INTERNSHIP REPORT

Summer 2021

An undergraduate internship report on Web Development

Submitted by

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Attestation

I hereby declare that this submission is my own work and to the best of my knowledge it contains no materials previously published or written by another person, or substantial proportions of material which have been accepted for the award of any other degree or diploma at IUB or any other educational institution, except where due acknowledgement is made in the report.
Any contribution made to the research by others, with whom I have worked at IUB or elsewhere, is explicitly acknowledged in the report. I also announce that the intellectual content of this report is the product of my own work, except to the extent that assistance from others in the project's design and conception or in style, presentation and linguistic expression is acknowledged.

Md.Nazmul Islam
September 2021
Dhaka, Bangladesh.

Acknowledgement

I might want to offer our heartiest thanks to faculty advisor Mohammad. Noor Nabi, Professor of School of Engineering and Computer Science, for his knowledge, tolerance, and for giving me the chance to gain from him. His direction and support were the most imperative resources that prompted the finish of this venture.
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Finally, we proudly acknowledge the great sacrifices, good wishes, moral support, fruitful advice, inspirations and encouragements from our family members, relatives and friends during the Internship.

Letter of Transmittal

Date:

Mohammad Noor Nabi

Lecturer

Department of Computer Science and Engineering,

Independent University, Bangladesh.

Subject: Internship Report Submission Summer, 2021

Dear Sir,

With due honor and respect, I would like to say that I want to submit my Internship report.

I worked at Astha IT Solutions, It was 3 months program from 3rd June 2021 to 17th August 2021.In this report, I attached all of my best tried for information, working and my capability with the outcome of the work.

I am very grateful to you for your excellent guideline and support for doing this project.I will be very much thankful if you please kindly go through this report and evaluate my works.

Sincerely yours,

Md.Nazmul Islam

ID: 1421109

Abstract

This report is divided into eight different chapters. At first in chapter one there is an introduction, background of the work, objective. Then we go to Chapter two that describes the Literature review. Then Chapter three that focuses on Project Management and Financing. Chapter four describes the Methodology. Chapter five focuses on Body of the project. Chapter six narrates Results and analysis. Chapter seven describes the Project as Engineering Problem Analysis. At last chapter eight focus on future work, conclusion and recommendation.

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CHAPTER 1

Introduction

1.1 Overview/Background of the Work

Background of the Project

The super shop management system is a built for the sake of ensuring effective and clear data saving and manipulating as well as neat work on the super shop products. This refers the super shop management system project highly minimize time and resources by which searching the products data you can get the data in quickest time. And almost the resources re wised used since most actions are done on the shop system. Some of the resources minimized include paper, manpower and related things. The other thing is for storing data's in secure way.

1.2 Objectives

There are three main objectives of inventory management, as follows:

- Provide the desired level of customer service. Customer service refers to a departmental Super shop ability to satisfy the needs of its customers. There are several ways to measure the level of customer service.
- Achieve cost-efficient operations: Super shop facility cost-efficient operations in several ways. Inventories can provide a buffer between operations so that each phase of the transformation process can continue to operate even when output rates differ. Inventories also allow a company to maintain a level workforce throughout the year even when there is seasonal demand for the company's output. By building large production lots of items, companies are able to spread some fixed costs over a larger number o units, thereby decreasing the unit cost of each item. Finally, large purchases of inventory might qualify for quantity discounts, which will also reduce the unit cost of each item.
- Minimize Super shop investment: As a company achieves lower amounts of money tied up in inventory, that company's overall cost structure will improve, as will its profitability. A common measure used to determine how well a company is managing its inventory investment

- It is the user friendly application for Employees of the super shop which reduces the burden and helps to manage all sections of super shop like product management and Billing etc.
- It deals with the automating tasks of maintaining of Bills.
- The super shop management system is easy for use so the user can maintain super shop actions without ambiguities.

- This refers the super shop management system project highly minimize time and resource by
- Which, searching the product data you can get the data in quickest time.
- The super shop management system is built for the sake of ensuring effective and clear data saving and manipulating as well as neat work on the super shop's products.

Chapter 2

Literature Review

2.1 Relationship with Undergraduate Studies:

Website design and development are the main objective of this internship. To develop a web based application or software there are several programming languages that are in use. For exampleHTML3, HTML4, HTML5, CSS, Bootstrap Framework etc. There are also some other programming languages that are used to develop the dynamic functions of the software or application. For example-PHP, Java etc. Nowadays there are also some framework's that use vastly.

During the time of my undergraduate studies, there had some courses like Database, C++, Web Development, Object Oriented programming, Android Apps, and all this course are very beneficial for my office work and project work. I gathered a lot of knowledge from those courses which are very helpful in my practical work.

2.2 Related works

During my undergraduate study, I worked on a project in web development course which was a hotel management system. During my Internship, my project is about a super shop management system that is related to that project. There are several companies that are working on this super shop management system project. Other companies sales this system at very high prices but in our company we are providing the same software at a very reasonable price which is helpful for our customers.

The amount of online businesses is increasing with every single day. This means that more web pages need to be created since nowadays a website is like a modern business card. This creates the need for simplification of the whole process.

Chapter 3

Project Management & Financing

3.1 Work Breakdown Structure

Work breakdown structure allows me to decompose project into small manageable sections, also known as deliverables.
Clearly defined deliverables are easy to assign, allow me to accurately estimate needed time and resources and track their completion.

3.3 Gantt chart

Gantt charts are useful for planning and scheduling projects. They help me assess how long a project should take, determine the resources needed, and plan the order in which I will complete tasks. They are also helpful for managing the dependencies between tasks.

Some benefits that Gantt charts offer:

- Know what's going on in my projects
- Improved communication and team cohesion
- Measure the progress of projects
- Experience more clarity
- Practice better time management
- See overlapping activities and task dependencies.

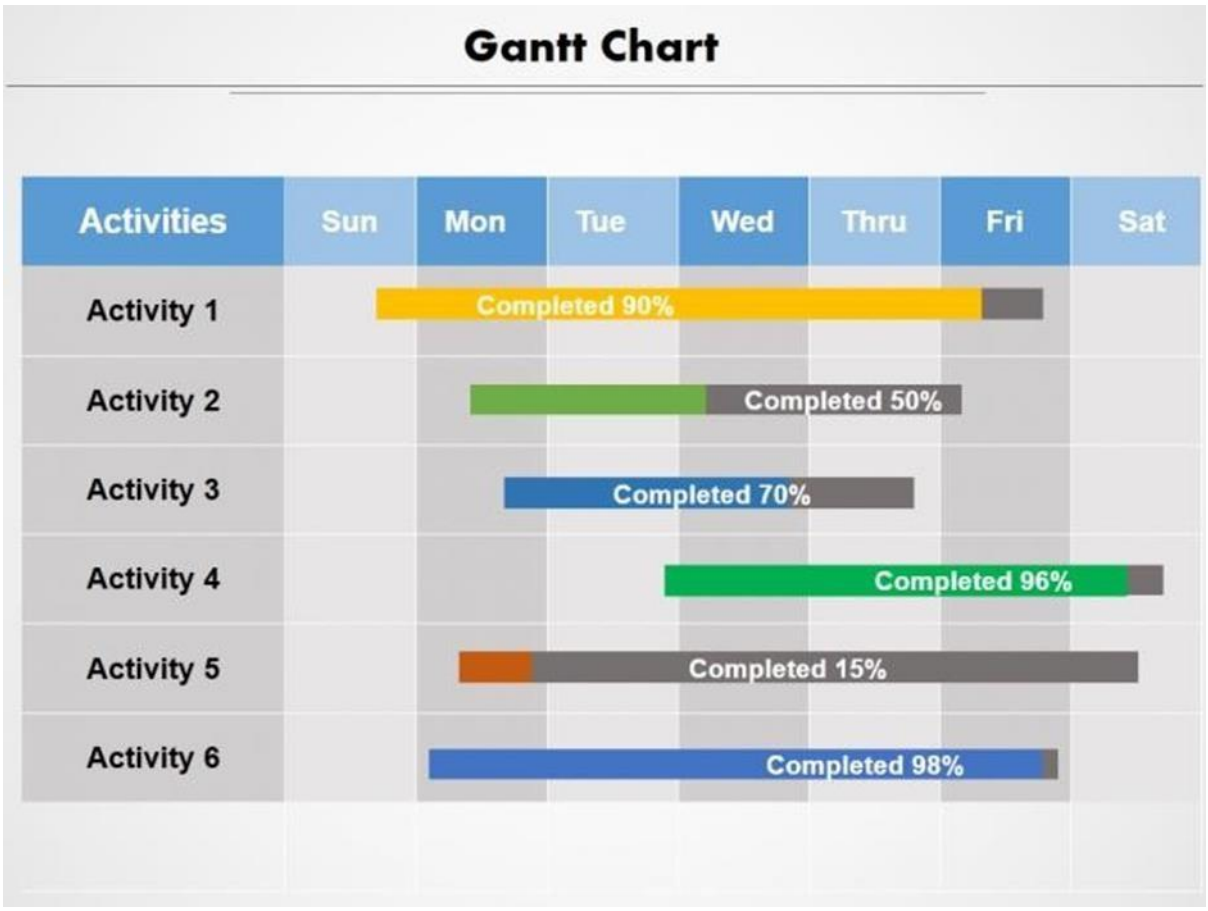


Figure 1 : Gantt Chart

3.4 Process/Activity Wise Resource Allocation

Resource allocation is the process of assigning and managing assets in a manner that supports an organization's strategic goals. Resource allocation includes managing tangible assets such as hardware to make the best use of softer assets such as human capital.

Resource allocation in project management is so important because it gives a clear picture on the amount of work that has to be done. It also helps to schedule ahead and have an insight into the team's progress, including allocating the right amount of time to everyone on the team.
How to allocate resources
Let’s take a look at how to effectively use resources at disposal:

- Know the project and the team
- Uncover risks early on
- Keep track of the project
- Analyze the project

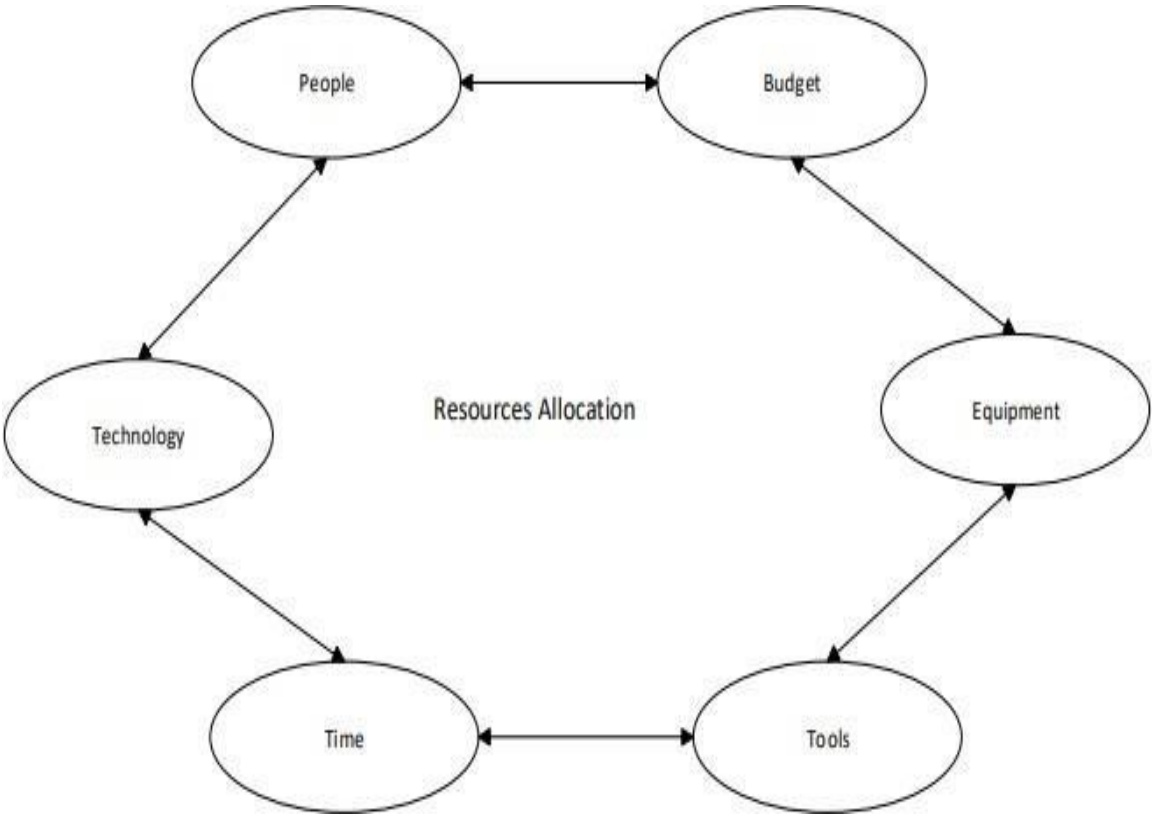


Figure 2: Process/Activity wise resource allocation

3.5 Estimated Costing

Cost estimation in project management is the process of forecasting the financial and other resources needed to complete a project within a defined scope. Cost estimation accounts for each element required for the project—from materials to labor—and calculates a total amount that determines a project's budget.

Requirement	Quantity	Amount
Computer	5	30000
Developer	5	1,25000
Server	1	30000
Domain	1	25000
Electric Bill		15000
Internet Cost		10000
Hardware Cost		20000
Other Cost		5000
Total Cost		260000

Table 1: Estimate costing

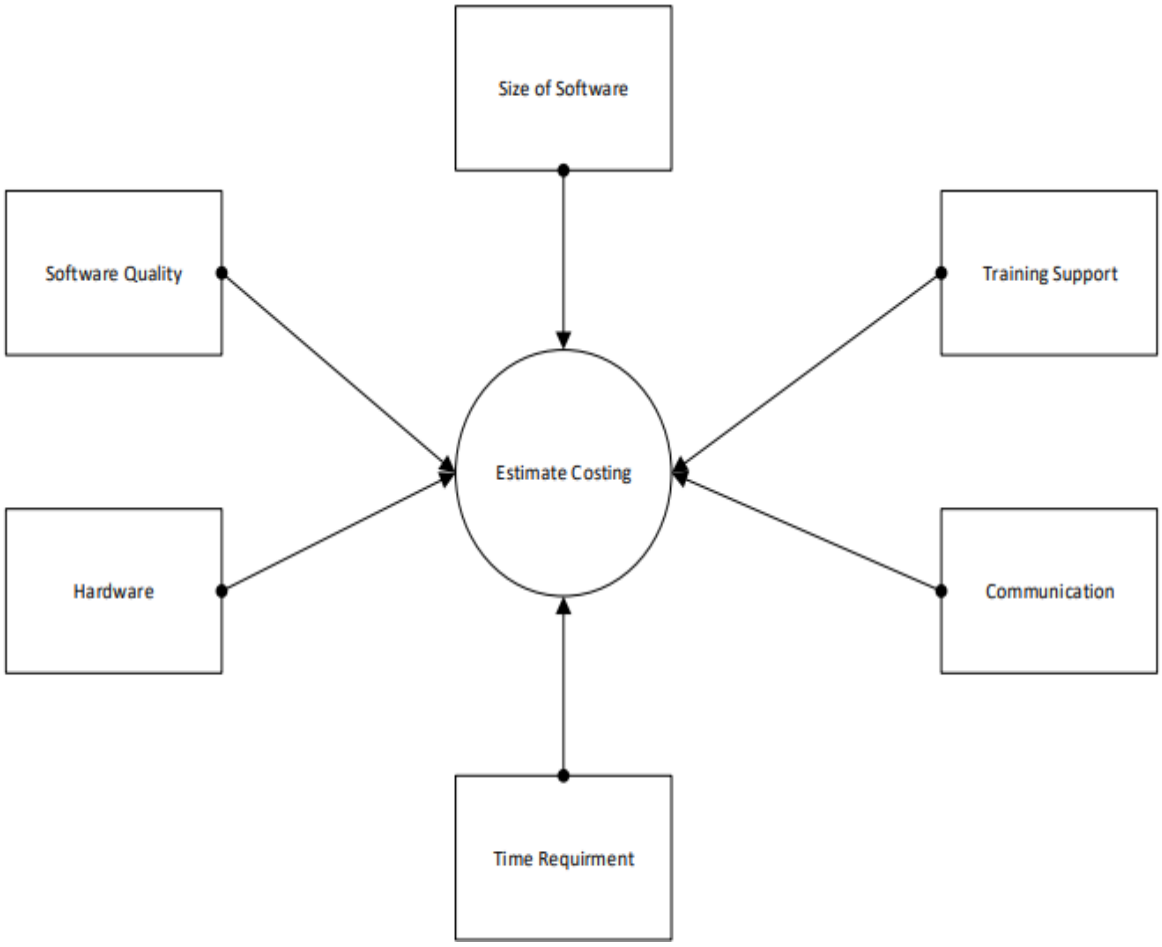


Figure 3 : Estimated Costing

Chapter 4

Methodology

The Super Shop Management System uses an electronic interface to demonstrate stock data to the stock chief client. The thing will use open-source programming fundamentally as a result of the expense of execution.

The second component of the Stock Manager Client web interface will empower the customer to modify application settings, for instance, the edge for email sees, a repeat of stock yields (each day at a particular hour, step by step, month to month, etc.), and security settings. In Fig. Software Development Life Cycle has shown up.
There are following six phases in every Software development life cycle model. These are given bellows here:

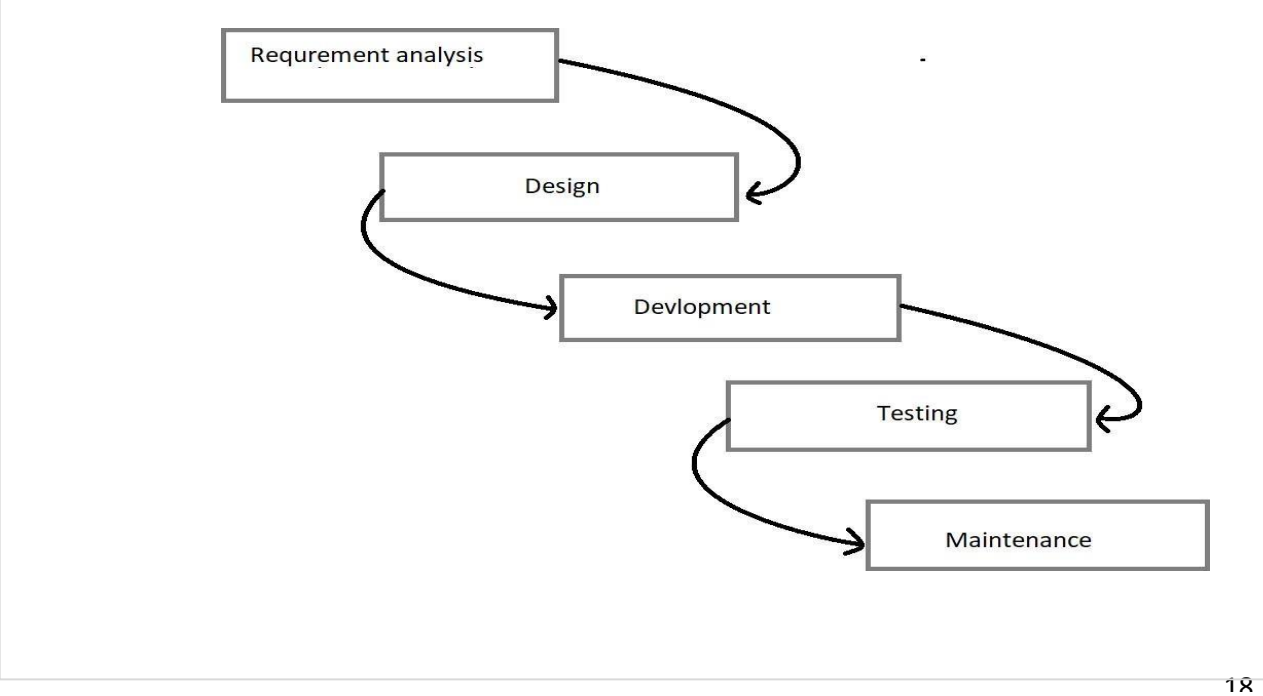


Figure 4 : Methodology

Chapter 5

Body of the Project

5.1 Work Description

Business necessities are gathered in this stage. This stage is the basic point of convergence of the endeavor managers and accomplices. Social events with chiefs, accomplices, and customers are held in order to choose the requirements like; who will use the structure? In what way will they use the structure? What data should be a commitment to the system? What data should be yield by the system? These are the general requests that gets answered during an essential social gathering stage.

After essential gathering, these necessities are analyzed for their authenticity and the likelihood of joining the requirements in the structure to be progression is also considered. Finally, a Requirement Specification record is made which fills the need of rule for the accompanying time of the model.

System Analysis

5.2.1 Six Element Analysis

The testing gathering seeks after the Software Testing Life Cycle and starts the Test Planning stage after the necessities assessment is done.

- **Design:** In this stage, the framework and programming configuration are set up from the prerequisite details which were considered in the main stage. Framework Design helps in indicating equipment and framework prerequisites and furthermore helps in characterizing generally speaking framework engineering. The framework structure particulars fill in as contribution for the following period of the model. In this stage, the analyzers think of the Test system, where they notice what to test, how to test.
- **Development / Coding:** On tolerating structure setup reports, the work is divided into modules/units and certified coding is started. Since in this stage, the code is conveyed so it is the essential fixation for the planner. This is the longest time of the item progression lifecycle.

- **Testing & Integration:** After the code is made it is attempted against the necessities to guarantee that the thing is truly comprehending the necessities tended to and collected during the requirements arrange. During this stage, a wide scope of down to earth testing like unit testing, mix testing, structure testing, affirmation testing is done similarly as non- utilitarian testing is also done.

- **Implementation:** After productive testing, the thing is passed on/sent to the customer for their use. At the point when the thing is given to the customers, they will at first do the beta testing. In case any movements are required or if any bugs are gotten.

- **Maintenance:** At the point when the customers start using the made system then the veritable issues come up and ought to be clarified from time to time. This methodology where the thought is taken for the made thing is known as help.

5.2.2 Feasibility analysis:

A feasibility study is an analysis that considers all of a project's relevant factors including economic, technical, legal, and scheduling considerations to ascertain the likelihood of completing the project successfully.

There are basically three parts in feasibility study: In its simplest form, a Feasibility Study represents a definition of a problem or opportunity to be studied, an analysis of the current mode of operation, a definition of requirements, an evaluation of alternatives, and an agreed upon course of action.

Economic Benefits:

➢ It will reduce man power. So that employee assignment cost will be much lower.

➢ It will reduce paper work Economical Costs: Economic cost also important concern when developing a new system. There have to make a few costs to implement the system.

➢ As this is a web application so first of all buy a domain name and for storage buy a host service.

➢ Development cost like pay for api or some other services.

5.2.3 Problem Solution Analysis

Present system is Lengthy. Their existing problems is given below

- The current system is very time consuming.
- To take everything manually needs more invigilators are required.
- There is chance of wrong information.
- All processing takes huge time.

Analysis of the problem

By investigating the existing problems these problems are scrutinized for the proposed system.

- Process is time killing.
- Lengthy process.
- Process is costly.
- Must present on time physically

Solution of the problem

- Employee need not to see everything physically.
- There is no need to write everything manually.
- There is no possibility of mistake.
- Estimate will be automatically generated.

- Sales or driver or any other employee need not take recite manually.

5.2.4 Effect and Constraints Analysis:

Project constraints are limiting factors for your project that can impact quality, delivery, and overall project success. Some say there are as many as 19 project constraints to consider, including resources, methodology, and customer satisfaction.

Effect Analysis Procedure:

- Understand the possible implications of making the change.

- Identify all the files, models, and documents that might have to be modified if the team incorporates the requested change.

- Identify the tasks required to implement the change, and estimate the effort needed to complete those tasks

Constraints Analysis:

Software constraints make rules and conventions commonly agreed to in a given programming environment explicit and automatically checkable. The potential usefulness of software constraints was investigated in both industrial and research environments. A framework for categorization of such constraints is defined

Figure 5 : Constraints Analysis

System Design

5.3.1 Rich Picture

The current super shop system were manually base system which is almost all works on the super shop organization is accomplished by papers. Among thus products data search in order to buy, audit, and other related works. And the other one is data security, the data's can be accessed anyone who entered to the super shop house as friends, other Humans without the volunteer of the Current system was manually, and the proposed system is software based system. Practically, rich pictures are unstructured and non-linear representations of a situation that depict complexity. The actual picture itself can be simple, like a back-of-the-napkin drawing, or complicated, for example, by using graphic facilitation artists or mapping tools. A rich picture offers a 'map' of a system.

Figure 6: Rich Picture

5.3.2 UML Diagrams

The Unified Modeling Language (UML) is an extensively valuable, developmental, showing language in the field of programming building that is intended to give a standard strategy to imagine the structure of a framework. UML was at first prodded by the yearning to organize the special notational structures and approaches to manage programming arrangements made by Grady Brooch. Starting now and into the foreseeable future, it has been at times changed to cover the latest update of UML.

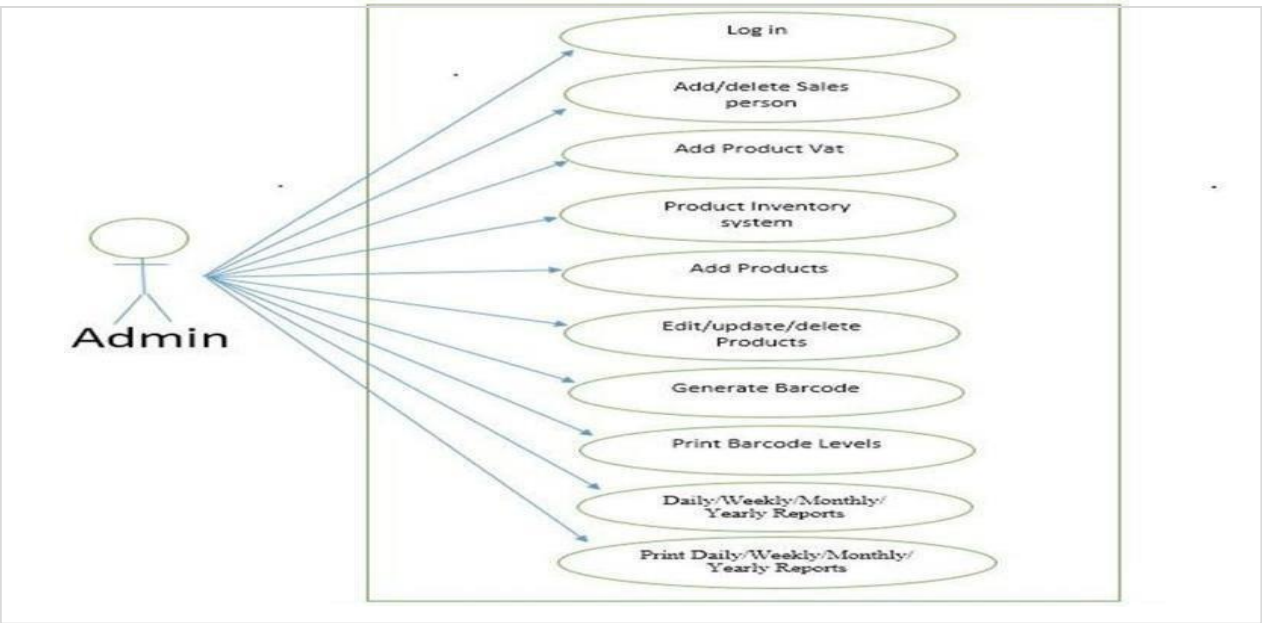


Figure 7: UML Diagram

5.3.3 Functional and Non-Functional Requirements

Functional Requirements:

There are functions done by the system such as: store the necessary information of products, prepare bill for the products, give week reports, easily searching of products, working in two languages. Update, delete and save data's of machine. Here is some Functional requirement given:

- Generate Report
- Store necessary information of products
- Support Multiple Language

The Function what the system do is
- Store product Data
- Search product data
- Edit update delete
- Generating bill
- Log in password change and so on.

Non-Functional Requirements:

Non-functional requirements are those features of requirements that tell us how well or what level of requirements is to be performed. Here is the list of Non-Functional Requirements:

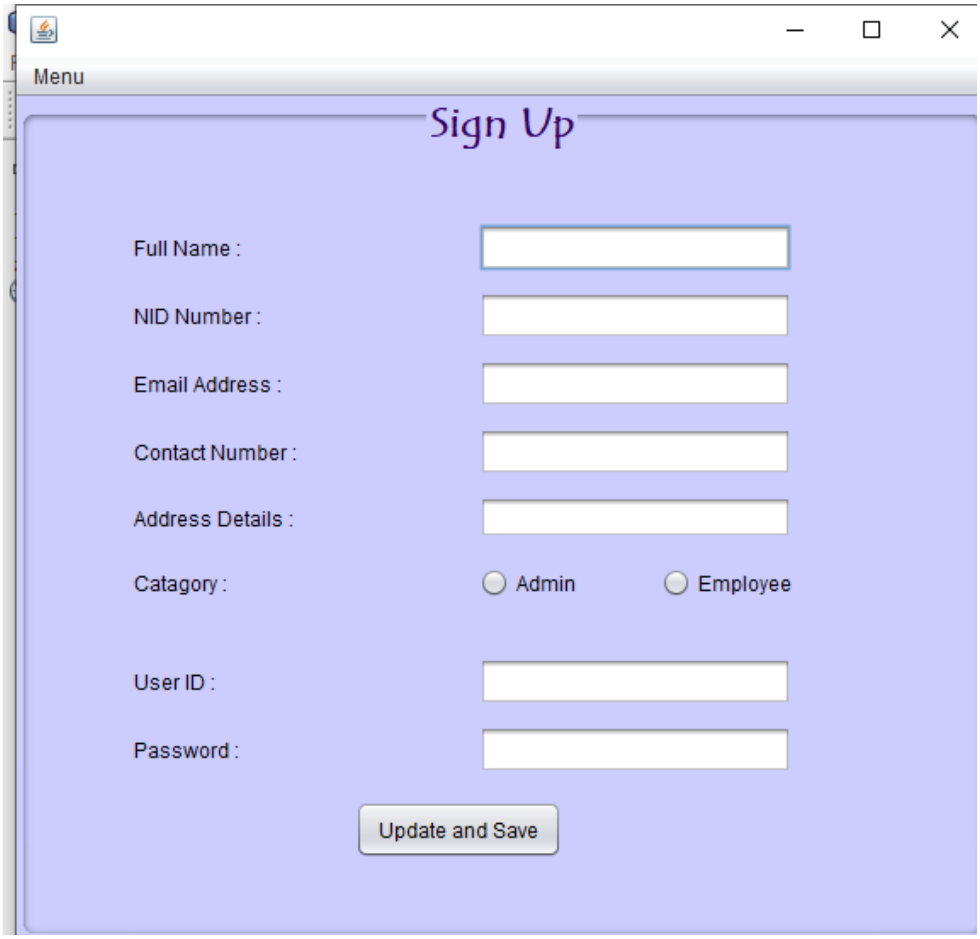
- Accessibility for the system
- Availability of the system.
- Deployment
- Failure Management
- Maintainability
- Privacy of the system.
- Portability requirements.

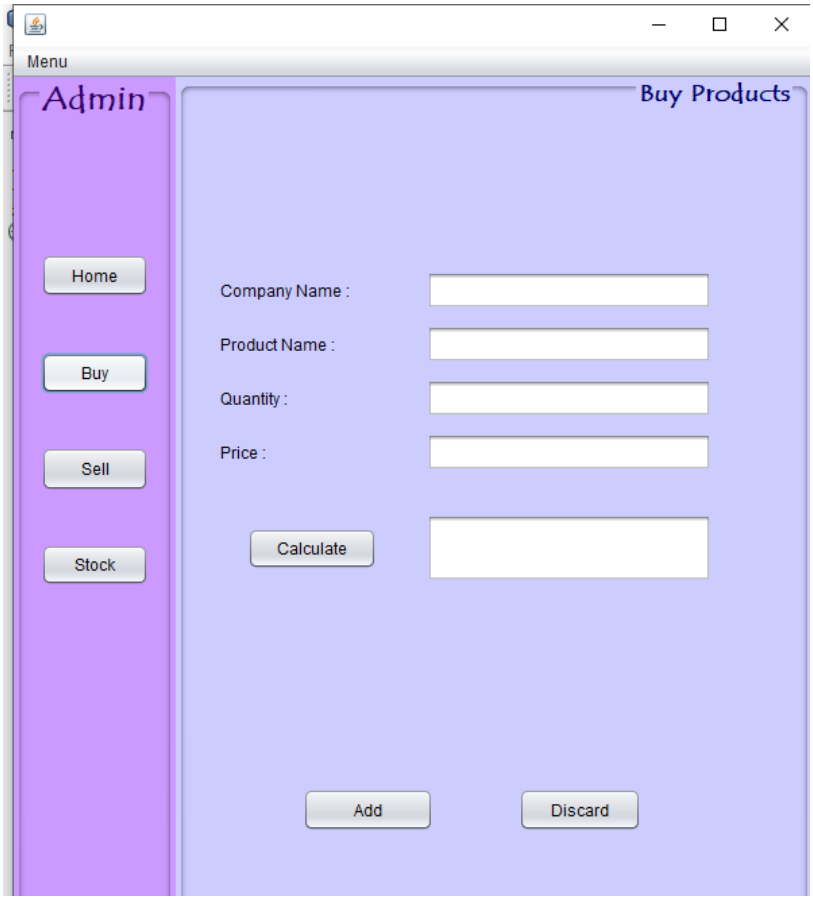
- Reliability requirements.
- Robustness
- Testability
- Recovery requirements.

5.4 Product Features

5.4.1 Input

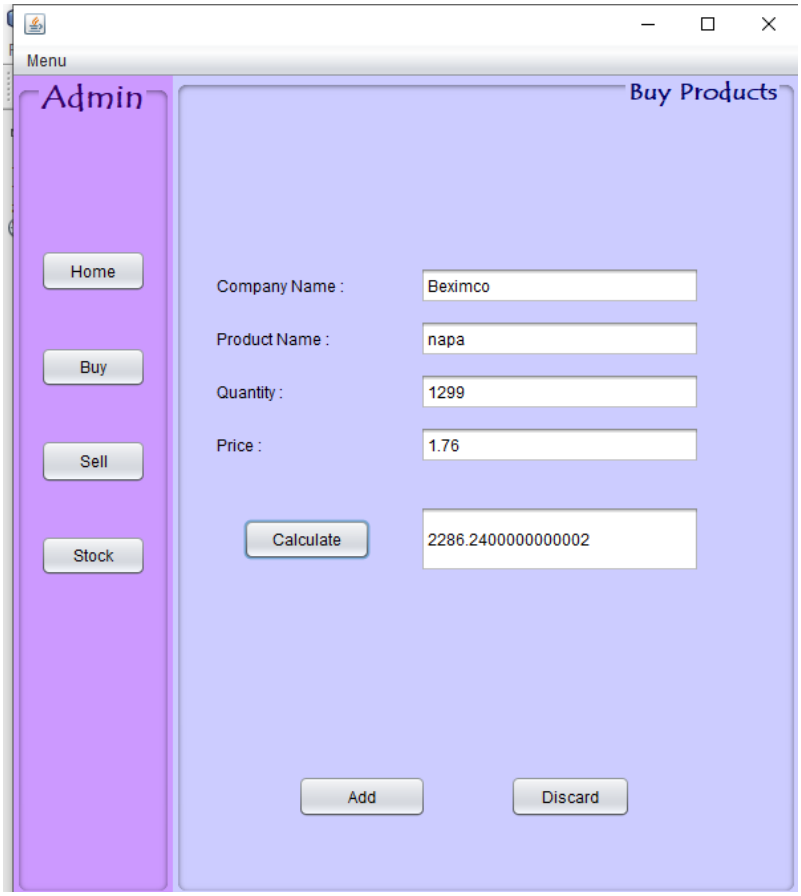
In our product we can search our available products. If it's available in our shop we can easily find out it. We can also calculate our products prices. We can also input buying list. And so on.





5.4.2 Output

Whatever we input in the system. We can see the result as output which was about how a customer login and signup in our software. The customers don't need to login again and again. We concerned about our cookies set up and get our expected output from the software.


Menu
Admin
Home
Buy
Sell
Stock
Buy Products
Company Name :
Beximco
Product Name :
napa
Quantity :
1299
Price :
1.76
Calculate
2286.2400000000002
Add
Discard

5.4.3 Architecture

Product architecture is the organization (or chunking) of a product's functional elements. It's the ways these elements, or chunks, interact. He Describes product architecture as the "scheme by which the function of A product is allocated to physical components.

Types of software architects:

- Enterprise architect.
- Solution architect.
- Application architect.
- Data architect/Information architect.
- Solution architect.
- Security architect.
- Cloud architect

Chapter 6

Results & Analysis:

After submitting them this project they give us a great feedback. After using these software they get every facilities which they want. These software reduce their cost of employee, paper, save their times, make their job more easy and so on. Pharmacy management software is very important at this time. By using this software they get highly benefit.

In this project after finishing the codes and design, we found some initial bugs which slow down the process. Then we fixed it and it works perfectly. This testing is observed and taken by various users and it passed successfully. All tests have been justified.

Chapter 7

Project as Engineering Problem Analysis

7.1 Sustainability of the Project

Definition:

Sustainability in the project profession is an approach to business that balances the environmental, social, economic aspects of project-based working to meet the current needs of stakeholders without compromising or overburdening future generations.

The five pillars of sustainability:

- Economic.
- Social.
- Environmental.
- Cultural.
- Security aspects.

Sustainability is important: A project is sustainable when defects can be corrected, it is able to meet new requirements, future maintenance is made easier, and it can cope with the changing environment.

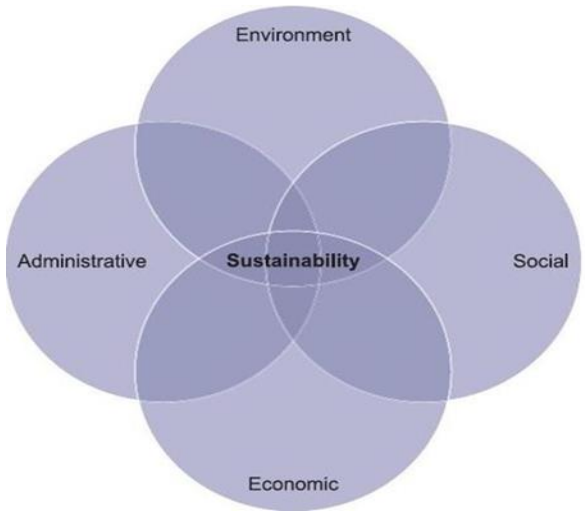


Figure 8: Sustainability

7.2 Social and Environmental Effect

Software has a significant impact on the resource efficiency of IT hardware and on how long it is used. Programs which execute the same functions can have very different levels of energy consumption depending on how they are programmed.

Broadly speaking, social impact is how organizations, businesses or individuals' actions affect the surrounding community. It may be the result of an activity, project, program or policy and the impact can be intentional or unintentional, as well as both positive or negative.

Software has a significant impact on the resource efficiency of IT hardware and on how long it is used. Programs which execute the same functions can have very different levels of energy consumption depending on how they are programmed.

Chapter 8

8.1 Future Works

In the future, the following components can be added to the system in order to improve the effectiveness and efficiency of the system.

Implementation of a Supermarket:

- An advanced password system that will be embedded into all login pages to increase the security of the system.
- A good Printing module should be included.
- A good Internet backup should be automated after everyday sales.
- Internet Transactions should be allowed.
- We will try to update version.
- Also add some new features and many more.

8.2 Conclusion

In conclusion, Supermarket Management System has to do with making appropriate effort to stop the rising problem to all manual supermarket operation in order to enhance the operation of such supermarket. In this project, the software or system that can be used to aid all supermarkets that is still operating manually have been successfully developed. The software can be implementing in all types of supermarket as mentioned in the second chapter. The software has a large memory of storing all the goods in the supermarket and also keeping record it is highly effective and accurate. Recommendation In the development of this supermarket management system, I will recommend that if there is going to be any modification the new writer should endeavor to improve on the limitations such as inclusion of the billing and printing to further increase the system architecture and to satisfy users need more for writing of the source code, visual studio 2012 should be used and Microsoft access for the database.

There are some limitations during the development of this supermarket management system that will require improvement as stated in previous chapter writer should put them in mind and face it as a challenge and not a problem. Problem Encountered a lot of challenges surfaced during the development of this incredible application though it tried stopping this project but the doggedness and consistency of the writer was in match with the challenge The following are some of the problems or challenges encountered.

- Expensive Internet facility.
- Understanding the Data
- Inadequacy of power supply and many more.

- Time factor on research to get a way of packaging the application successively.

Business Automation is very confident to make this project successful as we have similar experience as per above summary project work at West Bengal.
Considering above project flow and discussion we can jointly carry out the project as Pilot basis.

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