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IT Store Management System

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IT Store Management System

By

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Summer, 2022

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September 14, 2022

Dissertation submitted in partial fulfillment for the degree of Bachelor of Science in Computer Science

Department of Computer Science & Engineering

Independent University, Bangladesh

Attestation

This is to certify that I, **Rafeya Khandaker Shawon (1821558)**, finished the report titled **IT Store Management System** and submitted it as part of the requirements for the **Degree of Computer Science and Engineering from Independent University, Bangladesh (IUB)**. It was finished under **Md. Abu Sayed** sir's instruction (Supervisor). I also attest that everything I wrote for my internship was original. Every one of the sources of data utilized in this undertaking and report has been properly recognized in it.

14, September, 2022

Signature

Date

Rafeya Khandaker Shawon

Name

Acknowledgement

I'd want to express my gratitude to the Faculty of Computer Science and Engineering for giving me this opportunity. I want to thank **Md. Abu Sayed** Sir, lecturer in the department of computer science and engineering at **Independent University in Bangladesh**, who is my supervisor. He inspired and guided me during this internship and the writing of this report with his ongoing guidance, priceless instructions, intriguing recommendations, and astute advise. I am eternally thankful to my technical supervisor, **Rohima Rohi**, Project Coordinator, **Project Management Technology,** for her kind encouragement, direction, constructive supervision, directives, and counsel as well as for inspiring me to successfully complete my internship at PMT. I must also highlight the wonderful working environment and teamwork inside this firm, both of which have helped me deal with a variety of challenges.

Finally, I'd like to express my gratitude to my family for their unwavering support, especially my parents.

Letter of Transmittal

Mr. Md. Abu Sayed
Lecturer,
Department of Computer Science and Engineering,
Independent University, Bangladesh.

Subject: Internship Report for Graduation Submission.

Dear Sir,

As a requirement for my computer science and engineering bachelor's degree, I am currently submitting my internship report. Working under your direct direction is a remarkable accomplishment. I've been employed by **Project Management Technology** for three months, working under Rohima Rohi's supervision as the project coordinator. I gained both intellectual and practical experience from this internship. I've been able to network in the corporate environment thanks to the training. I made an effort to make this report as informative as I could using the information I learned during my internship. I adhered to the guidelines and went into enough detail to describe the pertinent fields in order to write a well-structured internship report. But I'm certain that this report will satisfy the requirements of my internship program.

Please accept my sincere thanks if you can read this report and offer your insightful opinion. It would make me extremely happy if you found this report beneficial and enlightening in gaining a clear understanding of the problem.

Sincerely Yours,
Rafeya Khandaker Shawon
ID: 1821558
Department of Computer Science and Engineering,
Independent University, Bangladesh.

Evaluation Committee

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Signature

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Name

Md Abu Sayed

Supervisor

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Signature

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Name

Ajmiri Khan

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Rahima Rohi

External Examiner

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Convener

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Abstract

An internship is characterized as gaining real-world experience from a variety of organizations, which aids in connecting academic theory with practical application. It is crucial since this is the first opportunity for a student to gain in-depth practical knowledge from various firms. I had the opportunity to work and learn with the developer team when I was given the opportunity to intern at PMT. The creation of a "IT Store Management System" was the project's main objective. This report covers the entire project that I gained knowledge of throughout my internship.

Prior to beginning any projects, I had to finish my learning sessions. During this learning session, I was tasked with creating a landing page, a dashboard, several interfaces for various elements, and some back-end coding. Prior to being given the actual project, it was almost like a talent test. In my report, I've gone into detail about the knowledge I've picked up, the experiences I had, and the work I completed while an intern at Project Management Technology. The majority of my effort on a website application involved building the complete site.

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Chapter 1

Introduction

Everything has been computerized in today's age of expanding technologies. This is why two very different electrical and physical information are included in what we now call information. Regardless of the information's source or format (data, paper documents, electronic documents, audio, social business, video, etc.), the organizational structure must be able to manage it throughout the information lifecycle for delivery through a variety of channels, in our case it is a web interface. Based on these requirements this IT store management system will manage, safeguard, store, and transmit the appropriate information to the appropriate individuals at the proper time. By using the IT store management system employees can quickly request their needed information from the admin and the admin can quickly provide those resources to that particular employee. The creation of an application for an IT store management system will be thoroughly discussed in this document. The program will be developed with React and PHP. The project has modules, including Admin and Employee. Anyone who is not even familiar with a basic management system can use it because it is easy to understand. It is simple to use and only offers the user a limited number of alternatives while asking him to do actions step by step.

1.1 Overview/Background of the Work

The main difficulty I encountered as an intern is converting theoretical principles into practical practice. On June 1st, 2022, I began my internship at Project Management Technology, which allowed me the chance to work on a web application called IT Store Management System. In general, a management information system enables employees to seek the administration of whatever resources they may need. The system will be

created with the most recent technology, making it much simpler, quicker, and more effective than ever before to give resources to employees. Additionally helps in effectively enhancing the organization's overall quality. Additionally, this system will present a high level of information security.

1.2 Objectives

Project objectives are the things we hope to accomplish by the project's conclusion. To facilitate communication with the administration and employees the following is a description of this application's primary goals:

- To easily collect information from employees about their needed IT resources.
- To be able to add those needed resources by category, supplier, or brand.
- To build a secure system.
- To let the admin add, delete, or modify those resources as per needed.
- To let the admin filter and sort through the products.
- To generate a report of total products in the store.

1.3 Scopes

Users can request resources using this web-based IT store management system. For employees and administrators, it offers many user interfaces with various functionalities.
An administrator can add an IT resource by the exact employee who made it. The resource will only be available to selected employees.
Any request for resources may be approved or disapproved by the administrator. When managing a store, an administrator can view a report on the total number of resources and filter or order those resources by category, brand, or provider.

Chapter 2

Literature Review

A thorough summary of prior studies on a subject is called a literature review. The literature review examines scholarly books, journals, and other sources that are relevant to a particular field of study. In other words, a literature review gives the reader context and places the current study within the overall body of previous research. In such a scenario, the review of the work is typically written before the methodology and outcomes sections.

2.1 Relationship with Undergraduate Studies

The "IT Store MANAGEMENT SYSTEM" project's development will be benefited from the knowledge and abilities learned in undergraduate courses. If these courses hadn't been completed before beginning this project, it would have been more challenging. Some of the relevant courses are:

- CSE451-Software Engineering: This course taught about requirements definition, modular design, structure design, data specifications, functional specifications, verification, documentation, software maintenance, and software support tools are examples of concepts in software engineering.

- CSE459-Software Architecture and component design: This course was about the basics of software architecture. Software system criteria for quality and architecture. Basic rules and criteria for architectural types, patterns, and frameworks used in software architecture design. Methods, approaches, and resources for outlining software architecture and recording design justification. techniques for designing and assessing software architecture.

- CSE309- Web applications and Internet: This course was an overview of the World Wide Web's history and structure, as well as HTTP and other related protocols, table, form, frame, window, and link elements; variables, data types, control structures, functions, event handlers, properties, methods, and cookies

are all used in client-side scripting; concepts, variables, data kinds, control structures, functions, and objects in server-side programming.

- CSE 307 - System Analysis and Design: It introduced me to methods and tools used in systems design and analysis, such as E-R diagrams and data flow diagrams. projects in which students use these technologies to analyze and develop systems.

- CSE 303- Database Management: This course was about the introduction to ideas and procedures for storing and working with stored data, locating and organizing files, database models and database design, database management system concepts, E-R diagrams and data flow diagrams. Formulation and wording of the query database management, techniques for storing, selecting, and presenting data integrity and security of the database. SQL's organizational structure and guiding principles, methods, and tools are used in systems design and analysis.

- CSE 213- Object-Oriented Programming: This course was an overview of object-oriented programming with Java, which was used to illustrate the ideas. classes, inheritance, polymorphism, object instances, and abstraction mechanisms are among the subjects discussed. Using an object-oriented approach. Also taught advantages and drawbacks of the object-oriented approach to system development.

- CSE 211- Algorithms: It included memory management, searching and sorting, hashing, recursion, backtracking, lists, stacks, queues, trees, operations on sets, priority queues, and graph dictionaries.

- CSE 203- Data Structure: It taught effective data organization techniques with a focus on data structures, their algorithms, and the effectiveness of these algorithms. Elementary data objects, elementary data structures, arrays, lists, stacks, queues, graphs, trees, compound structures, data abstraction, and simple operations on these structures are all concepts and examples covered

Chapter 3

Project Management & Financing

3.1 Work Breakdown Structure

A schematic diagram called the work breakdown structure shows how a project is broken down into smaller parts. For our project, we created a work breakdown structure (WBS) to make sure that our activities were synchronized. Critical deliverables are not overlooked thanks to the work breakdown structure (WBS), which visually represents all scopes, risks, communication points, responsibilities, and costs. It is the best tool for team cooperation and brainstorming. We took a top-down approach while creating our task breakdown structure.

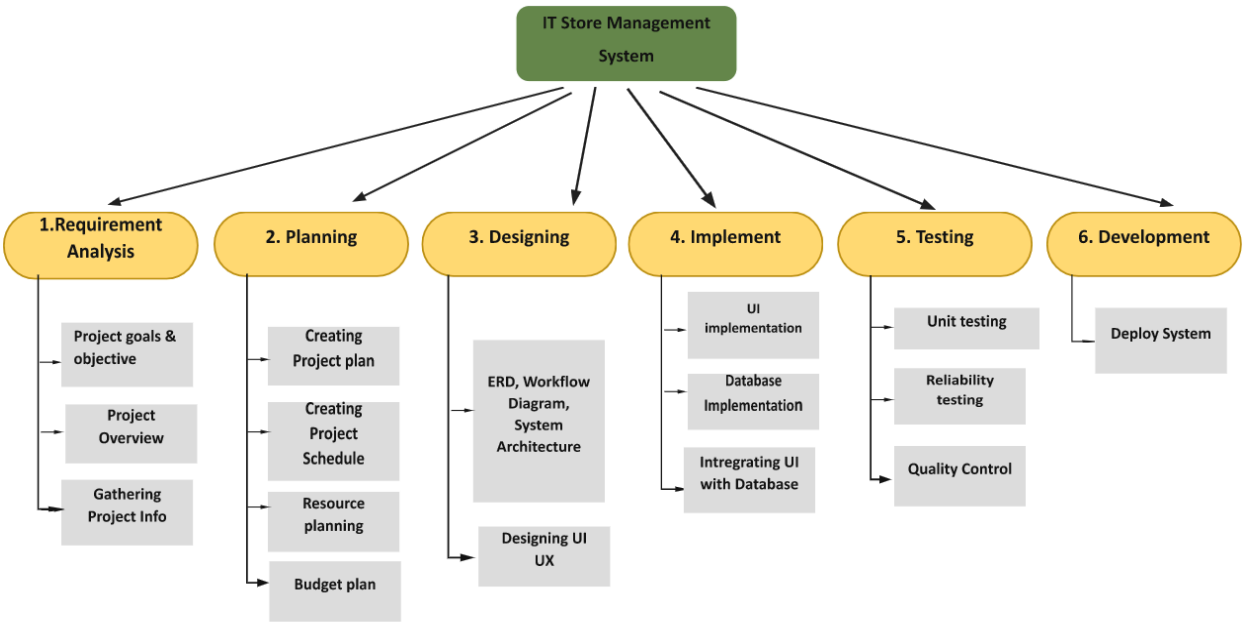


Figure 1: Work Breakdown Structure

3.2 Process/Activity wise Time Distribution

The Work Breakdown Structure includes each and every project activity. We work in a flow with a set time frame to finish such activities in order to achieve balance with other developers. Together with the other team members who are developers, my project manager develops the timetable. Days of time have been set aside for the current activities or responsibilities. My project manager works out the schedule with the other developers in the team. For the current activities or tasks, days of time have been allotted to the table.

Activity	Day	Work Percentage
Requirement Analysis	7	4.2%
Planning	10	6%
Design	7	4.2%
Implementation	14	8.4%
Testing	12	7.2%
Deployment	10	6%
Total	**60**	**100%**

Table-1: Time Distribution

3.3 Gantt Chart

A Gantt chart is a project management tool that may be used to plan and schedule projects of all sizes. Horizontal bar charts are created using project management timelines and tasks, showing start and finish dates, dependencies, scheduling, and deadlines, as well as the percentage of the job completed at each step and the task owner.

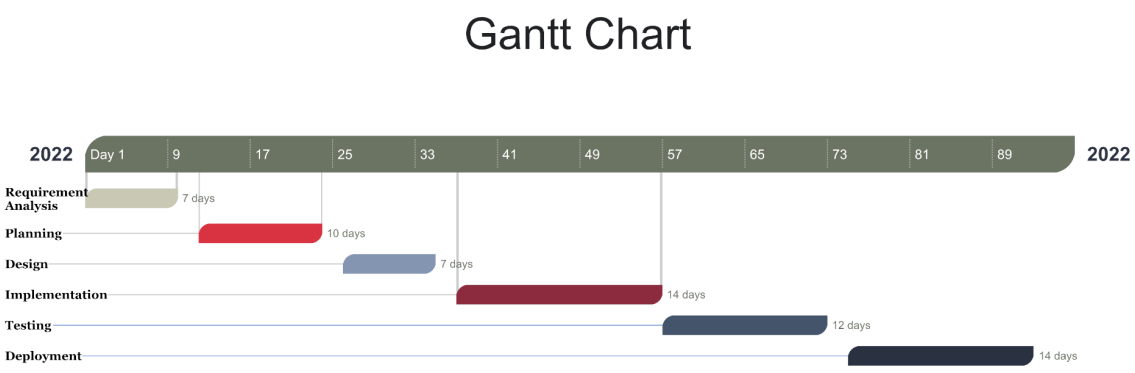


Figure 2: Gantt Chart

3.4 Process/Activity wise Resource Allocation

Allocating resources in a way that advances the objectives of your team is called resource allocation. Developers are regarded as the most important resource in this project, followed by office PCs and the servers required to distribute the product. Every person in the organization is seen as a resource, thus each one is given a specific task with a set deadline that contributes to the project's overall productivity. It takes 60 days to set up the full system for this project. The following list includes specifics for each project step:

- **Requirement Analysis and Planning:** This is the first phase of the project during which the company has presented the project's concept. The developers reviewed the methodologies to be used, the creation of smaller goals and the setting of dates for them, as well as the overall needs for the project's completion, during the development process. Examples include computer requirements, software/tech to be used to create the application, features, and the need for developers. This section took 10.2% of the overall works into account.

- **Design:** In order to see the wider picture right away, we build the project's high level and low level diagrams as well as the web pages for the application during this phase. 4.2% of all works were taken into account in this section.

- **Implementation:** We have started building the front-end and back-end code for the application, and the website is ready for design. We made a consistent effort to meet all deadlines. It takes two weeks to complete the process. It represents 8.4% of the entire amount of work.
- **Testing:** When the feature is added to the website, the test will start. At the conclusion of the implementation phase, unit testing for the application will begin. It will take 12 days to finish this operation. It represents 7.2 percent of the entire effort.
- **Deployment:** We will buy a VPS and domain to deploy the application to a live server after the deployment test. Ten days will pass throughout this. This makes about 6% of the total job.

3.5 Estimated Costing

Based on the features that the client desired for the website, the cost was determined. It depends on the size, specifications, functionality, and design of the website. This covers the price of the SSL certificates, pre-designed themes, logo design, home page sliders, SEO, social network integration, and various other tools used to make this website. Additionally taken into account were the developer's fee and the resources used. The price tag is Tk. 65,000. After the first year of deployment, there will be a hosting and domain fee if service help is required.

Task	Amount
Planning & Analysis	6000
Design	10,000
Implementation	25,000
Testing	7,000
Deployment	20,000

Table 2: Estimated Costing

Chapter 4

Methodology

The full plan and logic behind our undertaking are referred to as our methodology. To create a plan that achieves our goals, it is necessary to conduct research on the methodologies used in our industry and the theories or concepts supporting the selection process. A methodology is a set of procedures that apply to a specific subject or activity. A method is a thorough process used to locate, pick, process, and analyze data regarding a topic. One of the most comprehensive, fully functional, and created using the most recent web technology is the website I'm working on.

I went through a number of aspects in my study for this assignment, classifying and analyzing the methods I would use to complete it. I'll be using a Waterfall model as my SDLC for development and implementation. The insights and knowledge gained from the requirements Waterfall model will be a great choice for developing this application.

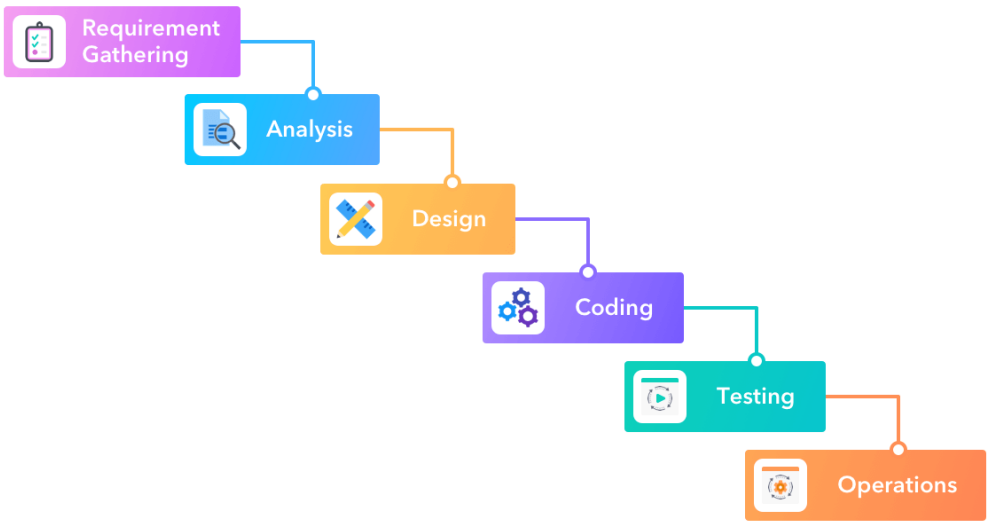
Phases of development:

- System prerequisites
- Software specifications
- Analysis
- Design
- Implementation
- Test
- Operation

4.1 Why Waterfall

The Waterfall Model is a sequential or linear method of project management that is based on predetermined deadlines, specifications, and results. Teams don't need constant communication, and they can function independently unless certain interconnections are needed. In addition to working autonomously, team members are usually expected to submit status updates less regularly. Some of the benefits of waterfall model include:

- project's scope is often constant, costs and completion dates may be established early on.
- Early project completion allows for minimal system changes, which lowers the cost of fixing and changing designs.



Chapter 5

Body of the Project

This part shows what was accomplished, how it was accomplished, what resulted, and what inferences and suggestions can be made. For readers who wish to know what was done in-depth and completely, the project's body of the report provides a full description of the work.

5.1 Work Description

An IT store management system is one that can easily, quickly, and smoothly manage the IT requirements of employees online. The solution allows employees to easily request the hardware and software they require. The problem of manual application is solved by this web-based application system. Two modules make up this system. They are:

- **Employee Module:** Employee will login to the system and select the IT store module, there they can request through a form their needed software and hardware with supplier details on it.
- **Admin Module:**Admin will receive the employees requests. Admin can see all of the resources available in the store. They can also sort the those resources according to their supplier or brand. Admin can also add, delete resources from the store.

Detailed description of the modules:

- **Add Product Module:** Admin will record the details of added resource in a form like page. This is going to contain details of supplier, cash memo, product name, quantity, category, working date etc.
- **Manage Product Module:** This page will contain a summary of all the products in store. Admin can search a specific product too with the product or supplier name.

- **Manage Catagories:** Here will be four pages, Manage Catagories, Manage Brands, Manage suppliers, Manage Product list. Admin can add, delete or update any of the product from this four conditional categories.
- **Request Product:** This is where employees request their needed IT support from. They can also update or request their request as needed.
- **Generate Report:** Generate report about the total categories of products available in rhe store.

5.2 System Analysis

In order to solve an issue, system analysis is a technique that looks at the larger system, explores its components, and determines how it functions. Information technology uses it, where computer-based systems need detailed analysis based on their structure and design.

5.2.1 Six Element Analysis

Activity	Operator	Non-computing Hardware	Computing Hardware	Software	Database	Network
Landing Page	User	N/A	Desktop/Tab/ Mobile	Chrome, Edge, Opera etc	MySQL	WAN/LAN
Request Resource	Employee	N/A	Desktop/Tab/ Mobile	Chrome, Edge, Opera etc	MySQL	WAN/LAN
Product add	Admin	N/A	Desktop/Tab/ Mobile	Chrome, Edge, Opera etc	MySQL	WAN/LAN
Manage Product	Admin	N/A	Desktop/Tab/ Mobile	Chrome, Edge, Opera etc	MySQL	WAN/LAN
Manage Categories	Admin	N/A	Desktop/Tab/ Mobile	Chrome, Edge, Opera etc	MySQL	WAN/LAN

Table 3: Six Element Analysis

5.2.2 Feasibility Analysis

Feasibility analysis is the process of examining a proposed project to see if it is feasible and should move forward. The primary focus of this examination is the confirmation of the design, plan, and strategy. This can be used to verify presumptions, restrictions, choices, and methodologies. We conducted few types of feasibility studies. Our Feasibility analysis is as below:

- **Technical Feasibility:** A technical feasibility analysis also looks at the system's hardware, software, and other technical requirements. It aids companies in assessing whether technical resources are enough and whether the technical team is capable of transforming concepts into functional systems. Our IT store management will be developed using PHP Laravel, React. Which will make the website faster and efficient. These are the most popular technologies and easy to implement.
- **Economic Feasibility:** Before allocating financial resources, this assessment often includes a cost/benefit analysis of the project to help businesses examine the feasibility, costs, and benefits related to a project. Additionally, it improves project credibility and serves as an impartial project evaluation, assisting decision-makers in identifying the favorable economic benefits that the proposed project will bring to the business. Our project is going to be low maintenance, this includes a positive economic feasibility.
- **Operational Feasibility:** This assessment entails conducting research to evaluate whether and how effectively the needs of the organization can be satisfied by completing the project. Operational feasibility studies also look at how a project plan satisfies the needs discovered during the system development process' requirements analysis phase. Our project is going to remove the manual work of requesting resources manually and shift the operations online. This will help the company to easily see the what IT resources are being used by the employees.

- **Scheduling Feasibility:** As a project will fail if it is not finished on time, this assessment is crucial to its success. An organization determines the project's estimated completion time when determining scheduling feasibility. Working on the schedule and maintaining is will help with project success too.

5.2.3 Problem Solution Analysis

- The fact that the requirements change frequently is the major issue a web developer needs to cope with during the web development process. Before starting to develop any product, it is essential to gather needs. A solution to this issuethe following steps were conducted:
    - Specified the project's parameters and scope to client.
    - Avoided assuming that we know what is needed.
    - Effective communication is crucial.
    - Created a list ofrequirements.
- Multitasking occasionally causes more issues than it is worth. Therefore sticking with schedule and we are required to provide a planned and efficient work flow.

5.2.4 Effect and Constraints Analysis

Effect: Similar to before when there was no software. The company found it challenging to manage the resources. All information was stored in a file according to the previous procedure. As a result, it was difficult and labor-intensive to discover previous histories and records regarding each resource. Software is created as a result to address this problem. Everything can be accessed from the recently developed program because the data is all kept in the database. There won't be a labor shortage to go through all the paperwork and maintain a software log of the entire procedure.

Constraints: Finding a solution for this software is really challenging. For a while, the outdated method was used, however the manual method is more time-consuming. The total process had a higher cost, and the price was variable. However, a certain sum of money must be paid on hosting, domains, etc. for the existing software. The software's budget initially presented a challenge, however later improvements were made and several functionalities and workloads were reduced to help the product stay within its budget. For the business, this software was effective. Time and extra money are saved.

5.3 System Design

Systems design is the process of defining a system's components, including modules, architecture, components, their interfaces, and data, depending on the requirements that have been given. Systems that meet the unique goals and requirements of a business or organization are defined, developed, and designed in this manner.

5.3.1 Rich Picture

Rich picture is made up of images, text, symbols, and icons that are all utilized to graphically depict the scenario. A complete picture enables us to recognize connections and linkages that we may otherwise overlook. It aids in determining one or more themes that participants might choose to investigate and address further. Rich images are thus always employed at the preliminary analysis stage.

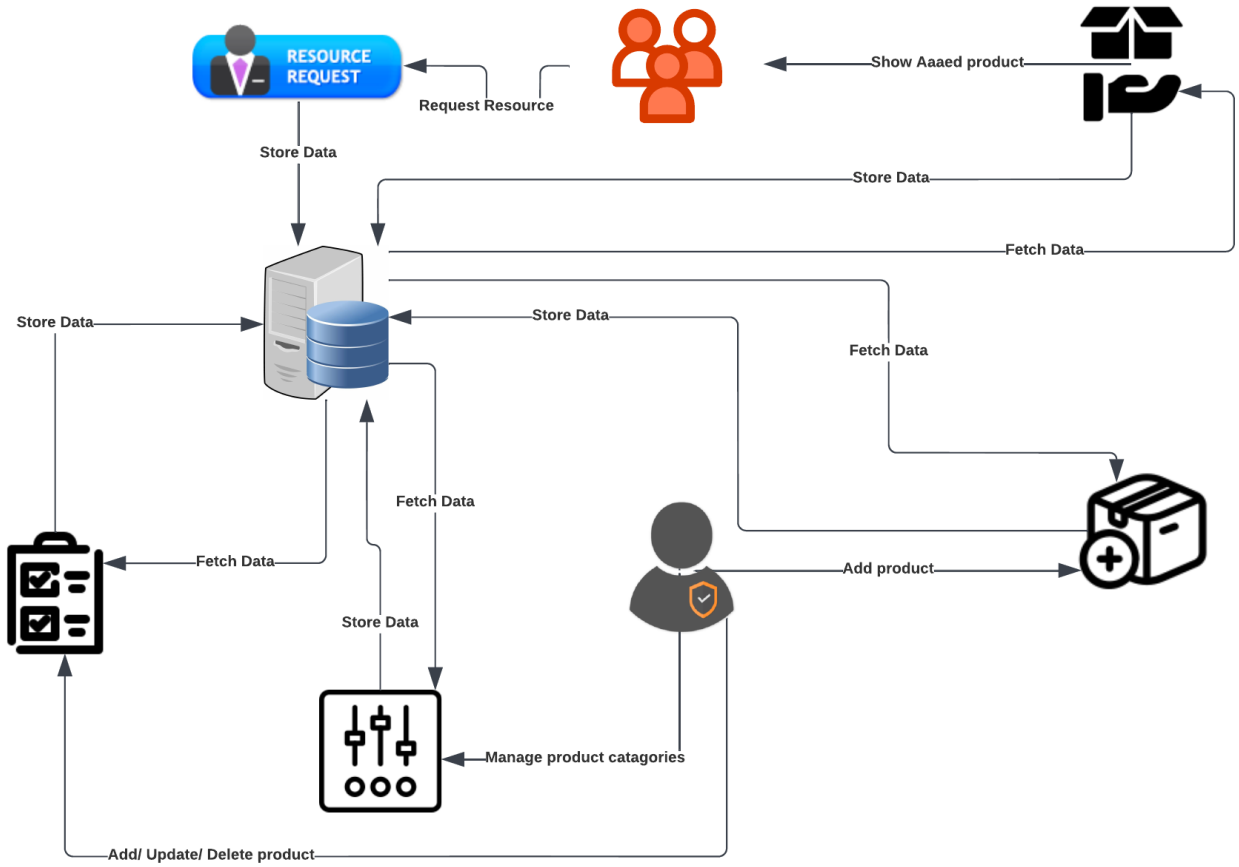


Figure 3: Rich Picture

5.3.2 UML Diagrams

In order to better understand, update, maintain, or document information about the system, a UML diagram is a diagram based on the UML (Unified Modeling Language) that aims to visually describe a system together with its primary players, roles, actions, facts, or classes. UML diagrams can be used as documentation for a project after it has been completed or as a tool to conceptualize it before it begins. UML diagrams can be used in any industry, but their main objective is to help teams see how a project is or will work.

Use Case Diagram:

Module-1: Product Request

Actor: Employees, Admin

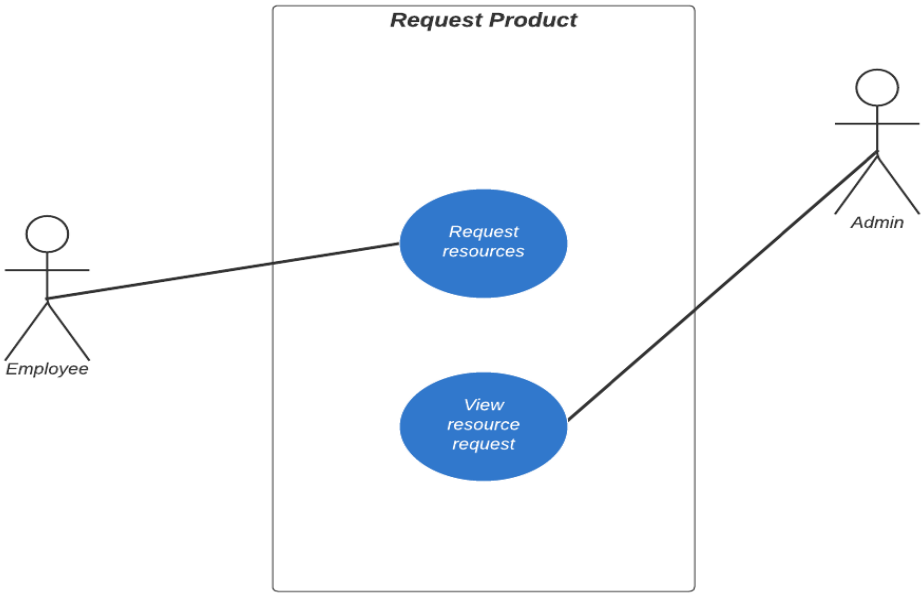


Figure 4: UML Product Request

Module-2: Add Product Module

Actor: Admin

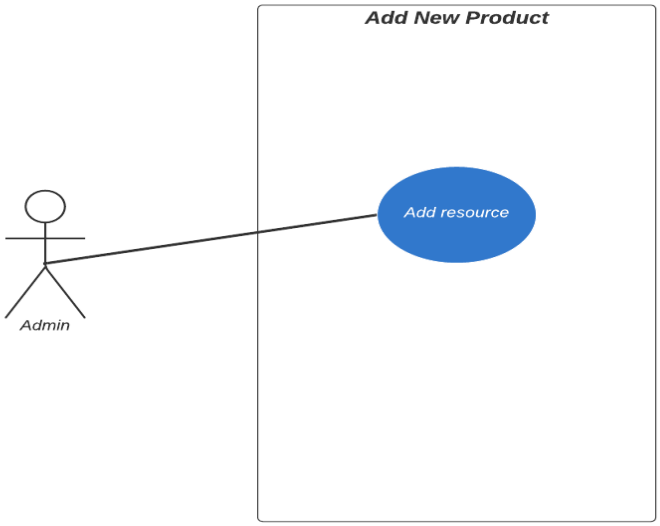


Figure 5: UML Add Product

Module-3: Manage Product Module

Actor: Admin

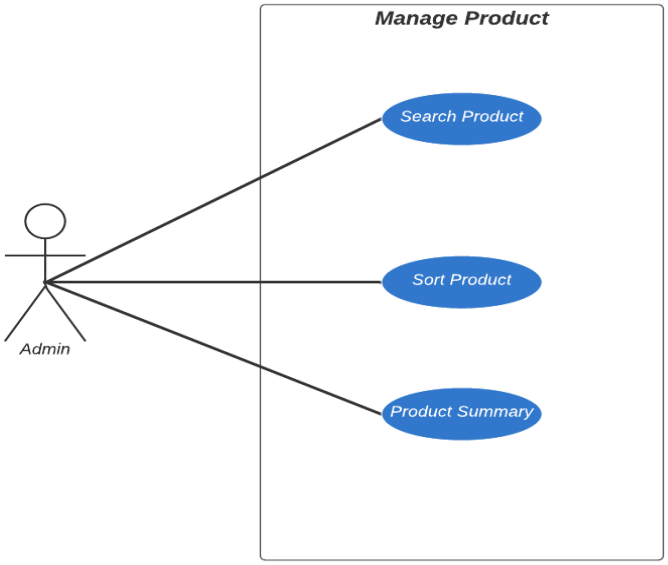


Figure 6: UML Manage Product

Module-4: Manage Categories

Actor: Admin

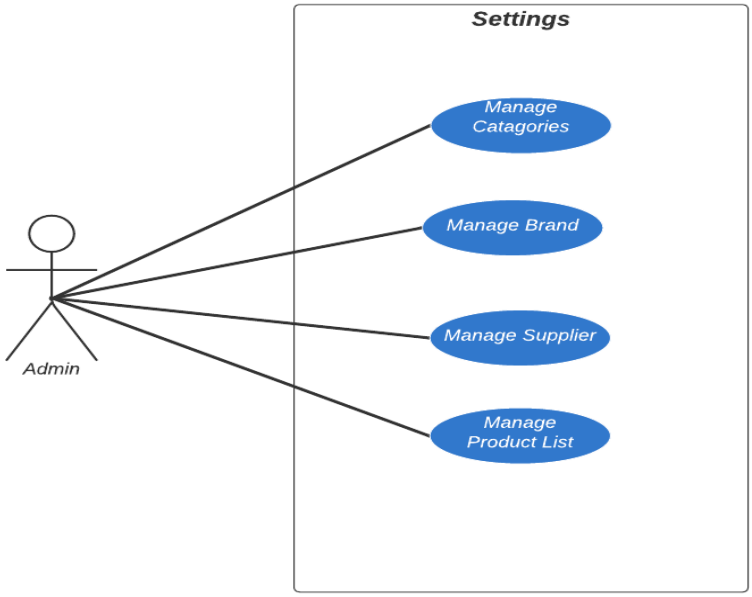


Figure 7: UML Manage Catagories

Module-5: Generate Report

Actor: Admin

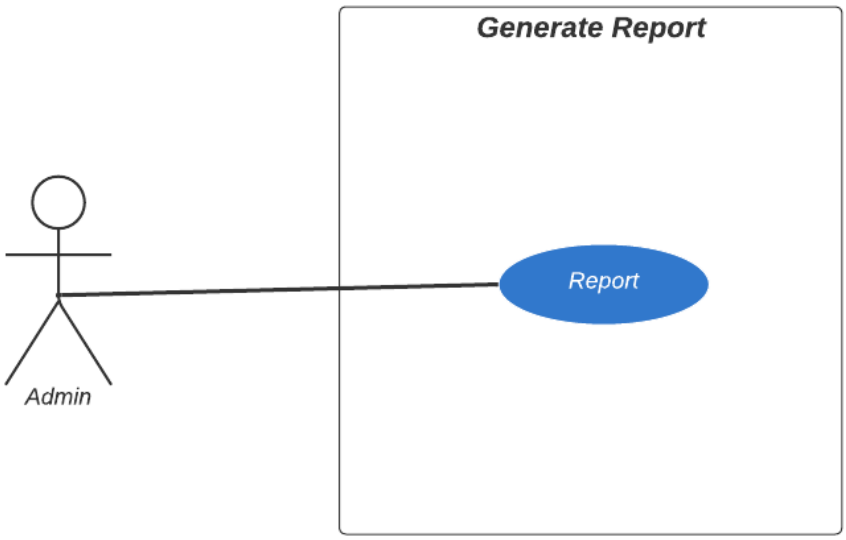


Figure 8: UML Generate Report

Activity Diagram:

Activity diagram for admin:

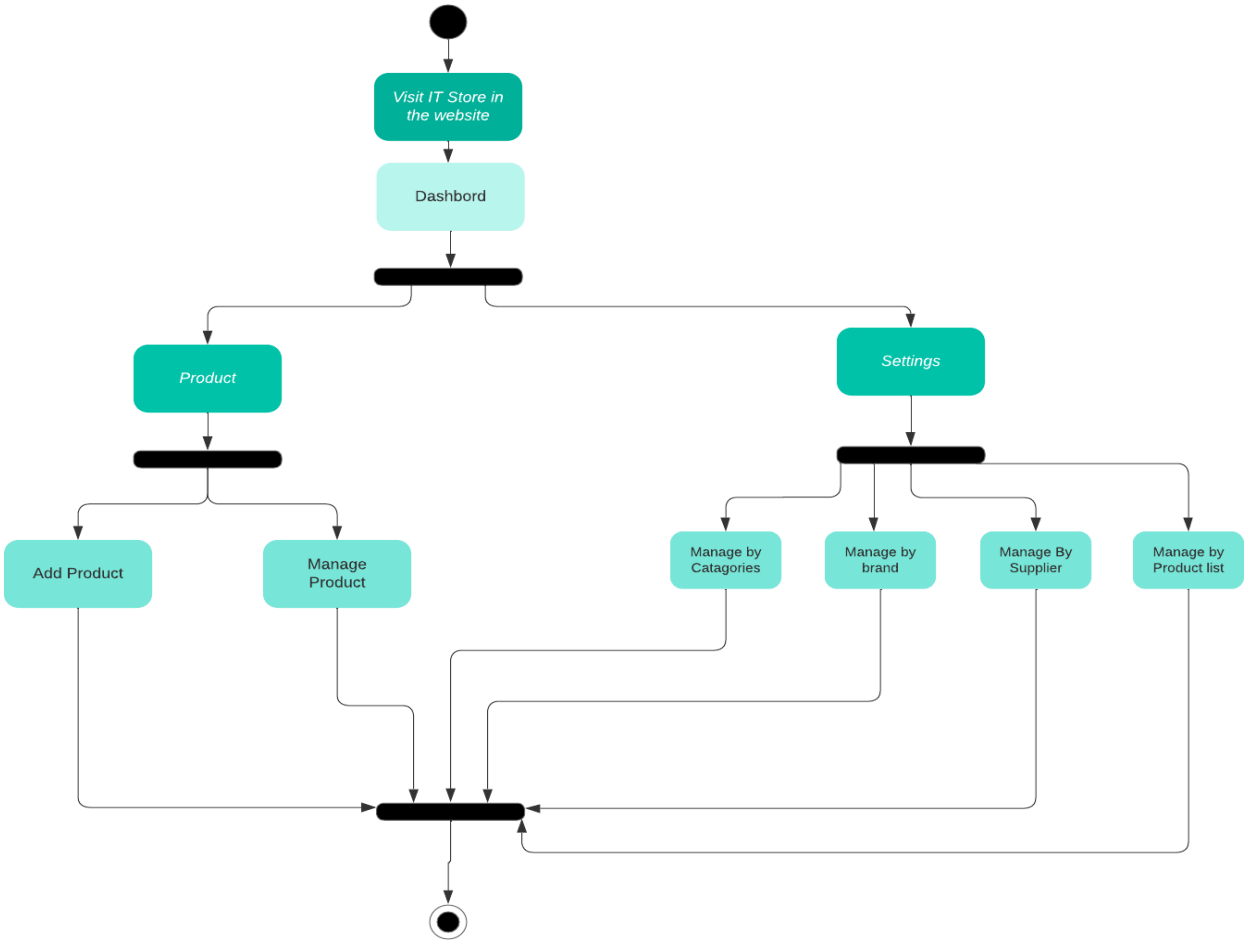


Figure 9: Activity Diagram Admin

Activity diagram for employee:

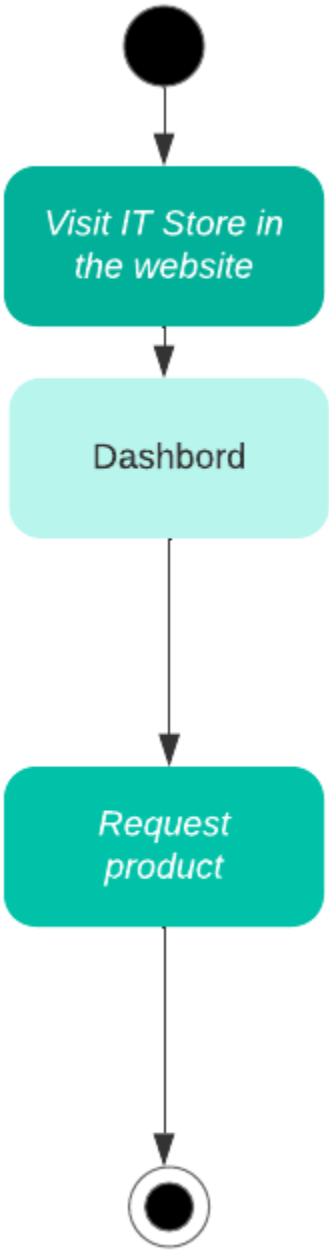


Figure 9: Activity Diagram Employee

5.3.3 Functional and Non-Functional Requirements

Functional Requirements: Functional requirements' main objective is to convert business needs into technology capabilities of a system. System's functional requirements between the technical team and the business stakeholders, this document acts as a contract for a formal statement of an application's functional needs.

Name of the function: Request Product

Function: Request Product		
Input: produc details, supplier name, brand, quantity etc	**Process Activities:** saves in database	**Output:** request is made to add new product in the store
Precondition: Must be logged in to their employee account, must have proper knowledge about the inputs.		
Post-condition: Save and show the employee saved information		
Alternate: If the information couldn't be saved, an error message or solution should send to the employee.		

Table 4: Functional Requirement Request Product

Name of the function: Add Product

Function: Add Product		
Input: added product details, supplier name, brand, quantity etc	**Process Activities:** saves in database	**Output:** Add info to product summary list.
Precondition: Must be logged in to their admin account, must have proper knowledge about the system, must have proper knowledge about the inputs.		
Post-condition: The system should be able to save the information, The system should be able to update and change the information at any time.		
Alternate: If the information couldn't be saved, an error message or solution should send to the admin		

Table 5: Functional Requirement Add Product

Name of the function: Manage Product

Function: Manage Product		
Input: Search product details, supplier name, brand etc	**Process** Activities: Checks details in database	**Output:** Shows sorted product list, product summary
Precondition: Must be logged in to their admin account, must have proper knowledge about the system, must have proper knowledge about the inputs.		
Post-condition: The system should be able to update and change the information at any time.		
Alternate: If the information couldn't be found, an error message or solution should send to the admin		

Table 6: Functional Requirement Manage Product Product

Name of the function: Manage Categories

Function: Manage Categories		
Input: Product, brand, supplier details.	**Process Activities:** Add, update or delete any product details	**Output:** Show updated product list.
Precondition: Must be logged in to their admin account, must have proper knowledge about the system, must have proper knowledge about the inputs.		
Post-condition: The system should be able to save the information, The system should be able to update and change the information at any time.		
Alternate: If the information couldn't be updated, an error message or solution should send to the admin		

Table 7: Functional Requirement Manage Categories

Name of the function: Generate Report

Function: Generate Report		
Input: Clicks generate report	**Process Activities:** Generate a summary report	**Output:** Show the report
Precondition: Must be logged in to their admin account, must have proper knowledge about the system, must have proper knowledge about the inputs.		
Post-condition: Admin should be able to download the report.		
Alternate: If the information couldn't be generated, an error message or solution should send to the admin		

Table 8: Functional Requirement Generate Report

Non-Functional Requirements: A non-functional requirement is one that describes criteria rather than specific behaviors that can be used to evaluate how a system performs. Functional requirements, which specify particular behavior or functions, are contrasted with non-functional requirements.

- Usability Requirements: The system should be easy to understand and should take less time to reach goals. User should be able to easily operate without any help.

- Security Requirements: System should be protected from unauthorized access. Regular database backups can be created which mitigates the risk of losing sensitive information due to malicious attacks or data corruption. To further increase security, the backup can be stored and encrypted in a separate server so that the data is recoverable and safe if the primary database server gets compromised or remains inaccessible.

- Reliability Requirements: It should save and update data correctly, be able to fetch correct data from the database as well. The system should be reliable as the probability that an error will occur for a specified number of inputs under specified input conditions in a specified time interval will be very low. The system should be fully serviceable as it will consistently give correct intended outputs for each of its input functionalities.

- Availability Requirements: The system will be functional and work almost all of the time. A flexible regular maintenance schedule will be set up to check for any vulnerabilities. Possible measures such as minimizing server overload can be taken to further increase the availability of the system.

- Performance Requirements: The system should be responsive and user friendly. The system shall respond to a request in less than 10 seconds. The response time shall be measured from the request for a page to when the last bit required to render the page is returned. Backend response times will be measured using the application server log files.

5.4 Product Features

Architecture

Any structure's framework is defined by its architecture. To illustrate how a structure will stand, it is mapped. The framework of a website, including how it will function, how data will be moved, and where it will be stored, is defined by the website architecture. We can refer to the project's architecture in order to talk more specifically. The front end of the website can be viewed and used by users. The front end receives requests or commands from users and sends them to the web server, which then retrieves and stores the requested data from the file system and database and sends it back to the front end for users to use.

Chapter 6

Results & Analysis

6.1 Planning and Implementation

The project started by conducting a requirement analysis. The results from the requirement analysis then were the basis of our planning stage. The requirement analysis result were previously mentioned. To simply put it, our application is made as the requirements were mentioned. The system is user friendly and reliable. The designs were made according to the requirements.

6.2 Test Results

The testing will allow us to cross check our system and it's requirements. A software testing strategy includes methods for creating software test cases into a well-thought-out series of steps that lead to the creation of useful software. Testing is a group of activities that can be planned out and carried out in a planned way. Program testing strives to verify software quality using techniques that may be inexpensively and successfully applied to systems.

The IT store management system is going to be very helpful in removing the hassle of manual info collection of Hardware and Software needs, and making things easier for the employees as well. There were different types of tests conducted to assure the quality of the software. Element testing was the first. While implementing every element was tested if it does what it was suppose to do. After the implementation unit testing was done to assure the system was working properly and the bugs were found and solved.

Chapter 7

Project as Engineering Problem Analysis

7.1 Sustainability of the Project/Work

The creation of long-term software has been one of the most important difficulties in the field of web application software development. In order to ensure that future generations will be able to meet their own requirements, sustainable development aims to meet present demands while preserving the health of shared systems and the environment. To make the program more durable, regular system maintenance is carried out. Everything has moved toward a more digital approach. It is understandable that "IT Store Management System" is very sustainable given the current unsafe circumstances and people's reliance on the internet.

7.2 Social and Environmental Effects and Analysis

Despite only used for companies businesses, the IT store management system might have certain social implications. Every action taken by the business and its personnel is recorded by this system. The system will keep track of the resources of the employees. Admin may quickly learn what employees do, what functions well, and what the business needs. Based on records, admin may quickly determine which resources are most and least needed for the business. When all of the resources are looked at, the business will become better, and ultimately, if the workers perform better, the business will reward them with additional perks. Databases can be used to safely store all data.

Regarding the environment, we won't need to use as much paper using this approach as we did in the past. So it's a terrific way to save paper. As is common knowledge, each year 17 billion cubic feet of trees are killed, with 60 percent of these being used to produce paper. Therefore, adopting this technology has a favorable effect on the environment.

7.3 Addressing Ethics and Ethical Issues

For all users, the system will be completely safe. No private data will be exposed from the database. We'll work hard to provide the highest level of security. Users alone are able to access their dashboard.

Chapter 8

Lesson Learned

8.1 Problems Faced During this Period

My first step into the working world, prepared to put new information into practice. If not adopted, at least observe how all that academic information is applied in the workplace. But I was not precisely sure what to anticipate or predict. We frequently just consider how important being hands-on is to maintain technical relevance. However, it's as crucial to understand the fundamentals of managing people. Bellow I listed few of the problems I faced during my internship.

- Time limit to learn: Typically, internships last only a few weeks. Since I undertake the most of the jobs without supervision, it was crucial that I make the most of my time to learn everything I can. In an effort to recall my experiences, I make it a point to learn something new every day. I now feel like I have everything I need to continue.

- Understanding teamwork: One of the main internship issues or challenges is figuring out teamwork because it differs greatly from university assignments in the real world. Miscommunication, incorrect interpretation of the true goals, and divergent viewpoints among team members are frequent and differ from the project group work I've completed.

- Over Absorption of Information: The information comes in so quickly that it is impossible to digest it all at once. It was difficult to process so much at once, learning about office, team, project etc.

- Time Management: Time management is crucial for balancing work, school, and personal obligations. The first step in a career is an internship. Late project submissions will not be tolerated by the supervisor during the internship. It was difficult to manage everything at once with sufficient efficiency.

- Performing the task: Tasks aren't enough guided or given directions. To understand how the supervisor wants the task to be done was challenging.

- Overload of Features:: A feature overload is when there are too many features present. This is why it's crucial to specialize.

- Overlooking the Task at Hand: The road to deployment may encounter setbacks. System failure could occur if cushion time is not planned for.

- Recognizing the workplace culture: Understanding & grasping the office culture takes time. Because organizational cultures differ from one office to the next. It is difficult to observe organizational behavior in such short amount of time.

8.2 Solution of those Problems

Solution to those problems are listed below:

- Absorption of Information: Keeping a diary and writing important things helped with this a lot. Looking the notes to find things afterwards helped a lot.

- Performing the task: Talking with the team did clearup lot of the confusion about performing specific tasks.

- Time Management: Adopting a well-organized lifestyle as a habit. It wan't something learned in a single evening. To improve self-management, I set goals and strive toward it.

- Time limit to learn: Primary role of an intern is to learn new things. Putting myself forward as a diligent and trustworthy worker I had to learn things fast.

Chapter 9

Future work & Conclusion

9.1 Future Works

We want to add more features to this application in the future, including:

- Customizable workflows: To handle this circumstance, the IT Store Management System should be able to adapt to change and put in place new workflows.

- Resource Request Summary: The system will give administrators access to a summary of assigned resources for each employee.

- Information archiving: A system that keeps a user's whole data should have an archiving system so that users who are dismissed, suspended, or retired are only partially removed from the system.

- Payroll system integration: To make the system more complete, we will integrate it with a payroll system that will allow all employees to access and download their resource request slips whenever they need to.

9.2 Conclusion

I worked on an IT store management web application throughout my internship. This method was created to streamline a procedure and update it. This management strategy is in place to increase workplace effectiveness.
The chance to work as a web application developer has been fantastic for me.

The three-month internship program I completed here was my introduction to the field of information technology. My time here taught me a lot about the job market and the development process. I now know how to manage various software requirements and the most effective development methodology.

Bibliography

1. Gawande, M.. (2022). Employee Record Management System. INTERANTIONAL JOURNAL OF SCIENTIFIC RESEARCH IN ENGINEERING AND MANAGEMENT. 06. 10.55041/IJSREM12629.

2. Choudhary, Sushil & Suman, Rajeev & Gupta, Niraj. (2014). Designing the Process of Stores Management for Implementing ERP in Manufacturing Organization: Case Study. ," Industrial Engineering Letters, International Institute of Science Technology & Education. 4. 49-66.

3. Miglisoft. "The Best Way to Create a Web Admin Dashboard for Your Projects." *HackerNoon*, 24 Dec. 2020, hackernoon.com/the-best-way-to-create-a-web-admin-dashboard-for-your-projects-xi3034yz.

4. Becker, Karen & Antuar, Nicholas & Everett, Cherie. (2011). Implementing an Employee Performance Management System in a Nonprofit Organization. Nonprofit Management and Leadership. 21. 255 - 271. 10.1002/nml.20024.

5. Wasson, Charles S.. "System Analysis, Design, and Development: Concepts, Principles, and Practices (Wiley Series in Systems Engineering and Management)." (2005).

6. Bell, Simon & Morse, Stephen. (2013). Rich Pictures: a means to explore the 'Sustainable Mind'?. Sustainable Development. 21. 10.1002/sd.497.

IT Store Management System

By

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Summer, 2022

Consent Form

The student modified the internship final report as per the recommendations made by his/her academic supervisor and/or panel members during final viva, and the department can use this version for archiving.

Asayed

(Signature of the Supervisor)

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