9	1 recorded	1	1	

FIGURE 25. Check Item Stock and Amend.

Chapter 5:

Conclusion and Recommendation

To conclude the project report, the designing, implementation and development of my system is on time, and it is be completed in the time-frame provided in the Gantt chart. Moreover, a few dummy values are inserted at certain web-pages to make a good understanding web page. This project has provided me with a great amount of knowledge on new coding techniques, usage, and more understanding to build the logic of my system. However, my project is still unique and the scope and objective is distinctive, and it is achieved. In addition to that, my system can be easily updated by adding in more modules to adapt certain environment as the programming language which is being used is reliable (PHP, HTML, SQL). Furthermore, the mobile interface will be used to indicate future references of my system.

5.1 Future Work Recommendation

As stated, it will be very useful to build and maintain a Mobile interface for this system and to provide SMS notification facility to be included. The mobile interface could have similar specifications but not equivalent when visualized, for example, the filtering of data from inventory will be limited. The amount of information displayed on the mobile screen will be reduced as compared to the information shown in the modules.

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APPENDICE

Appendix 1. User-side Interface Modules

Appendix 1-1 Home Page

AN ONLINE INVENTORY SYSTEM FOR IT FACILITATING COMPANIES

[Logout](#)

[HOMEPAGE](#) [ACCOUNT](#) [REQUEST ITEMS](#) [VIEW SUMMARY](#) [FEEDBACK](#)

You Are Here » [Homepage](#)

About Us

ABC deals with ICT and anything that spells ICT

We found out that ICT is a great way to improve lives and to enrich nation. Here are a few key things that you need to know about ABC and its roles. We are a trust company established under XYZ company.

[Read More](#)

Why Us?

- We generate services efficiently and effectively.
- To provide infrastructure and facilities to ensure delivery information.
- To encourage knowledge based companies
- To create continous digital and social development in the business.
- To develop multimedia operations and to facilitate and support companies in their beginning stage by providing tools for their growth compatibilites.

[Read More](#)

Take Items on Loan NOW!

You may check the list of items that are stll available. [Check List](#)
Or you can [Book Now](#).

[Read More](#)

Appendix 1-2 User Password Interface

AN ONLINE INVENTORY SYSTEM FOR IT FACILITATING COMPANIES

[Logout](#)

[HOMEPAGE](#) [ACCOUNT](#) [REQUEST ITEMS](#) [VIEW SUMMARY](#) [FEEDBACK](#)

You Are Here » [Homepage](#) » [Account](#) » [Change Password](#)

Change Password

User Name:

Old Password:

New Password:

Re-Enter New Password:

[Reset Form](#) [Submit Form](#)

Appendix 1-3 Other Account Change Details Interface

AN ONLINE INVENTORY SYSTEM FOR IT FACILITATING COMPANIES

[Logout](#)

[HOME PAGE](#) [ACCOUNT](#) [REQUEST ITEMS](#) [VIEW SUMMARY](#) [FEEDBACK](#)

You Are Here » [Homepage](#) » [Account](#) » [Change Other Details](#)

Change Details(Please fill all the fields)

miff09 User Name:

Handphone:

Fax Number:

Company(current Employee):

Company Address:

Appendix 1-4 User Feedback Form

AN ONLINE INVENTORY SYSTEM FOR IT FACILITATING COMPANIES

Logout

[HOMEPAGE](#) [ACCOUNT](#) [REQUEST ITEMS](#) [VIEW SUMMARY](#) [FEEDBACK](#)

You Are Here » [Homepage](#) » [Feedback](#) » [Feedback Form](#)

Please Fill in the following details

Full Name :	<input type="text"/>																														
Email Address :	<input type="text"/>																														
Company :	<input type="text"/>																														
Rate us :	<table><thead><tr><th></th><th>Very Satisfactory</th><th>Satisfied</th><th>Neutral</th><th>Unsatisfied</th><th>Very Unsatisfied</th></tr></thead><tbody><tr><td>Management</td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td></tr><tr><td>Assistance</td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td></tr><tr><td>Items Quality</td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td></tr><tr><td>Reliability of Items</td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td></tr></tbody></table>		Very Satisfactory	Satisfied	Neutral	Unsatisfied	Very Unsatisfied	Management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Assistance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Items Quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Reliability of Items	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Very Satisfactory	Satisfied	Neutral	Unsatisfied	Very Unsatisfied																										
Management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>																										
Assistance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>																										
Items Quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>																										
Reliability of Items	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>																										
Comments :	<input type="text"/>																														

reset **submit**

Widget

Map Sat Ter Earth IT

©2012 Google - Map data ©2012 Google - Terms - View Larger Map

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Appendix 2. Admin-side Interface Modules

Appendix 2-1 Log in interface

AN ONLINE INVENTORY SYSTEM FOR IT FACILITATING COMPANIES

Welcome Admin, Please Login

User name:

Password:

Appendix 2-2 Home Page of Admin

AN ONLINE INVENTORY SYSTEM FOR IT FACILITATING COMPANIES

[Logout](#)

[HOMEPAGE](#) [ACCOUNT MANAGEMENT](#) [INVENTORY ACCESS](#) [REQUEST MANAGEMENT](#) [FEEDBACK REVIEW](#)

You Are Here > [Homepage](#)

Welcome Admin

The Total Number Of Pending requests is:6

Navigation

- Check Pending Request
- Request Management
 - Amend Status
- Add New User
- Amend Inventory Item
 - Search Items
- Feedback Review

Appendix 2-3 Change Admin's Own Password

AN ONLINE INVENTORY SYSTEM FOR IT FACILITATING COMPANIES

Logout

HOME PAGE ACCOUNT MANAGEMENT INVENTORY ACCESS REQUEST MANAGEMENT FEEDBACK REVIEW

You Are Here » [Homepage](#) » [Account Management](#) » [Change Your Own Password](#)

Change Details(Please fill all the fields)

Admin Login Name:

Old Password:

New Password:

Re-enter New Password:

Reset **Submit**

Appendix 2-4 View All Declined Requests

AN ONLINE INVENTORY SYSTEM FOR IT FACILITATING COMPANIES

Logout

[HOMEPAGE](#)
[ACCOUNT MANAGEMENT](#)
[INVENTORY ACCESS](#)
[REQUEST MANAGEMENT](#)
[FEEDBACK REVIEW](#)

You Are Here » [Homepage](#) » [Request Management](#) » [Check Pending Request](#) » [Request Declined](#)

View All | View Page: 1 2

No.	Reason To Loan	Item Type	Date Request	Date Return	Location	Instruction	Quantity	Requester
3	event 6	sdfsdf	13-11-2011	26-11-2011	oweekjnkedmfk	wfmkmffff	4	aina
6	event 8	kedkw	29-11-2011	30-11-2011	jejeje	jejeje	6	red
16	event2	Laptop	20-10-2011	28-10-2011	Imakjd	sndjfiw	6	aina
17	event 3	Laptop	27-10-2011	31-10-2011	erfwjeri	ejjwjwe	10	aina
18	event13	Laptop	16-11-2011	19-11-2011	labs	no instruction	7	aina
19	event16	jndsakjsnd	14-11-1111	12-12-1111	kjekjer	kwejrwejr	6	red
21	event20	jejrwe	12-12-3333	18-19-3333	jkwejqw	jqweje	8	miff
22	event 8	kedkw	29-11-2011	30-11-2011	jejeje	jejeje	6	red
24	event10	Desktop	21-10-2011	28-10-2011	ksdk	njsndjfnjwef	6	aina
25	event 11	Laptop	26-10-2011	31-10-2011	oiwjdjdj	njnjsdfsfsd	2	aina

Appendix 2-5 View All Items on Loan

AN ONLINE INVENTORY SYSTEM FOR IT FACILITATING COMPANIES

[Logout](#)

[HOMEPAGE](#) [ACCOUNT MANAGEMENT](#) [INVENTORY ACCESS](#) [REQUEST MANAGEMENT](#) [FEEDBACK REVIEW](#)

You Are Here » [Homepage](#) » [Request Management](#) » [Requests All Loan](#)

View All | View Page: 1

No.	Item Id	Item Type	Model Of Item	Quantity on Loan	User Incharged	Date Taken	Date Return	Description
19	3	Peripheral	Panasonic TH-P42X28k	4	miff09	15-12-2011	21-12-2011	2 recorded.

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Appendix 2-6 View All Late Requests (Delayed)

AN ONLINE INVENTORY SYSTEM FOR IT FACILITATING COMPANIES

[Logout](#)

[HOMEPAGE](#) [ACCOUNT MANAGEMENT](#) [INVENTORY ACCESS](#) [REQUEST MANAGEMENT](#) [FEEDBACK REVIEW](#)

You Are Here » [Homepage](#) » [Request Management](#) » [Requests All Delayed](#)

View All | View Page: 1

No.	Item Id	Item Type	Model Of Item	Quantity on Loan	User Incharged	Date Taken	Date Return	Description
21	1	Desktop	Dell Studio One	6	miff09	30-11-2012	04-12-2012	-dsifsdhjskfd
17	1	Desktop	Dell Studio One	10	miff09	26-11-2012	29-11-2012	-dsifsdhjskfd

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Appendix 2-7 View History Of Requests

AN ONLINE INVENTORY SYSTEM FOR IT FACILITATING COMPANIES

Logout

[HOME PAGE](#) [ACCOUNT MANAGEMENT](#) [INVENTORY ACCESS](#) [REQUEST MANAGEMENT](#) [FEEDBACK REVIEW](#)

You Are Here » [Homepage](#) [Homepage](#) » [Request Management](#) » [Requested Items All Returned](#)

View All | **View Page: 1**

No.	Item Id	Item Type	Model Of Item	Quantity on Loan	User Incharged	Date Taken	Date Return	Description
10	1	Desktop	Dell Studio One	7	aina	14-14-2222	14-13-2222	-dsfjsdfhjksfd
12	17	Desktop	HP 2311F	2	aina	15-11-2011	19-11-2011	sadasdasd
13	18	Desktop	Dell Optiplex 745	5	aina	11-11-2011	19-11-2011	sjdfksf
20	21	XX	XXX	6	red	27-11-2012	30-11-2012	XXXX
15	18	Desktop	Dell Optiplex 745	4	miff09	27-10-2011	28-10-2011	-



Appendix 2-8 An Auto-Count of Inventory Items

AN ONLINE INVENTORY SYSTEM FOR IT FACILITATING COMPANIES

Logout

[HOMEPAGE](#)
[ACCOUNT MANAGEMENT](#)
[INVENTORY ACCESS](#)
[REQUEST MANAGEMENT](#)
[FEEDBACK REVIEW](#)

You Are Here » [Homepage](#) » [Inventory Access](#) » [Check Stock Amount](#) » [View All Stock Amount](#)

[Back](#)

The Total Number Of Pending requests is:21

No.	Item type	Item Model	Item Description	Total Quantity	Avaiable Quantity
1	Desktop	Dell Studio One	-dsfsdfhjksfd	30	20
2	Desktop	Corei7	-	24	21
3	Peripheral	Panasonic TH-P42X28k	2 recorded.	5	0
4	Peripheral	LCD Projector	2 recorded.	2	2
5	Peripheral	CanonScan LIDE	recorded 4	4	4
6	Peripheral	Alter Lansing MX5021	-	4	1
7	Software	After Effects CS4 9	1 recorded	1	1
8	Software	Sony Vegas Pro 9	1 recorded	1	1
9	Software	Sony Sound Forge 10	1 record	1	1
10	Peripheral	Corsair Ram	-	2	2
11	Peripheral	Kingston Ram	-	14	14
12	Peripheral	SyncMaster 2333SW	-	41	41
13	Peripheral	Wacom	-	6	6
14	Peripheral	Satellite M100	toshiba laptop	1	1
15	Desktop	Mac	Mac Pro 3	1	1
16	Desktop	HP Z200	-	11	11
17	Desktop	HP 2311F	-	10	11
18	Desktop	Dell Optiplex 745	-	109	109
19	Peripheral	Canon		1	1
20	Desktop	Dell1221	Laptop	1	11
21	XX	XXX	XXXX	6	0

Appendix 3. Technical Paper