

Development of Arms Management System for BD ARMY

Israth Jarin

ID: 18103167

A Practicum Report submitted in partial fulfillment of the requirements for the
award of Bachelor of Computer Science and Engineering



Department of Computer Science and Engineering

College of Engineering and Technology

IUBAT – International University of Business Agriculture and Technology

Summer - 2023

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The Practicum has been examined and approved by

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Summer - 2023

Abstract

Development of Arms Management system is a web based Arms management system. The Platform will offer various function to ease up the working process. The application will also offer different modules. The application will consist of three types of users: Admin, Customer and Duty Officer. From the dashboard, the admin will be able to control the entire application. Customer and Duty Officer have some limited access. The web application is designed as per the requirements of the client. The application is developed in PHP Laravel for the backend functionalities along with MySQL as the database.

Letter of Transmittal

16th August,2023

The Chairman,
Practicum and Placement Board,
College of Engineering and Technology,
IUBAT – International University of Business Agriculture and Technology,
4 Embankment Drive Road, Sector 10, Uttara Model Town,
Dhaka 1230, Bangladesh.

Subject: Letter of Transmittal.

Dear Sir,

With due respect, I would like to approach you that it is a great opportunity as well as immense pleasure for me to submit this report titled "**Development of Arms Management System For BD ARMY**" for the fulfillment of my Practicum course.

It was undoubtedly a splendid opportunity for me to work on this project to actualize my theoretical knowledge and has an enormous exposure with the corporate culture of a renowned company. Now I am looking forward to your kind appraisal regarding this practicum report.

I shall remain deeply grateful to you if you kindly go through this report and evaluate my performance.

Sincerely Yours,

Israth Jarin
ID: 18103167
Program: BCSE

Student's Declaration

I am Israth Jarin, a student of BCSE - Bachelor of Computer Science and Engineering program, under the College of Engineering and Technology (CEAT) of International University of Business Agriculture and Technology (IUBAT) declaring that, this report on the topic of "**Development of Arms Management System For BD ARMY**" has been prepared for the fulfillment of the Internship Course CSC 490, which is the partial requirement of Bachelor of Computer Science and Engineering Degree.

The report and the project on "**Development of Arms Management System For BD ARMY**" is originally prepared by me. All modules & procedures of this project were made after proper inspection and as per the requirement of the project client.

It has not been prepared for any other purpose, reward or presentation.

Israth Jarin

ID: 18103167

Program: BCSE

Acknowledgment

In the name of ALLAH who is the most merciful and the most graceful. It's my pleasure to takethis occasion to thank afew people, who have assisted, encouraged, directed and supported us throughout our practicum program. First of all, I want to thank my parents, who have endowed their immeasurable-innumerable support and encouragement to attain this exquisite event of my life.Then I want to honor my respect **Prof Dr Abdur Rab**, Vice Chancellor of IUBAT-International University of Business Agriculture & Technology. Then I want to honor my respected **Prof. Dr. Utpal Kanti Das**, Chairman of Computer Science and Engineering Department.

My sincere and outmost thank goes to **Dr. Hasibur Rashid Chayon**, Associate Professor of Department of Computer Science and Engineering, IUBAT- International University of Business Agriculture and Technology. For his continuous encouragement and contribution gave me the courage, the determination needed to able to finish the Internship well. I will always remain thankful for the advice and suggestion provided my Supervisor **MD. Saidur Rahman**, Assistant Professor, IUBAT This report would not have been possible without the essential and gracious support of many individuals who encouraged me to complete this project on time.

Supervisor's Certification

This is to certify that Practicum report on "**Development of Arms Management System For BD ARMY**" has been carried out by Israth Jarin bearing ID: 18103167, of IUBAT – International University of Business Agriculture and Technology as a partial fulfillment of the requirement of Practicum Defense. The report has been prepared under my guidance and is a record of the accomplished work, carried out successfully. To the best of my knowledge and as per his declaration, no parts of this report has been submitted anywhere for any degree, diploma or certification.

Now she is permitted to submit the report. I wish her success in all of his future endeavors.

Md. Saidur Rahman,

Assistant Professor,

Department of Computer Science and Engineering,

IUBAT- International University of Business Agriculture and Technology

Department's Certification

On behalf of the Department of Computer Science and Engineering of IUBAT-International University of Business Agriculture and Technology, we, the undersigned, certify that this practicum report "**Development of Arms Management System For BD ARMY**" for the award of Bachelor of Computer Science and Engineering (BCSE) degree was duly presented by Israth Jarin (ID:18103167) and accepted by the department.

Md. Saidur Rahman,

Assistant Professor

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Chapter 01

Project Overview

1.1 Introduction

Arms management system refers to a set of procedures, tools, and technologies that a company use to keep track of and manage the Service Center. It can be utilized and implemented in a number of different ways, ranging from simple to complex. It relies on the needs and scale of the company, as well as the capabilities and utility of the management software. All businesses that deal with service need and benefit from vehicle service management software. It maintains track of all the vehicle servicing on its list and controls them.

1.2 Project Overview

Vehicle service management system is an application that can manage other service center under an organization or under an owner. The application consists of three type of user: Admin, Service Center and Customer. Admin is the controller of the whole process. Admin can add, delete, update category and brand and also can delete the customr and also can delete the service center pressing delete button and can see how many service center and customer are there. Admin can update brand and category also overall functionalities according to the need. Admin can generate the report for his own purpose. Service center have some access that can manage the service. Service center can add new service and also can set the price for the service. He also can update the customer service request also give the servieec to the customer. Customer can access from log in page and sign in with his account. Customer can access and can control only those function which are available to the customer. A particular customer can booking and update also delete the service request before approved by the servie center only ifthat user have the authority to do those actions.

1.3 Background of Study

Every service center have their systems which is controlling by the service center admin. But this project is to control all the service center under the platform admin or owner. This project was done in order to make easy for particular organization. The main advantage of this program is that it can show all service center under one platform at one place, which helps to customer to take the service from one system easily.

1.4 Objectives

1.4.1 Broad Objective

The objective of this project is to increase efficiency and make management easier. Here I tried to bring most critical necessities of a vehicle service management system and combined all the service center within a platform to make it stand out and make it useful for the user.

1.4.2 Specific Objective

1. To control various service center.
2. To provide accurate information about brand and categories.
3. To keep track of service center list.
4. Service center provide bill to the customer.

1.5 Methodology

The landing page will present the website with a log in and registration page. Here service center and customer can log in to their account to get access to the main frame. Admin can get his access to the main dashboard as well.

From the dashboard admin can handle the actions that are available. He can manage the user information. There is table section. Admin can view the list of user and can see which service center are available. Admin can add and manage categories, brand. Admin can see the service, category and also the brand list. Admin can edit the company profile. The Admin Dashboard is filled with such features to dynamically handle the whole website.

When Service center login to the system, can update his profile and also can create the service with proper description and also can set the price as well. Even any kind of booking request, service center owner can respond.

Customer can login to his profile and update it. He can request for booking and update and delete before service center take any action. Customer can get the report for his completed service and can print it also. For payment purpose, he can get the payment system option for payment.

1.6 Data Sources

Primary Data is collected from various vehicle service center to see how they operate and how they function. Which functions are more applicable and possible to achieve.

Secondary Data is collected from different web-based service center. Where I got ideas to create the new data.

1.7 Process Model

I followed the Waterfall Process Model for creating the project. The Waterfall Approach was the first SDLC Model to be widely used to ensure project success in Software Engineering.

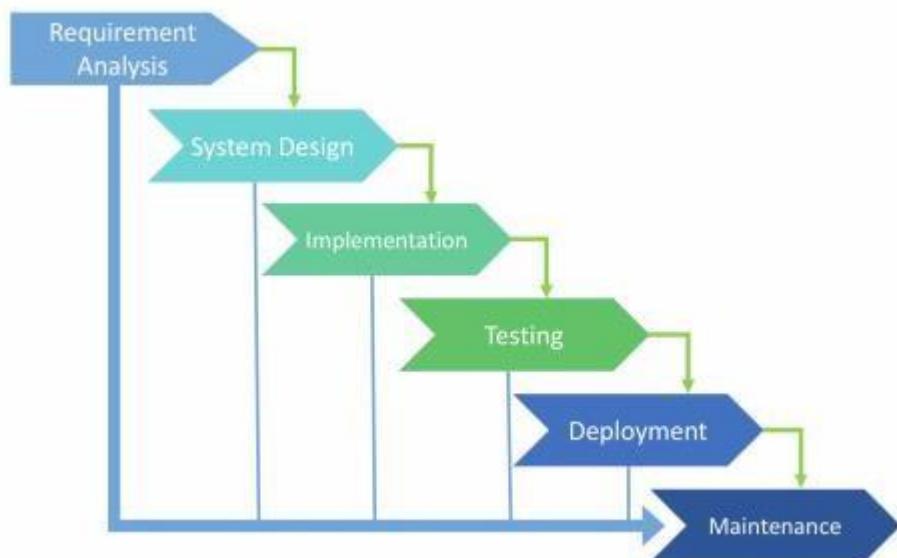


Fig 1.1: Waterfall Process Model

The sequential phases in Waterfall model are –

Requirement Gathering and analysis – During this phase, all possible requirements for the system to be developed are gathered and recorded in a requirement specification document.

System Design & Implementation – In this phase, the requirements specifications of the first phase are reviewed and the system design is completed. This engineering design helps you specify hardware and system requirements and define the overall system architecture.

Integration and Testing – All units developed during the implementation phase are integrated into the system after testing each unit. After integration, the entire system is tested for errors and failures.

Deployment of system – The goods is deployed within the client environment or released into the market once the functional and non-functional testing is completed.

Maintenance – Within the client environment, there are several challenges that arise. Patches are published to fix the problems. In addition, better versions of the items are created to support the merchandise. Maintenance is finished in order to provide these modifications to the customer's environment.

1.8 Reason for Choosing Waterfall Process Model

The main reason behind that to choose this model for my project that it's a simple porject and the requirement is clear for me to develop. For mini project it used a lot and the requirement are not chage frequently.

Some of the main advantages of the Waterfall Model are as follows –

1. Simple and straightforward to know and use
2. Easy to manage thanks to the rigidity of the model.
3. Each phase has specific deliverables and a review process.
4. Phases are processed and completed one at a time.
5. Works well for smaller projects where requirements are alright understood.
6. Clearly defined stages.

1.9 Feasibility Study

A feasibility assessment examines the likelihood of a project being completed successfully. A feasibility study is created to determine if the project, once completed, will serve the organization's goals for the amount of labor effort and hence the time spent there. A feasibility study allows the developer to forecast the project's long-term viability and thus its utility. The feasibility study of a system proposal is consistent with its feasibility: its impact on the organization, its ability to meet user needs, and its effective use of resources. Therefore, when an alternative application is proposed, a proof of concept is usually done before the development is approved. This document provides under design and covers feasibility List.

1.9.1 Technical Feasibility

The system must first be assessed from a technological standpoint. The feasibility study must be backed up by a high-level design of the system's requirements in terms of input, output, programs, and procedures. Following the discovery of an overview system, the inquiry must continue to suggest the type of equipment, required methods for constructing the system, and methods for operating the system once it has been designed.

At the same time, the procedure of utilizing this application is simple, ensuring that users are technically capable of achieving the goals.

The project, entitled Vehicle Service Management System, is technically feasible with the following that are readily, inexpensive, and well served.

SL	Hardware Requirements	Software Requirements
1	Desktop Computer	OS (Any), Browser (Any)
2	Internet Support	PHP, Laravel, JavaScript, HTML5, CSS4, Authentication, API, REST API, JSON
3	12GB system memory with 1TB HDD	MySQL

Table 1.1: Software and Hardware Requirements

1.9.2 Economic Feasibility

Given the economical feasibility of the system I proposed, I properly analyzed and maintained the time. The cost of the system is flexible for the company. Employee time costs are reduced if the system is fully maintained by the organization. The estimated cost of hardware is about 80,000 taka & software is free.

1.9.3 Operational Feasibility

Even though I had spoken with my customer multiple times regarding the project's update, he stated his appreciation for the newly constructed system and expressed a need for it. If users have expressed a desire for a system that is available more of the time, is more efficient, and is more accessible, the chances are that the requested system will be employed ultimately. As a result, my project is developmentally realistic.

Chapter 02

Organization Introduction

2.1 Organization Introduction

Organization Overview Kodeeo Ltd. is a Bangladeshi firm that offers full-featured web solutions, software development, mobile applications, graphic and multimedia, domain hosting, and digital marketing services. Its core consists of highly trained designers and developers with more than five years of experience in a variety of intricate designs and development. With services including web design and development, mobile app design and development, software development, SEO, and social media designing and development, Kodeeo Ltd. has pleased its customers. In every area of our operations we work hard in understanding the Client's requirement and providing the Kodeeo Ltd solution. We firmly believe in the philosophy of 'Our vision is to make every youth skilled & employed'. We take pride in a team of highly qualified, skilled and motivated Professionals who are encouraged to lead, innovate and excel. Our team consists of top professionals who share a common vision and passion, providing our clients with critical insights and advice to succeed in today's competitive environment. We believe in delivering Expertise, Excellence Services through our experience and giving the highest best end use of services to our client. (Kodeeo Ltd). Organization Services Kodeeo Ltd. is a leading supplier provider of information technology services, including all types of creative and professional software, enterprise software integration, management information systems, e-commerce, game development, web development, and mobile app solutions

2.2 Organization Services

Kodeeo functions as a vendor enterprise for select businesses, including Skill-Interior. Kodeeo primarily offers the following core services:

Business Analysis and Consultancy

2.2.1 Software Development

2.2.2 Digital Marketing and Content Creation

2.2.3 Integrated Campaign

2.2.4 Maintenance and Support

2.3 The Vision

Web Development :

At Kodeeo Ltd, our primary focus revolves around the creation of websites that embody search engine friendliness, aesthetic appeal, and interactivity. Recognizing the undeniable significance of a strong online presence and the abundant marketing prospects offered by the digital realm, we understand the indispensable role that a well-crafted website plays. As we embark on the journey of designing and developing your website, our adept professionals meticulously consider key facets such as user-friendly navigation, consistent design language, high-caliber content, adherence to timelines and budgetary constraints, and robust backend support.

Mobile Application Development :

Our prowess extends to the realm of mobile application development, where our team of expert engineers thrives. These seasoned professionals boast a wealth of experience in constructing versatile mobile applications catering to diverse industries. With a rich history of over five years working extensively on both Android and iOS platforms, our engineers are well-equipped to deliver excellence. Our specialization lies in native Android development, ensuring swift app responsiveness and unparalleled quality. We not only conceptualize and design but also bring your ideas to life through a meticulous process encompassing planning, building, testing, and seamless deployment.

Digital Marketing :

In the ever-evolving digital landscape, Kodeeo Ltd emerges as a comprehensive solution provider in the realm of digital marketing. Our array of tailored packages is meticulously designed to position your company at the zenith of the online world. Digital marketing serves as the bedrock of business success, and we understand its pivotal role in brand promotion. Our efforts focus on amplifying your visibility to potential customers across the digital spectrum. A heightened online presence paves the path toward achieving your business objectives. As a full-service digital agency, Kodeeo Ltd caters to an eclectic clientele spanning from esteemed corporations to pioneering startups.

2.3 Location and Contact

House 15, Road-10 A, Sector 11, Dhaka 1230, Bangladesh.

Phone: +88 01854-969657

Email: info@kodeeo.com



Figure 1.1 Organizational Location

2.4 Organization Vision

Kodeeo Ltd.'s vision is to empower young people and build a successful IT business in a digital Bangladesh. Their mission is to become one of the top leading IT companies in Bangladesh. Through \ the creative use of technology, Kodeeo Ltd. gains a competitive edge and increases operational \ effectiveness and efficiency.

2.5 Organization Mission

Kodeeo Ltd. was established as a one-stop shop for a skills development platform. Client needs are satisfied in respect to their attributes thanks to their services and the excellent staff behind them.

2.6 My Position in this Organization

I am an intern developer to this organization. I am guided by a supervisor in this organization. He is very helpful and informative. I have really learned a lot from him. I have successfully completed my project in time. It was only possible by the guidance of my supervisor. It was also a big experience to maintain the office time for me. I also uphold the organization's other guidelines. I'm glade to be a part of this office. It's definitely helped me get ready for the start of my profession.

2.7 Organization Structure

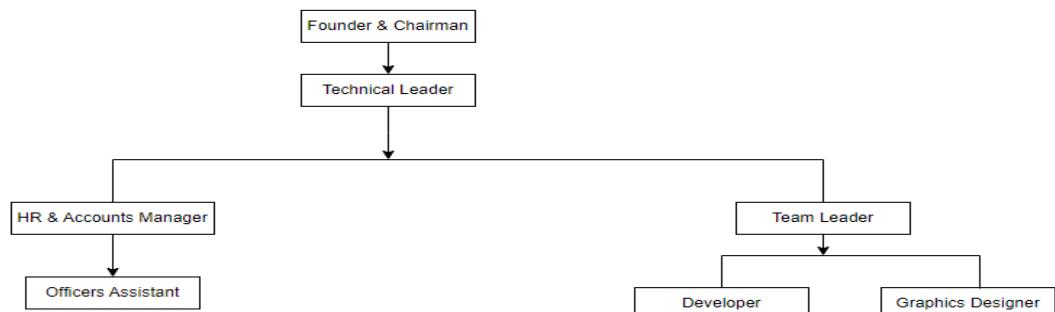


Figure 1.2 Organization structure of kodeeo (www.kodeeo.com)

Chapter 03

Requirement Engineering

3.1 Requirements Analysis

Requirement analysis serves as a critical juncture within the realm of software engineering, bridging the gap between system engineering and system design. This pivotal task empowers software developers to delineate and construct comprehensive models encompassing information, functionality, and behavior domains targeted by the software.

As the foremost stage in the software development process, requirement analysis entails an array of responsibilities. These encompass the identification and definition of the prerequisites and criteria essential for the creation of a new or refined product. This phase lays the foundation for the subsequent stages of development, ensuring that the software's eventual construction is rooted in a thorough understanding of user needs and system functionality.

There are 6 phases which is described below:

Requirement Initiation: My project entitled “Arms Management System for BD ARMY”.

Requirement Elicitation: Communicating consider all of their demands, and ensure that they grasp the new systems' implications. I also attempted to comprehend the user's requirements as well as the system's limitations. I examined the work of the user. Mainly two works:

- Analyze the Requirement
- Recording User Requirements

Requirement Elaboration: This is the process of gathering information about the demands and restrictions of users. How the system's entities will interact with one another.

Requirement Negotiation: Here we negotiate with the customer regarding the cost of software and other equipment provided to the system.

Requirement Specification: The behavior of the system to be developed is described in detail in a software requirements specification (SRS). At this point, I described the manpower and technology needs for the system's deployment.

3.2 Requirement Engineering

Requirement is the technical field of creating user requirements and specifying software systems, as the name implies. Requirements engineering has many definitions. However, they share the idea that requirements consist of understanding what the requirements mean from a design perspective.

There are four type of requirement:

1. User Requirements
2. System Requirements
3. Functional Requirements
4. Non-Functional Requirements

3.2.1 User Requirements

Here user requirements I have taken under consideration while doing ‘Vehicle service management system’. The user requirements are:

1. There should be an admin login page.
2. Admin can login.
3. Commander can login.
4. Duty Officer can login.
5. Admin can manage the Arms types.
6. Admin can manage the Arms Stock.
7. Commander can login for give firing order.
8. Duty Officer can login for specific purpose.
9. Admin can take action against damage stock and stock.
10. Commander can view the Stock.
11. Commander can view the Arms types.
12. Commander can view the Arms setup.
13. Commander can provide billing report to the vendor.
14. Commander center can update profile.
15. Commander can login.
16. Duty Officer can login.
17. Duty Officer can view the notice only.
18. Admin and Duty Officer can print report.

3.2.2 System Requirement

1. System can provide Commander info.
2. System can provide Duty Officer information.
3. System provide the available stock list.
4. System provide the list of tables if they are available or not
5. System provide the list of all Arms types information.
6. System provide the list of all Arms setup information.
7. System provide the list of all Sailors information.
8. System provide the list of all Vendors information.
9. System provide the list of all Purchases information.
10. System provide Damage stock list.
11. System provide purchases information.
12. System provide a reports.
13. System should be able to edit, add and update all the given information.

3.2.3 Functional Requirement

I

1. Admin manage all the Arms types Category.
2. Admin manage all Arms setup Category.
3. Admin manage all Soldiers.
4. Admin manage all Damage Stock.
5. Admin manage all Stock.
6. Admin manage the commander and duty officer.
7. Admin edit his own info.
8. Commander manage the firing order.
9. Duty Officer manage the stock.
10. Commander should be able to edit ,update information.
11. Commander should be able to edit his own info.
12. Duty Officer should be able to edit his own info.
13. Commander should be able to view all the arms types, arms setup, stock, damage stock.

3.2.4 Non-Functional Requirement

1. Production Requirements: Arms management system should be available in pc as well as running on any OS.
2. Organizational Requirements: Only admin can add or remove user, Stock and Damage Stock, Purchases, Soldiers, Arms types.
3. External Requirements: System should be trustable for ensuring complete privacy for all of its users.

3.3 Use Case Diagram

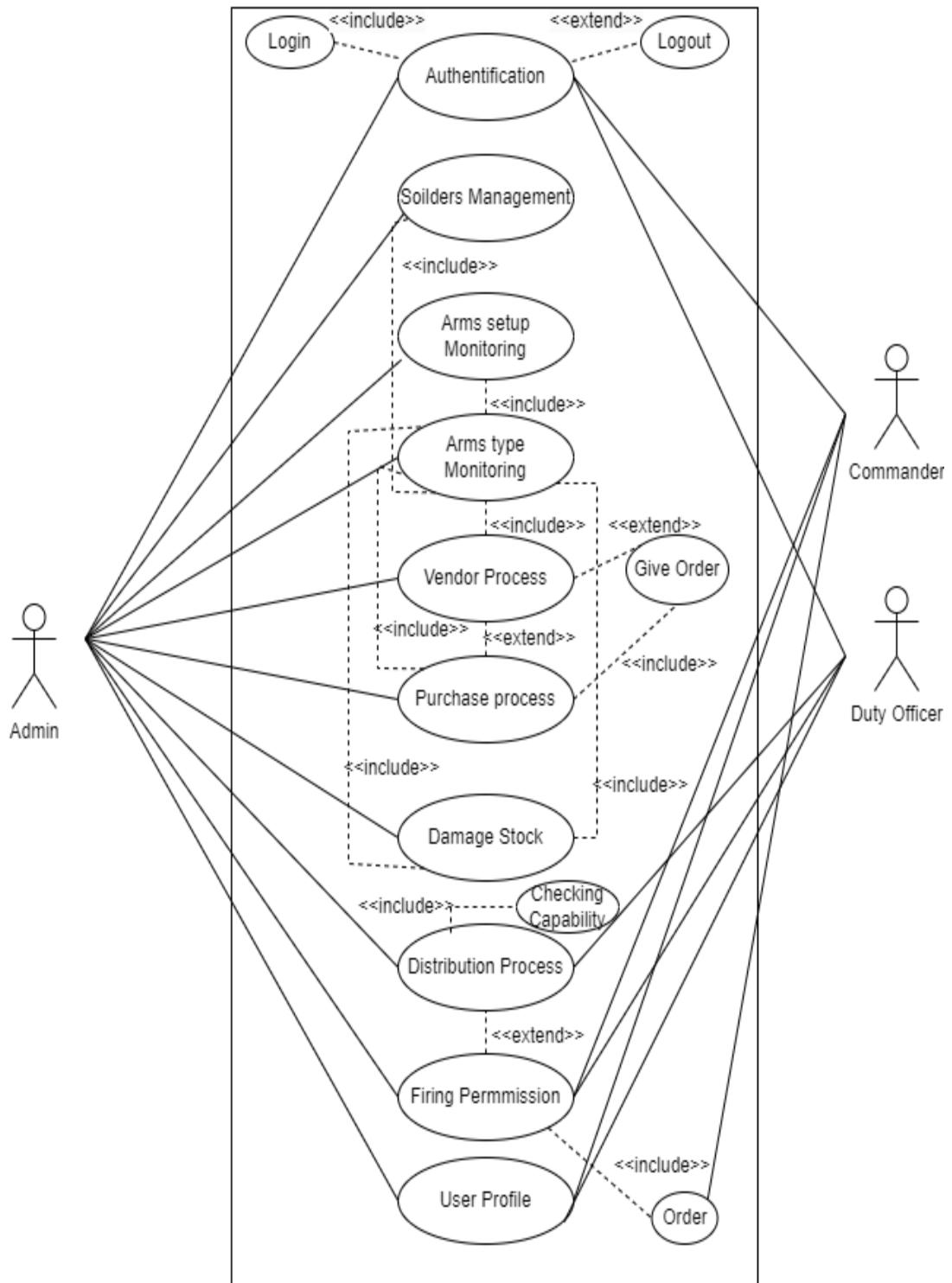


Fig 3.1: Use Case Diagram

Chapter 04

System Planning

4.1 Functions of the Proposed System

Functions of the proposed system “Arms Management System For BD ARMY” are given below:

SL	Functions	Synonym
1	Authentication (Login & Logout)	F1
2	Arms setup Monitoring	F2
3	Arms type Monitoring	F3
4	Soldiers Management	F4
5	Vendor Process	F5
6	Purchase Process	F6
7	User Profile Maintainace	F7
8	Damage Stock	F8
9	Distribution Process	F9
10	Firing Permission	F10

Table 4.1: Functions of the Project

4.1 System Project Planning

We have need to keep our mind that how much time need to finish our project. CPF's second activity is software project planning. Software project management begins with a series of activities collectively referred to as software project planning. Through the planning of the software project, we estimated the work to be done, the resources required, the elapsed time from start to finish, and finally analyzed the project to determine if it was feasible.

The following activities of software project planning that I have followed:

1. System Project Estimation
2. Function Oriented Metrics
3. Process Based Estimation
4. Task Scheduling
5. Project Schedule Chart
6. Cost Estimation

4.2.1 System Project Estimation

The accuracy of a software project estimate predicated based on a number of things.

They are-

1. Properly estimated the size of the product to build.
2. The ability to translate the size estimation into human effort, calendar time and money.
3. The degree to which the project plan reflects the abilities of the software team.
4. The stability of the product requirements and the environment that supports the software engineering effort.

The most significant aspect of the software project that I had to address was software size estimation. If the software size was not properly calculated, it would result in a variety of issues such as scheduling issues, budget issues, and so on.

4.2.2 Function Oriented Metrics

The following are the information domain values:

Number of external inputs (EI) – User inputs that provide software-specific application-related data are counted as input to distinguish them from requests.

Number of external inquiries (EQ) – An inquiry is described as an on-line input that results in the development of an on-line output in the form of a software response. Each enquiry was counted separately.

Number of Internal logical files (ILF) - Each logical master file was counted separately. The database table where the application modifies the form input.

Numbers of external interfaces files (EIF) - All machine-readable interfaces that previously sent information to another system were counted.

Functional Complexity: The complexity matrices are listed below:

Table 4.2: Complexity Metrics for External Input (EI)

EI	1-4 DETs	5-15 DETs	16 or more DETs
1 FTRs	Low	Low	Average
2FTRS	Low	Average	High
3 or more FTRs	Average	High	High

Table 4.3: Complexity Metrics for External Output and External Queries (EO / EQ)

EO/EQ	1-5 DETs	6-19 DETs	20 or more DETs
1 FTRs	Low	Low	Average
2-3 FTRs	Low	Average	High
4 or more FTRs	Average	High	High

Table 4.4: Complexity Metrics for Internal Logical File and External Interface File (ILF / EIF)

ILF/EIF	1-19 DETs	20-50 DETs	51 or more DETs
1 RETs	Low	Low	Average
2-5 RETs	Low	Average	High
6 or more FTRs	Average	High	High

Functional Component Complexity Weight Assignment

Table 4.5: Complexity Weight Assignment for Transaction Functions

Complexity	Transaction Function Types	
	EI/EQ	EO
Low	3	4
Average	4	5
High	6	7

Table 4.6: Complexity Weight Assignment for Data Functions

Complexity	Data Function Types	
	ILF	EIF
Low	7	5
Average	10	7
High	15	10

Identifying Complexity for Transition Functions

Table 4.7: Complexity Identification of Transition Functions

Transition Function	Fields/File Involvement	FTRs	DETs
Login (EI)	Fields: Email, Password Files: Users	1	2
Logout (EI)	Fields: Email, Password Files: Users	1	2
Profile Update (EI)	Fields: Name, Phone, Email, Address, Password, Image, Corps, ID Number Files: Users	1	8
Profile View (EO)	Fields: Name, Phone, Email, Address, Image, Corps, ID Number Files: Users	1	7
Arms Setup View (EO)	Fields: Name, Status, Specification Files: Arms Setup	1	3
Arms Setup Add (EI)	Fields: Name, Specification, Status, Image Files: Arms Setup	1	4
Arms Setup Update (EI)	Fields: Name, Specification, Status, Image Files: Arms Setup	1	4
Arms Setup Delete (EI)	Fields: Name, Specification, Status, Image Files: Arms Setup	1	4
Arms Type View (EO)	Fields: Type Name, Description, Status, Image Files: Arms Type	1	4

Arms Type Add (EI)	Fields: Type Name, Description, Status, Image Files: Arms Type	1	4
Arms Type Update (EI)	Fields: Type Name, Description, Status, Image Files: Arms Type	1	4
Arms Type Delete (EI)	Fields: Type Name, Description, Status, Image Files: Arms Type	1	4
Damage Stock View (EO)	Fields: Purpose, Submission Date Files: Damage Stock, Users	2	2
Damage Stock Add (EI)	Fields: Purpose, Submission Date, Amount Files: Damage Stock, Users	2	3
Damage Stock Update (EI)	Fields: Purpose, Submission Date, Amount Files: Damage Stock, Users	2	3
Damage Stock Delete (EI)	Fields: Purpose, Submission Date, Amount Files: Damage Stock, Users	2	3
Rank View (EO)	Fields: Name, Image, Status Files: Users	1	3
Stock View (EO)	Fields: Available Arms Name, Status Files: Users	1	2
Stock Add (EI)	Fields: Available Arms Name, Status Files: Users	1	2
Stock Update (EI)	Fields: Available Arms Name, Status Files: Users	1	2

Stock Delete (EI)	Fields: Available Arms Name, Status Files: Users	1	2
Authorized Officer View (EO)	Fields: Name, Image, Notice, Status Files: Users	1	3
Authorized Officer Add (EI)	Fields: Name, Image, Address, Email, Password, Role, Status Files: Users	1	7
Authorized Officer Update (EI)	Fields: Name, Image, Address, Email, Password, Role, Status Files: Users	1	7
Authorized Officer Delete (EI)	Fields: Name, Image, Address, Email, Role, Status Files: Users	1	6
Vendor View (EO)	Fields: Vendor Name, Address, Email, Phone Files: Users, Vendor	1	4
Vendor Update (EI)	Fields: Vendor Name, Address, Email, Phone Files: Users, Vendor	1	4
Vendor Delete (EI)	Fields: Vendor Name, Address, Email, Phone Files: Users, Vendor	1	4
Purchase View (EO)	Fields: Name, Amount, Description Files: User	1	3
Purchase Add (EI)	Fields: Fields: Name, Price, Amount, Description Files: User	1	4
Purchase Update (EI)	Fields: Name, Price, Amount, Description Files: User	1	4

Purchase Delete(EI)	Fields: Name, Price, Amount, Description Files: User	1	4
---------------------	--	---	---

Identifying Complexity for Data Function

Table 4.8: Complexity Identification of Data Function

Data Function	Fields/File Involvement	RETs	DETs
Users (ILF)	Fields: Name, Email, Phone, Address, Password, Image Files: Admin	1	6
Arms Setup (ILF)	Fields: Name, Status, Description, Image Files: Admin	1	4
Arms Type (ILF)	Fields: Name, Status, Description, Image Files: Admin	1	4
Damage Stock (ILF)	Fields: Purpose, Submission Date, Amount Files: Admin	1	3
Stock (ILF)	Fields: Available Arms Name, Status Files: Admin	1	1
Authorized officer (ILF)	Fields: Name, Image, Address, Email, Password, Role Files: Admin	1	6
Vendor (ILF)	Fields: Vendor Name, Address, Email, Phone Files: Admin	1	4
Purchase (ILF)	Fields: Name, Price, Amount, Description Files: Admin	1	4

Unadjusted Function Point Contribution

Table 4.9: Unadjusted Function Point Contribution (Transition Function)

Transition Function	FTRs	DETs	Complexity	UFP
Login (EI)	1	2	Low	3
Logout (EI)	1	2	Low	3
View Profile (EO)	1	5	Low	4
Update Profile (EI)	1	8	Low	3
View Arms Setup (EI)	1	4	Low	3
Add/Delete/Update Arms Setup (3 x EI)	1	4	3x Low	5
View Arms Type(EO)	1	4	Low	4
Add/Delete/Update Arms Type (3 x EI)	1	4	3x Low	5
Add/Delete/Update Damage Stock (3 x EI)	2	3	3x Low	5
Add/Delete/Update Stock (3 x EI)	1	2	3x Average	7
Add/Delete/Update Authorized Officer(3 x EI)	1	7	3x High	9
Add/Delete/Update Vendor (2 x EI)	1	4	2x Low	7
Add/Delete/Update Purchase	1	4	2x Low	5
Total				63

Table 4.10: Unadjusted Function Point contribution (Data Function)

Data Function	RETs	DETs	Complexity	UFP
Users (ILF)	2	7	Low	7
Arms Setup (ILF)	1	4	Low	7
Arms Type(ILF)	1	5	Low	7
Stock (ILF)	2	3	Low	7
Damager Stock (ILF)	2	3	Low	7
Authorized officer (ILF)	1	6	Low	7
Vendor (ILF)	1	6	Low	7
Purchase (ILF)	1	5	Low	7
Total				49

Total Degree of Influence (TDI)

Table 4.11: Degree of Influence

SL	GSC	DI
1	Data Communications	3
2	Distributed Data Processing	0
3	Performance	3
4	Heavily Used Configuration	2
5	Transaction Rate	2
6	Online Data Entry	3
7	End-User Efficiency	4
8	Online Update	0
9	Complex Processing	1
10	Reusability	0
11	Installation Ease	2
12	Operational Ease	2
13	Multiple Sites	0
14	Facilitate Change	0
Total		22

TDI (Range 0 to 70)

Influence size by +/- 22% = 22

Adjusted Function Point Calculation

$$\begin{aligned}VAF &= (0.65 + (0.01 * TDI)) \\&= (0.65 + (0.01 * 22)) \\&= 0.87\end{aligned}$$

Now,

UFP = UFP (Transition Functions) + UFP

UFP = 63 + 49

UFP = 112

The project is developed in PHP Laravel. Hours per Function Point of PHP is 15.5. Each person will work 8 hours per day.

So, Effects for PHP = AFP*Productivity

$$\begin{aligned}&\approx 112 \times 15.5 \\&\approx 1736 \text{ per hour}\end{aligned}$$

12 hour person/per day = 1736/12

Approximate 146 days

In a group, there are 2 members

$$\begin{aligned}&= 146/2 \\&= 73 \text{ days Working 25 days a month.} \\&= 73/25 \Rightarrow 2.92 \text{ months}\end{aligned}$$

4.2.2 Process Based Estimation

In this section I show that in which particular part take how much time & percentage to complete the whole system: The estimation table given below:

Activity	CC	Planning	Engineering		Construction		Implementation	Total
			Analysis	Design	Code	Test		
F1	0.32	0.02	0.163	0.065	0.197	0.118	0.045	0.46
F2	0.32	0.02	0.163	0.065	0.197	0.118	0.045	0.28
F3	0.32	0.02	0.163	0.065	0.197	0.118	0.045	1.1
F4	0.32	0.02	0.163	0.065	0.197	0.118	0.045	1.1
F5	0.32	0.02	0.163	0.065	0.197	0.118	0.045	1.38
F6	0.32	0.02	0.163	0.065	0.197	0.118	0.045	2.76
F7	0.32	0.02	0.163	0.065	0.197	0.118	0.045	1.66
F8	0.32	0.02	0.163	0.065	0.197	0.118	0.045	0.46
F9	0.32	0.02	0.163	0.065	0.197	0.118	0.045	1.1
F10	0.32	0.02	0.163	0.065	0.197	0.118	0.045	2.3
Total	0.46	0.28	1.1	1.38	2.76	1.66	0.64	9.2
Effort	5%	3%	25%	30%	10%	18%	7%	100%

Table 4.12 Process Based Estimation

4.2.3 Task Scheduling

When it comes to project scheduling, there are a few basic guidelines to follow. They are as follows –

Compartmentalization – The project needs to be broken down into manageable activities and tasks.

Interdependence – First need to determine the interdependence of each subdivided activity or task. Some tasks need to be run sequentially, while others can be run in parallel.

Defined responsibilities – Every scheduled task should be assigned to a specific team member.

Defined outcomes – Every scheduled work should have a clear goal in mind. Typically, the result is a work product or a portion of a work product.

4.2.4 Effort Distribution

The software development project utilizes the project estimating approach to determine the required number of project units. For allocation of effort, the 40-20-40 rule is followed, suggesting that 20% of the effort is dedicated to coding, 40% to backend testing, and the remaining 40% to frontend analysis and design. It should be noted that this rule serves as a general guideline.

Interestingly, in this particular project, the analysis and design phase has consumed 46% of the total development time, while coding accounted for 36%, leaving the final 18% for testing and support activities.

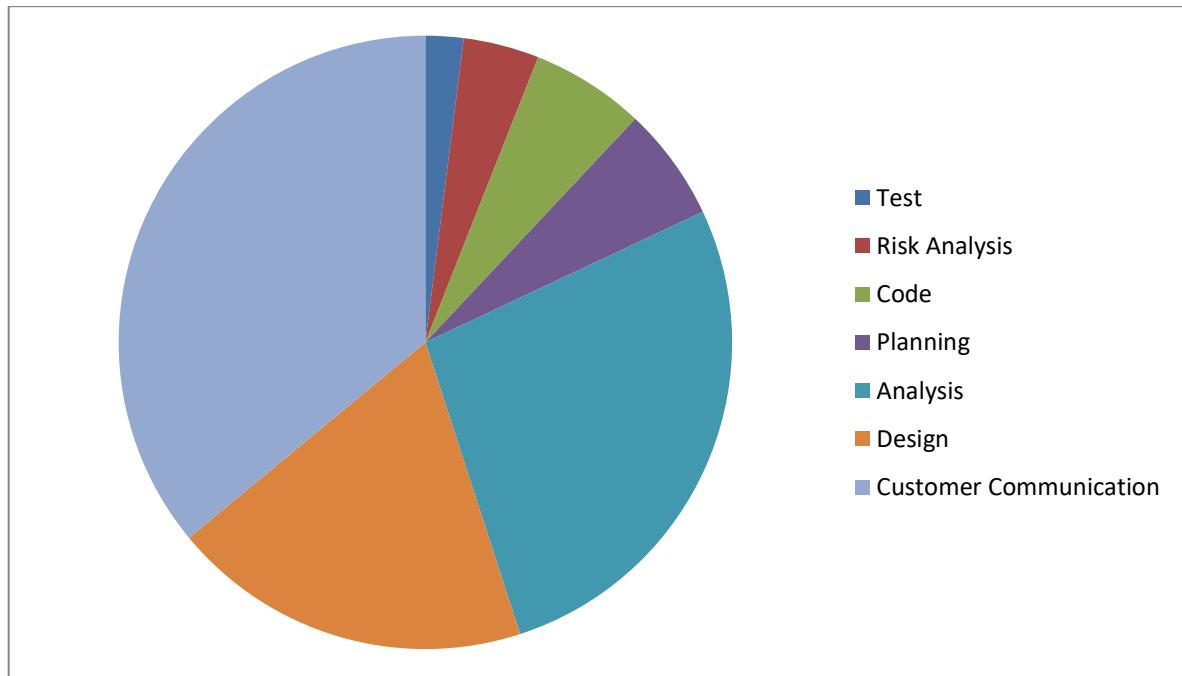


Table 4.13 Effort Distribution

4.2.5 Project Scheduling Chart

The following is a timeline for this project:

Table 4.14: Project Scheduling Chart

Week Activities	W 1	W 2	W 3	W 4	W 5	W 6	W 7	W 8	W 9	W 10	W 11	W 12	W 13	W 14	W 15	W 16
Requirements Analysis																
System Design																
Implementation																
Testing																
Deployment																

4.2.6 Cost Estimation

To estimate the cost for my project & several type of cost have to develop a system. Like software, hardware, personal & other cost have for a development a system.

4.2.6.1 Personnel Cost

Need to developed the project = 90

days Holiday = 30 days

Working days = 90-30 = 60 days

Per months to develop = 60/3 = 20

days Per day work = 8 hours

Working hours every month = 20*8 = 160 hours

Table 4.15: Personnel cost

Type	Members	Duration	Honorarium
Analyst & Designer	1	3 Months	20,000 BDT
Developer	1	3 Months	20,000 BDT
Tester	1	3 Months	10,000 BDT
Total			50,000 BDT

4.2.6.2 Hardware Cost

Cost of the computers that was used to complete the project:

Table 4.16: Hardware Cost

Device	Quantity	Price	Lifetime	Using Year	Deprecation Cost
Acer Desktop	2	38,000/ =	5 Years	3 rd Year	$3*(38,000*20\%) = 22,000 \text{ BDT}$
Total					33,000 BDT

4.2.6.3 Software Cost

Table 4.17: Software Cost

Description	Price
Windows OS	Free
VS Code Editor	Free
Others	Free
Total	0/=

4.2.6.4 Other Cost

Table 4.18: Other Cost

Description	Price
Electricity	8,000 BDT
Internet	5,000 BDT
Others	5,000 BDT
Total	18,000 BDT

4.2 Costing

Table 4.19: Accounts Table

Description	Cost
Personal Cost	50,000 BDT
Hardware Cost	33,000 BDT
Software Cost	Free
Other Cost	18,000 BDT
Total Cost	101,000 BDT

Chapter 05

Risk Management

5.1 Risk Management

In the Arms Management System project, we used risk management techniques to identify, mitigate, manage and control the risk that may occur during the process of software building or those that follows afterwards. We are attempting to identify the hazards that may arise throughout the project's development in this project. Additionally, attempt to come up with a means to avoid such risks, and if they do occur, devise a plan to mitigate the harm.

5.2 Risk Process Model

For Arms Management System these are the four steps we will deal with in risk engineering:

- Risk Identification
- Risk Analysis
- Risk Planning
- Risk Monitoring

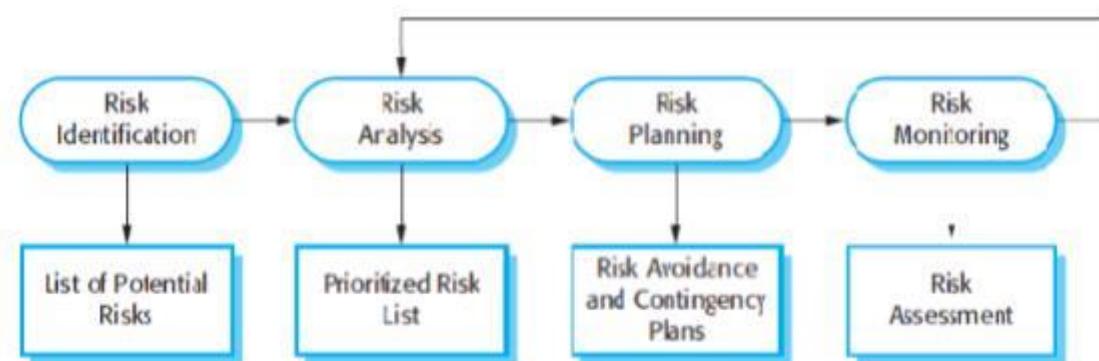


Fig 5.1: Risk Management Process

5.3 Risk Identification

Table 5.1: Risk Identification Table

Risk Type	Possible risks
People	<ul style="list-style-type: none">1) Team members may struggle to comprehend the provided requirements.2) During the project's progress, any member may become ill.3) It's possible that the group's required training will be unavailable.5) The group members' lack of experience.4) There is a lack of communication among the members of the organization.
Technology	<ul style="list-style-type: none">1) It's possible that the database won't be able to handle many entries at the same time.2) The system's fundamental modules may have dependency-related issues, which reduces the system's reusability.3) The processing power of the available workstations may not be sufficient to complete the job.
Requirements	<ul style="list-style-type: none">1) Requirements may change after the construction of fundamental features, necessitating a complete rewrite of the entire system's functionality.2) A requirement change may be proposed that affects the entire system components' internet work.
Estimation	<ul style="list-style-type: none">1) The project's estimated development time may be shorter than anticipated.2) The budgeted amount may not be sufficient for the entire project's development.

5.4 Risk Analysis, Planning and Monitoring

Table 5.2: Risk Analysis Table

Possible Risks	Probability	Status	Impact	Mitigation
1. Insufficient training or Staffs	15%	Did not Occur	Tolerable	Inexperienced members may be guided by more experienced staff.
2. Group members might be ill or unavailable	35%	Resolved	Tolerable	Distribute the workload among the group members who are available.
3. Estimated budget may be lower than required	40%	Did not Occur	Catastrophic	It's possible that reducing functionalities will be beneficial.
4. Estimated time maybe be less than required	55%	Resolved	Catastrophic	To ensure productivity, hold regular meetings.
5. Size of the software might be underestimated	25%	Resolved	Serious	Development should begin when the entire process has been thoroughly examined.
6. Defect repair is Understand	25%	Resolved	Serious	To detect bugs faster, code should be thoroughly documented.
7. Database may show slower execution	25%	Did not	Serious	Move to a faster database system if possible.

Chapter 06

Analysis Modeling

6.1 Analysis Modeling

Analysis modeling is the system's necessary diagram, which helps developers understand the workflow and create the project in a systematic manner. Analysis modeling consists of:

1. Activity Diagram
2. Data Flow Diagram
3. Entity Relationship Diagram

6.2 Activity Diagram

6.2.1 Activity Diagram for Admin

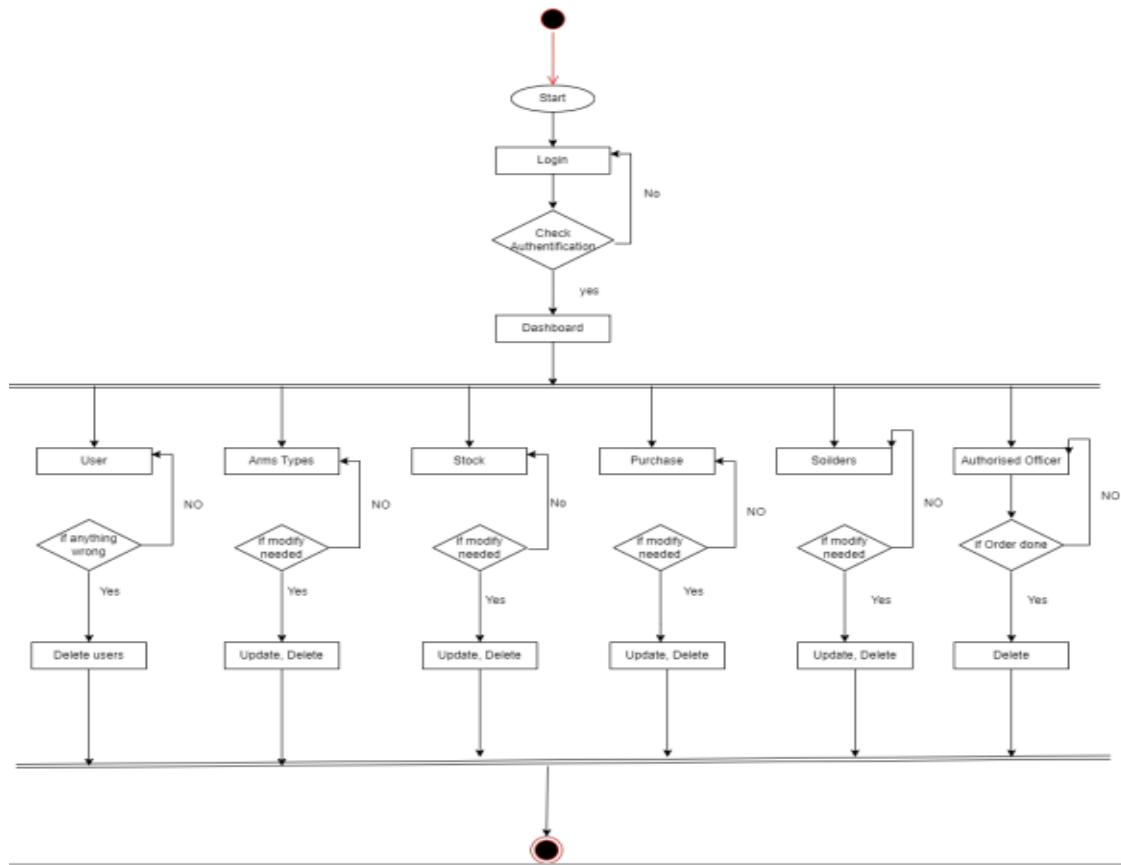


Fig 6.1: Activity Diagram for Admin

6.2.2 Activity Diagram for Commander

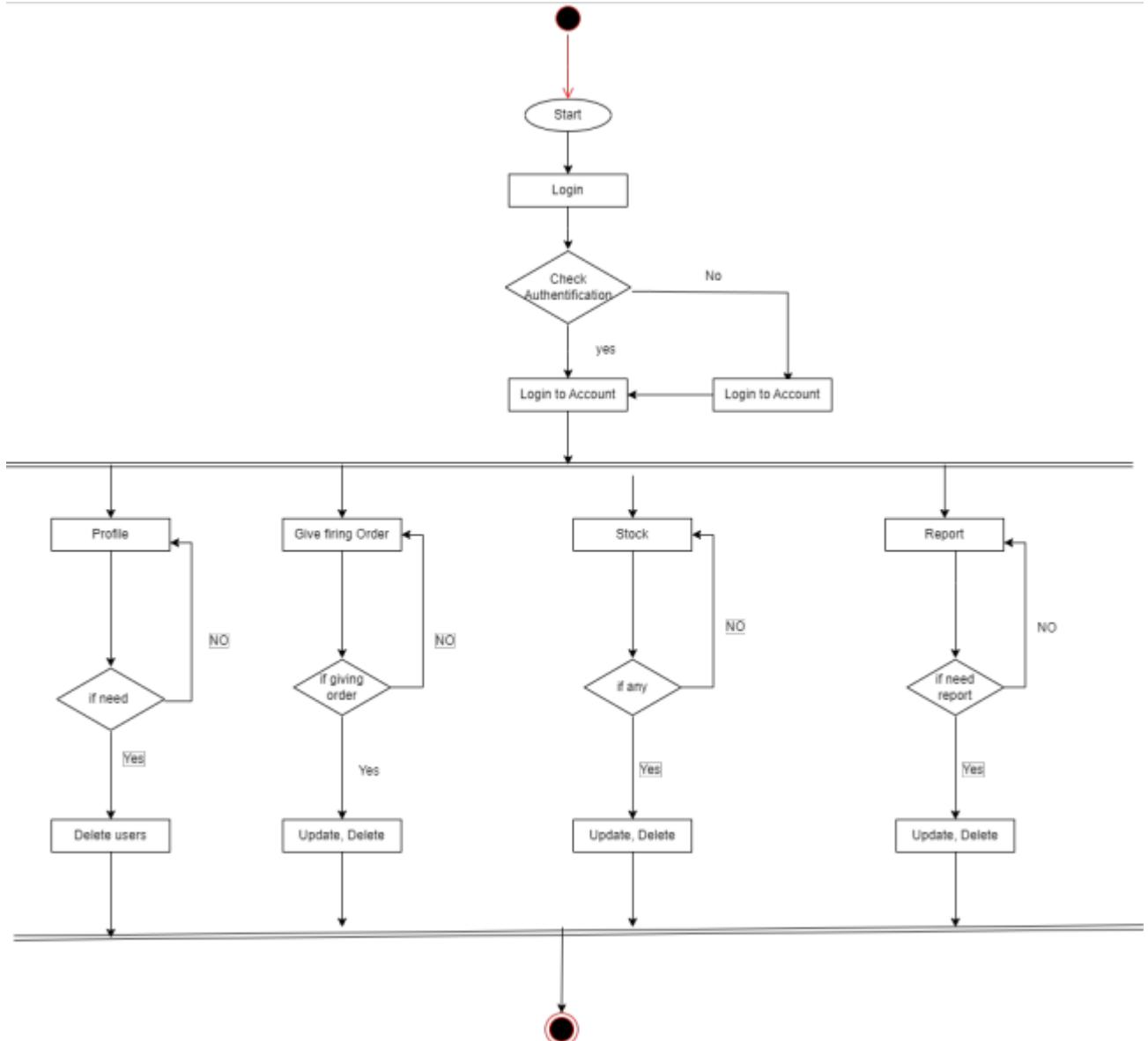


Fig 6.2: Activity Diagram for Commander

6.2.3 Activity Diagram for Duty Officer

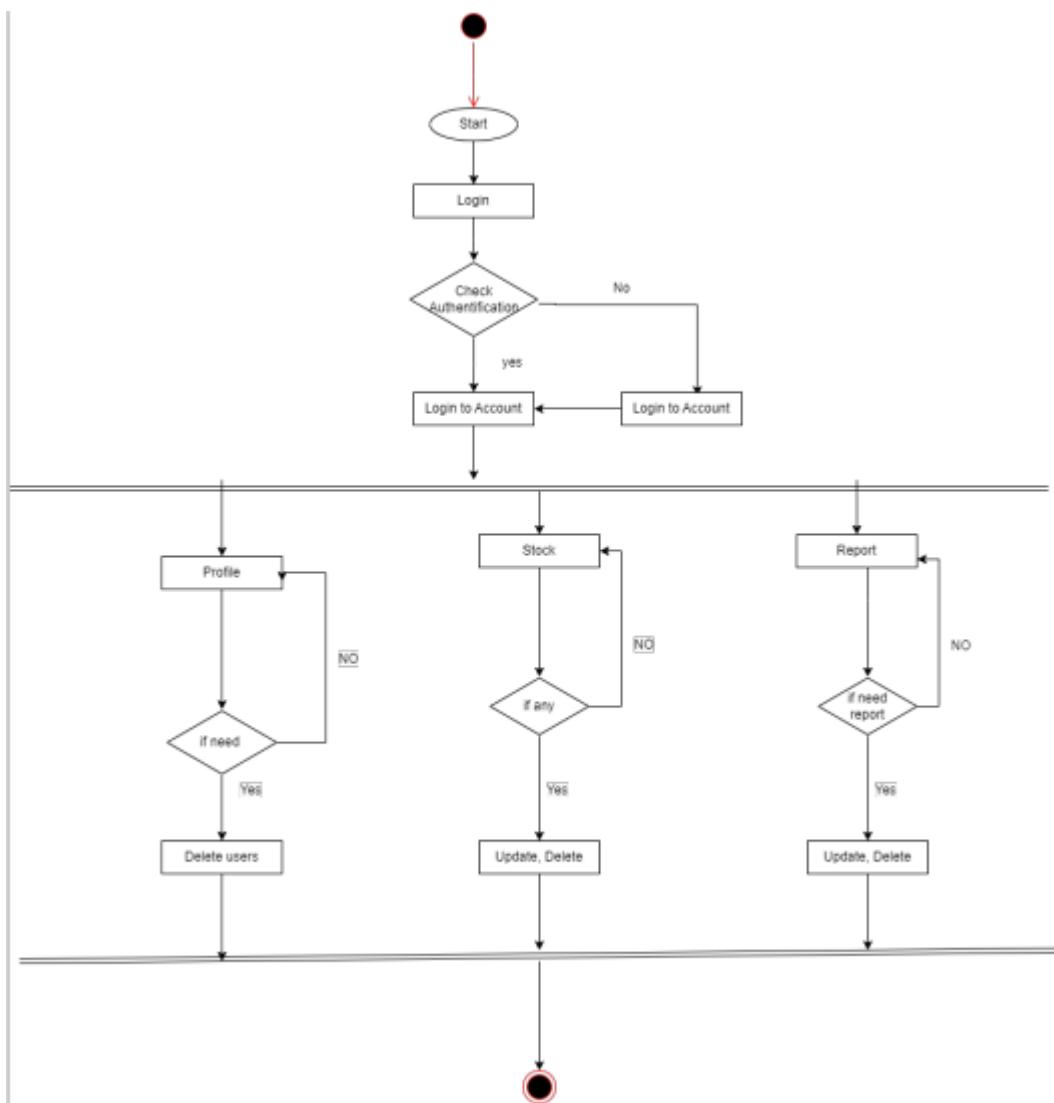


Fig 6.3: Activity Diagram for Duty Officer

6.3 Data Flow Diagram

6.3.1 Context Level DFD

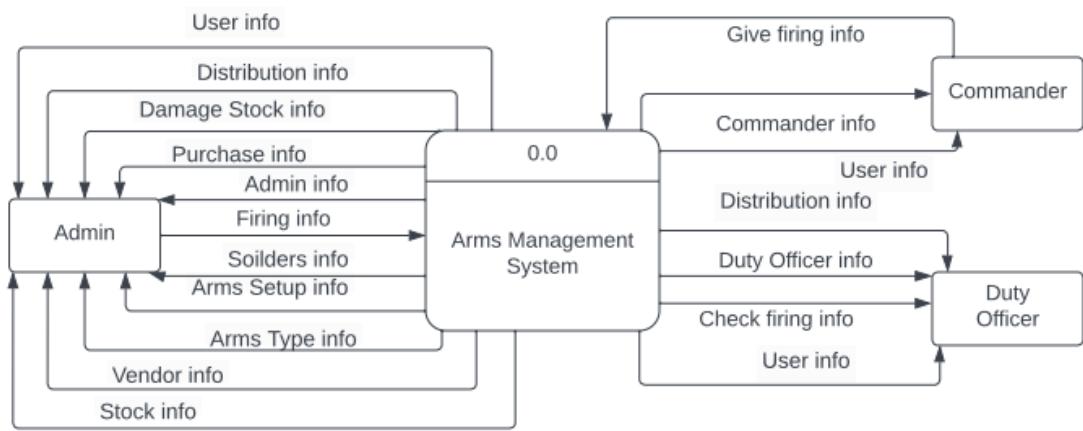


Fig 6.4: Context Level DFD

6.3.2 Level 1 DFD

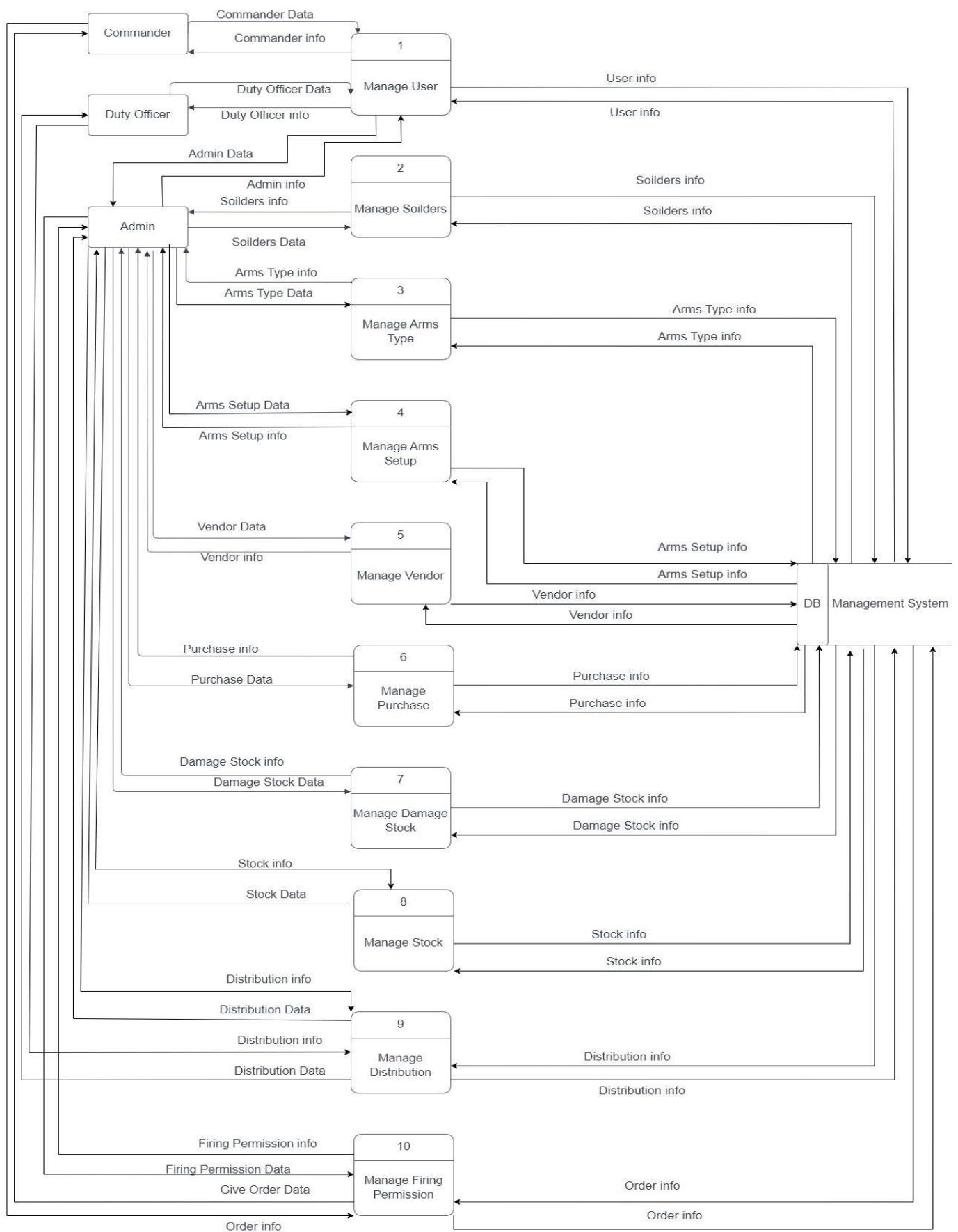


Fig 6.5: Level 1 DFD

6.4.1 Level 2 DFD Process 1(Manage User)

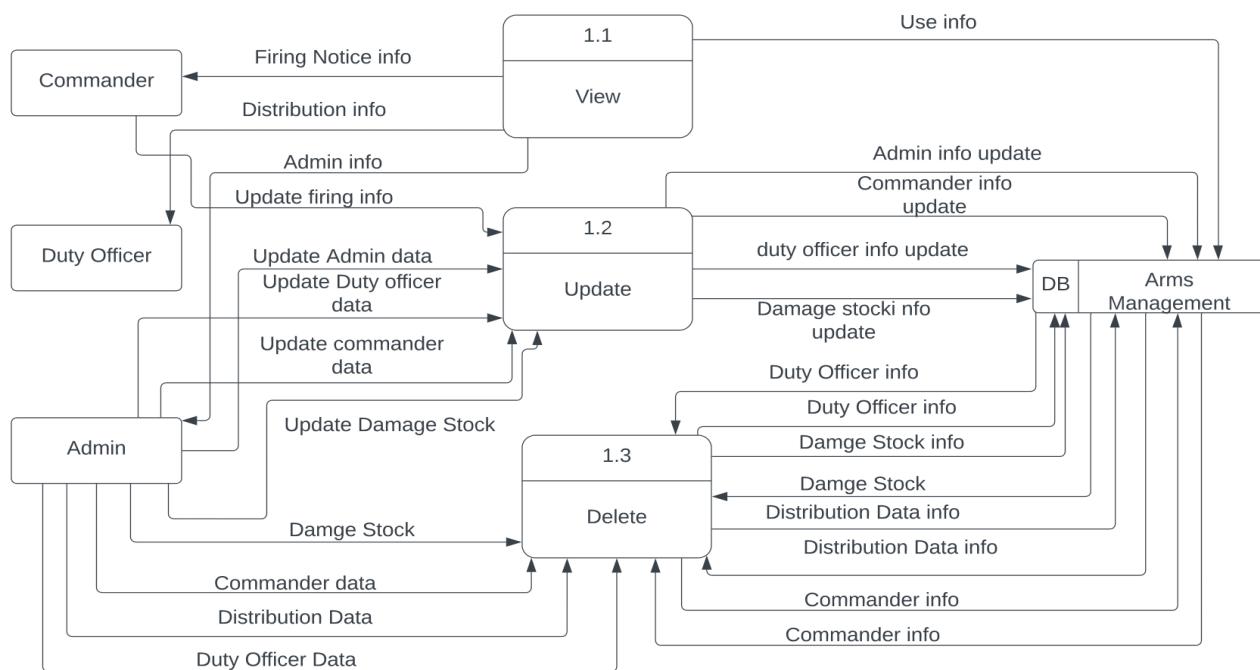


Fig 6.6: Level 2 DFD Process 1 (Manage User)

6.4.2 Level 2 DFD Process 2(Arms Types)

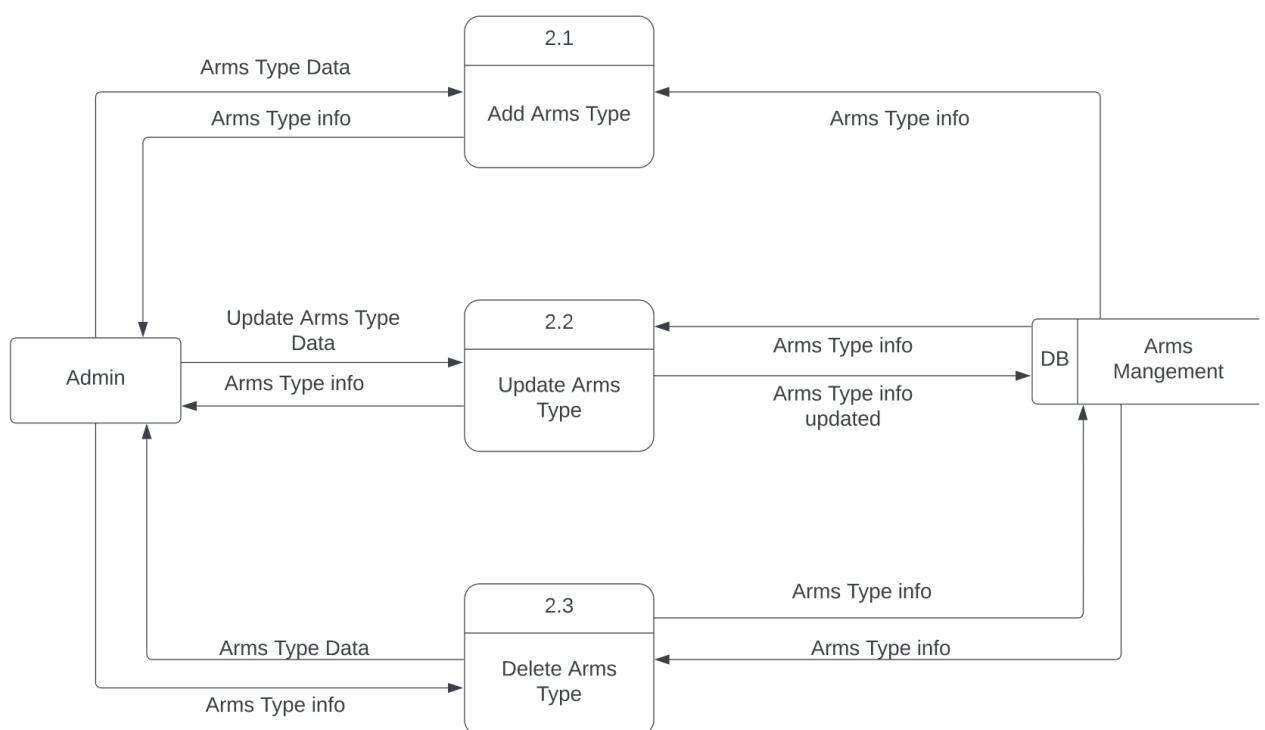


Fig 6.7: Level 2 DFD Process 2 (Arms Types)

6.4.3 Level 2 DFD Process 3 (Arms Setup)

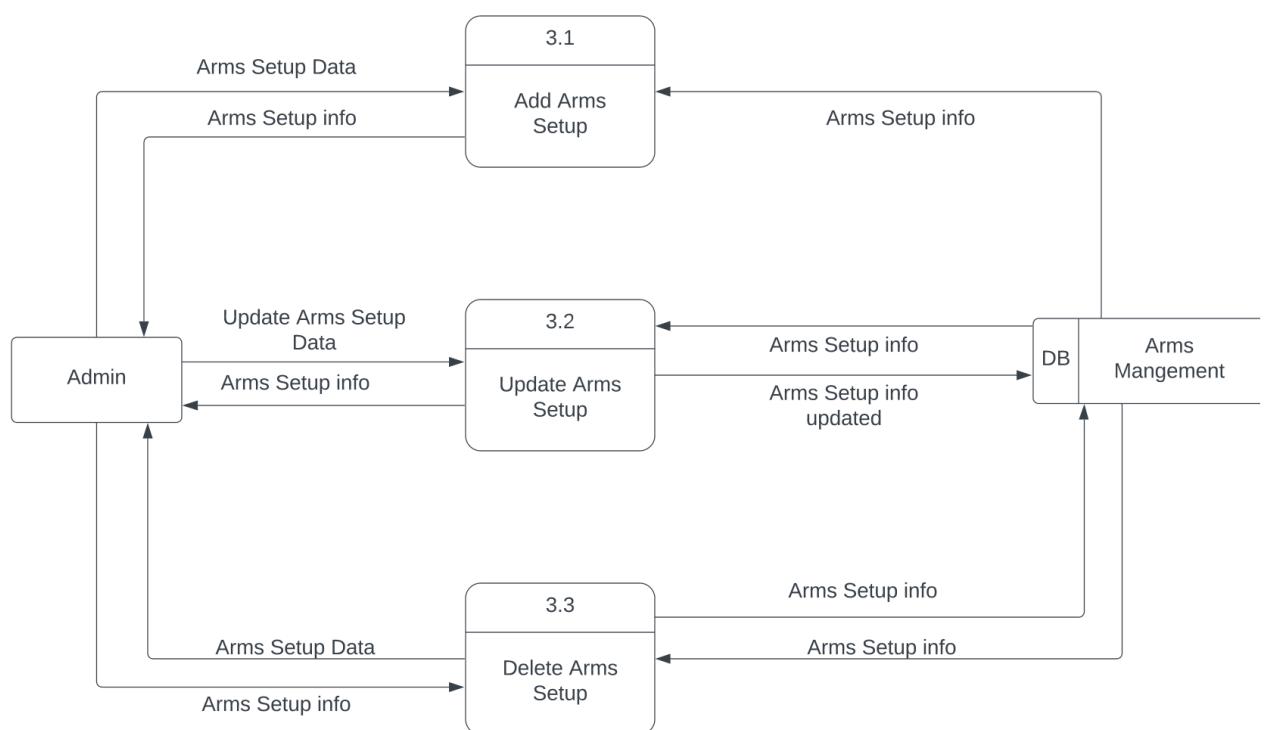


Fig 6.8: Level 2 DFD Process 3 (Arms Setup)

6.4.3 Level 2 DFD Process 4 (Vendor)

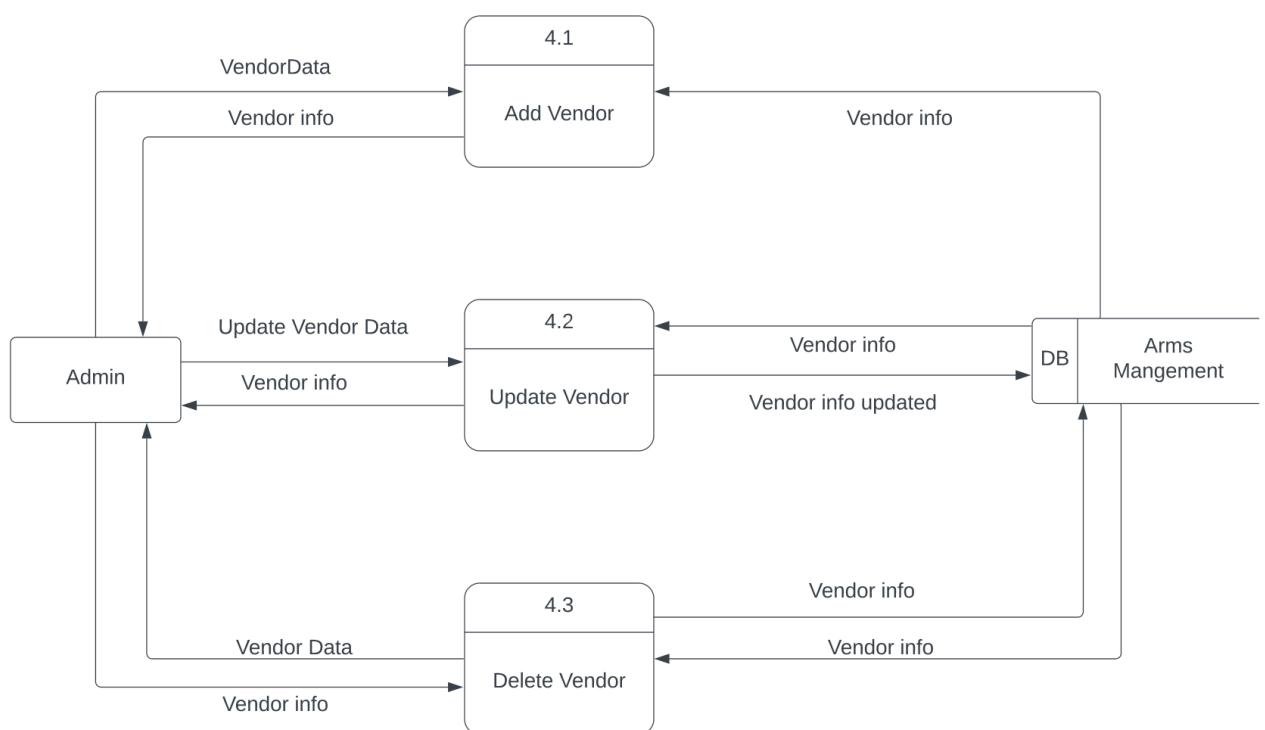


Fig 6.9: Level 2 DFD Process 4 (Vendor)

6.4.4 Level 2 DFD Process 5 (Purchase)

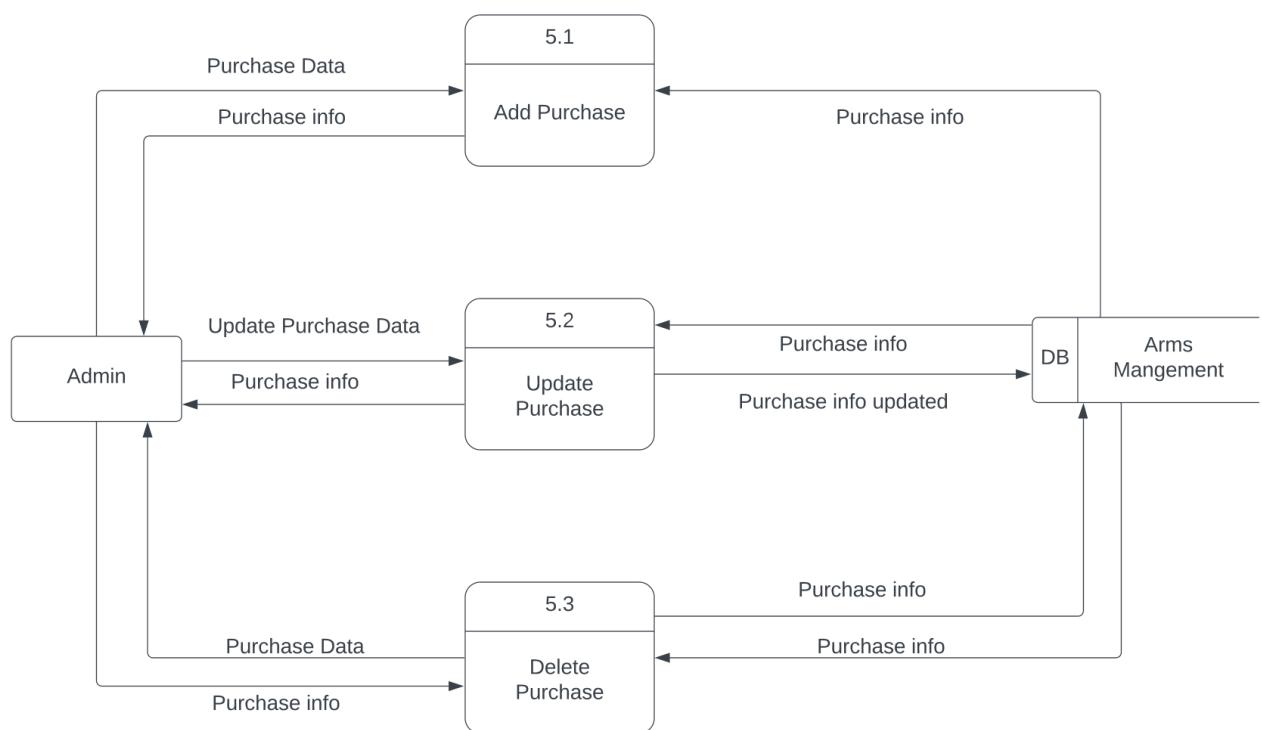


Fig 6.10: Level 2 DFD Process 5 (Purchase)

6.4.5 Level 2 DFD Process 6(Stock)

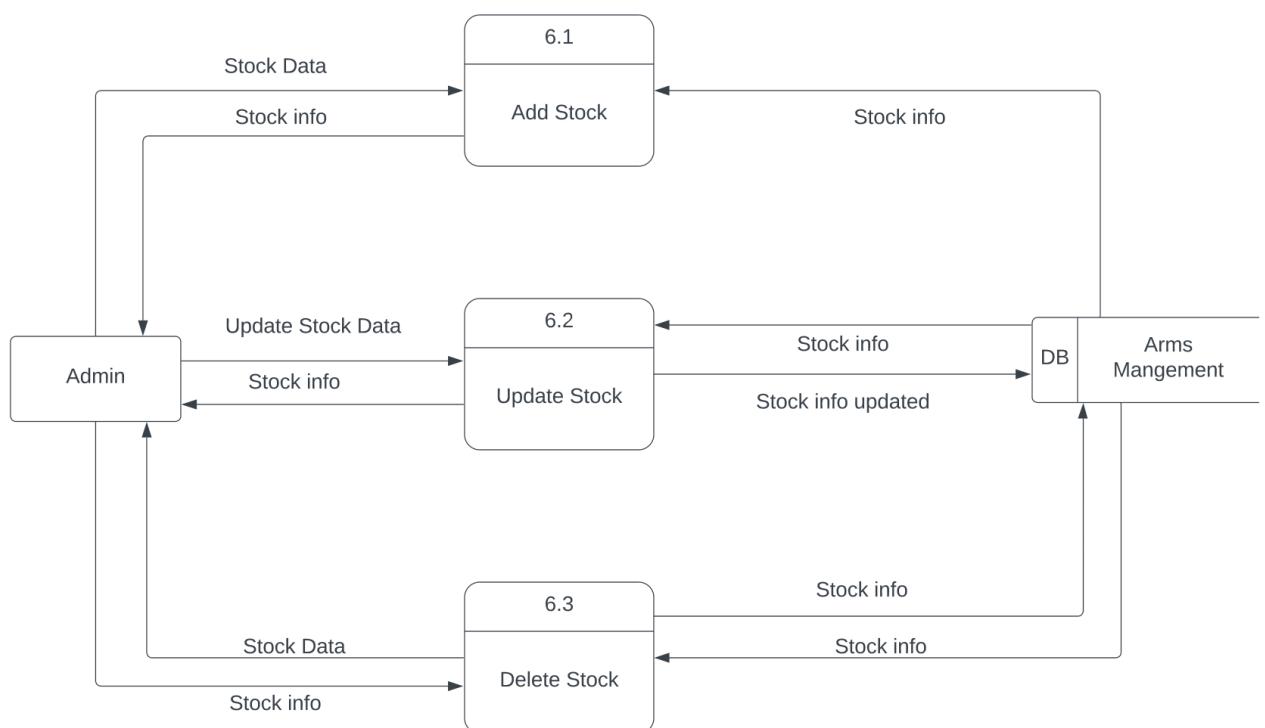


Fig 6.11: Level 2 DFD Process 6 (Stock)

6.4.6 Level 2 DFD Process 7 (Damage Stock)

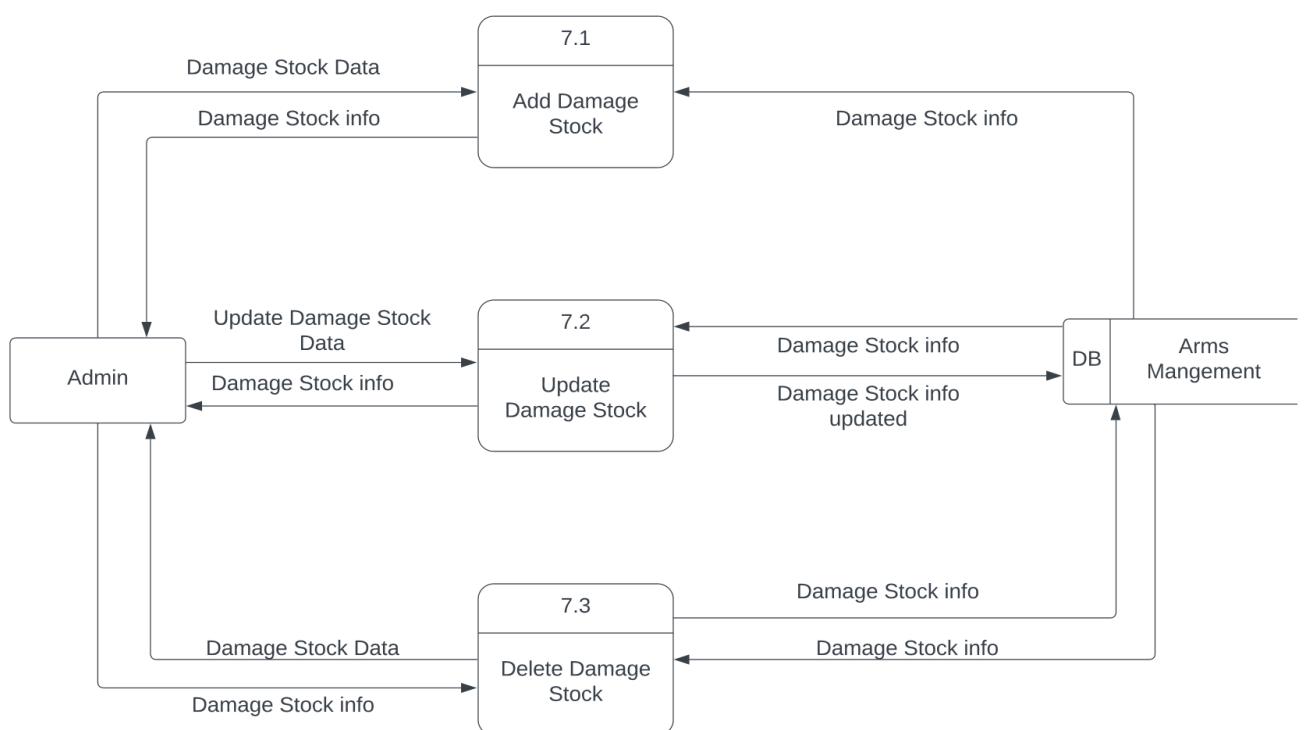


Fig 6.12: Level 2 DFD Process 7 (Damage Stock)

6.4.7 Level 2 DFD Process 8 (Generate Report)

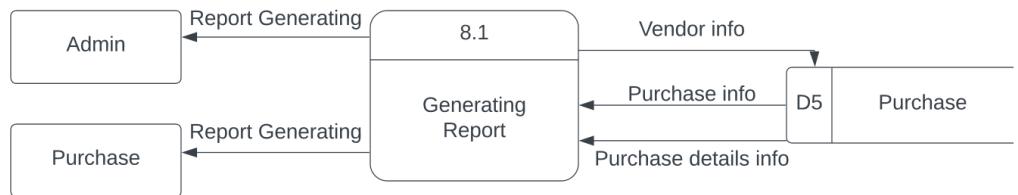


Fig 6.13: Level 2 DFD Process 8 (Generate report)

6.4.3 Level 2 DFD Process 9 (Generate Report)

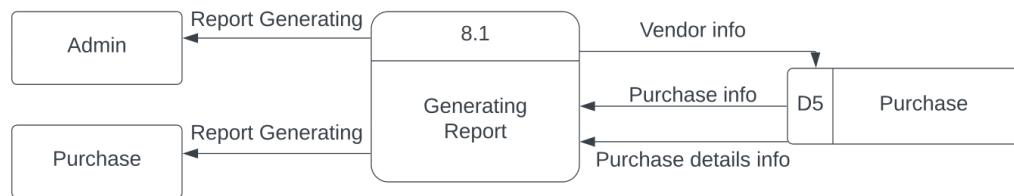


Fig 6.14: Level 2 DFD Process 9 (Generate report)

6.5 Entity Relationship Diagram

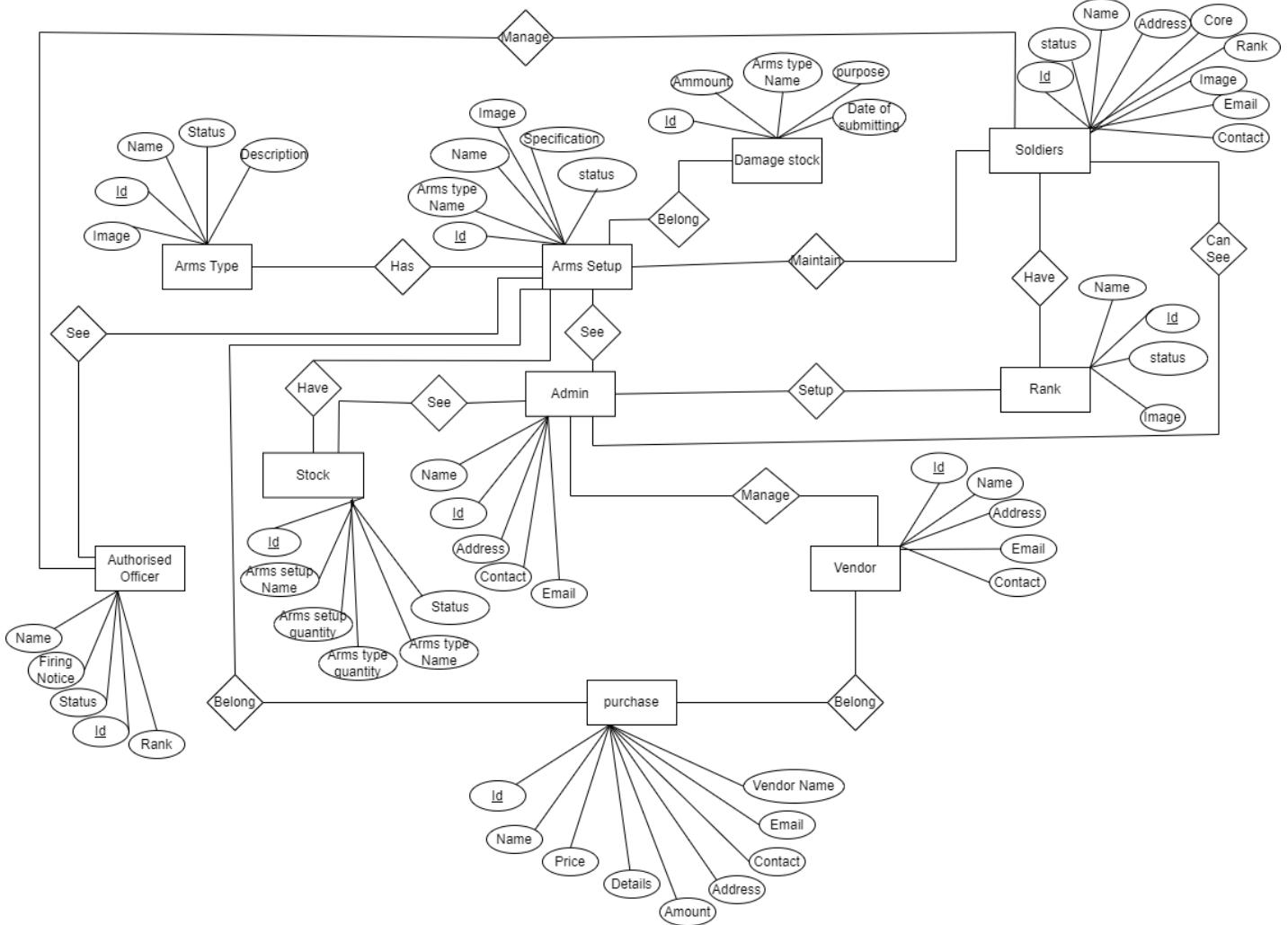


Figure 6.15: Entity Relationship Diagram

Chapter 07

Designing

7.1 Database Schema Design

SELECT * FROM `users`

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 ▾ Filter rows: Search this table Sort by key: None

Extra options

			id	name	email	phone	password	role
<input type="checkbox"/>	 Edit  Copy  Delete	1	Admin	admin@gmail.com	01916714242	\$2y\$10\$BZ9mERTM2XoOaoU6MCLwKucF8N7VaO5rsdvJTFIJDDZ...	admin	
<input type="checkbox"/>	 Edit  Copy  Delete	2	Shuvo	shuvo@gmail.com	01723547898	\$2y\$10\$rxFqLuidepuPMw3MFNHI.Eydmzpo06eU5NiAHk9X.X...	customer	
<input type="checkbox"/>	 Edit  Copy  Delete	3	CarCorner	carcorner@gmail.com	01700585588	\$2y\$10\$Hw0ttVgrqeC2gzWjW9C/4.ZasO9tJZ6PTnhN2G0Tf3...	service	
<input type="checkbox"/>	 Edit  Copy  Delete	4	AutoMobile	auto@gmail.com	01700585511	\$2y\$10\$QlkG1uXASXveLnD5P4iy8e0juANqmUnd2b9hWzM.Dwn...	service	
<input type="checkbox"/>	 Edit  Copy  Delete	5	Nahid	nahid@gmail.com	01723547797	\$2y\$10\$xiRgfyKkBOnWSCXzSdPyBOcMkkall3Bjy9xi8PWNRxW...	customer	

Figure 7.1: User Table

Showing rows 0 - 1 (2 total, Query took 0.0003 seconds.)

SELECT * FROM `categories`

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 ▾ Filter rows: Search this table Sort by key: None

Extra options

			id	name	description	status	image	created_at	updated_at
<input type="checkbox"/>	 Edit  Copy  Delete	1	Texi	Nothing to describe.	Active	20221207071214.jpg	2022-12-07 07:14:48	2022-12-07 07:14:48	
<input type="checkbox"/>	 Edit  Copy  Delete	2	Motor-Cycle	Nothing to describe.	Active	20221207071215.png	2022-12-07 07:15:14	2022-12-07 07:15:14	

 Check all With selected:  Edit  Copy  Delete 

Show all | Number of rows: 25 ▾ Filter rows: Search this table Sort by key: None

Figure 7.2: Category Table

`SELECT * FROM `brands``

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None

Extra options

		id	brand_name	status	description	image	created_at	updated_at
<input type="checkbox"/>	Edit Copy Delete	1	Audi	Active	Nothing to describe.	20221207071215.png	2022-12-07 07:15:32	2022-12-07 07:15:32
<input type="checkbox"/>	Edit Copy Delete	2	Nissan	Active	Nothing to describe.	20221207071215.png	2022-12-07 07:15:57	2022-12-07 07:15:57

Check all With selected: Edit Copy Delete Export

Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None

Figure 7.3: Brand Table

Showing rows 0 - 4 (5 total, Query took 0.0003 seconds.)

`SELECT * FROM `services``

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None

Extra options

		id	service_center_id	service_name	price	status	image	description	created_at	updated_at
<input type="checkbox"/>	Edit Copy Delete	1	3	Engine Servicing	5000	inactive	20221207071222.jpg	Nothing to describe.	2022-12-07 07:22:48	2022-12-07 15:00:54
<input type="checkbox"/>	Edit Copy Delete	2	4	Oil Changing	5000	active	20221207081210.jpg	Nothing to describe.	2022-12-07 08:10:28	2022-12-07 08:10:28
<input type="checkbox"/>	Edit Copy Delete	3	3	Oil Changing	3000	active	20221207101236.jpg	Nothing to describe.	2022-12-07 10:36:59	2022-12-07 10:36:59
<input type="checkbox"/>	Edit Copy Delete	4	4	Engine Servicing	3500	active	20221208071216.jpg	Nothing to describe.	2022-12-08 07:16:26	2022-12-08 07:16:26
<input type="checkbox"/>	Edit Copy Delete	5	4	Brake Fixing	3200	active	20221208071219.jpg	Nothing to describe.	2022-12-08 07:19:32	2022-12-08 07:19:32

Figure 7.4: Service Table

SELECT * FROM `bookings`

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None

Extra options

	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	id	Customer_name	user_id	phone	service_center_id	brand_id	model	service_id	special_request	price
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	1	Shuvo		2 01723547898		3	1	Sports	1 Please check break.	500
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	3	Shuvo		2 01723547898		3	1	SUV	3 NULL	300
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	6	Shuvo		2 01723547898		3	1	SUV	1 I quit this service. Hello iubat	500
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	7	Shuvo		2 01723547898		4	1	Sports	5 NULL	320
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	9	Shuvo		2 01723547898		4	1	Sports	2 NULL	500

Check all With selected: Edit Copy Delete Export

Figure 7.5: Booking Table

Showing rows 0 - 0 (1 total, Query took 0.0003 seconds.)

SELECT * FROM `contacts`

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 Filter rows: Search this table

Extra options

	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	id	name	phone	email	message	created_at	updated_at
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	3	Minhaz	01700585500	minhaz123@gmail.com	Hello	2022-12-10 10:13:33	2022-12-10 10:13:33

Check all With selected: Edit Copy Delete Export

Show all | Number of rows: 25 Filter rows: Search this table

Figure 7.6: Contact Table

phpMyAdmin

Server: 127.0.0.1 » Database: carsolutionltd

Table	Action	Rows	Type	Collation	Size	Overhead
bookings	Browse Structure Search Insert Empty Drop	5	InnoDB	utf8mb4_unicode_ci	16.0 KiB	-
brands	Browse Structure Search Insert Empty Drop	2	InnoDB	utf8mb4_unicode_ci	32.0 KiB	-
categories	Browse Structure Search Insert Empty Drop	2	InnoDB	utf8mb4_unicode_ci	32.0 KiB	-
contacts	Browse Structure Search Insert Empty Drop	1	InnoDB	utf8mb4_unicode_ci	16.0 KiB	-
failed_jobs	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_unicode_ci	32.0 KiB	-
feedbacks	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_unicode_ci	16.0 KiB	-
migrations	Browse Structure Search Insert Empty Drop	11	InnoDB	utf8mb4_unicode_ci	16.0 KiB	-
password_resets	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_unicode_ci	32.0 KiB	-
payments	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_unicode_ci	32.0 KiB	-
personal_access_tokens	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_unicode_ci	48.0 KiB	-
services	Browse Structure Search Insert Empty Drop	5	InnoDB	utf8mb4_unicode_ci	32.0 KiB	-
users	Browse Structure Search Insert Empty Drop	5	InnoDB	utf8mb4_unicode_ci	48.0 KiB	-

Figure 7.7: Full Database Table

7.2 Interface Design

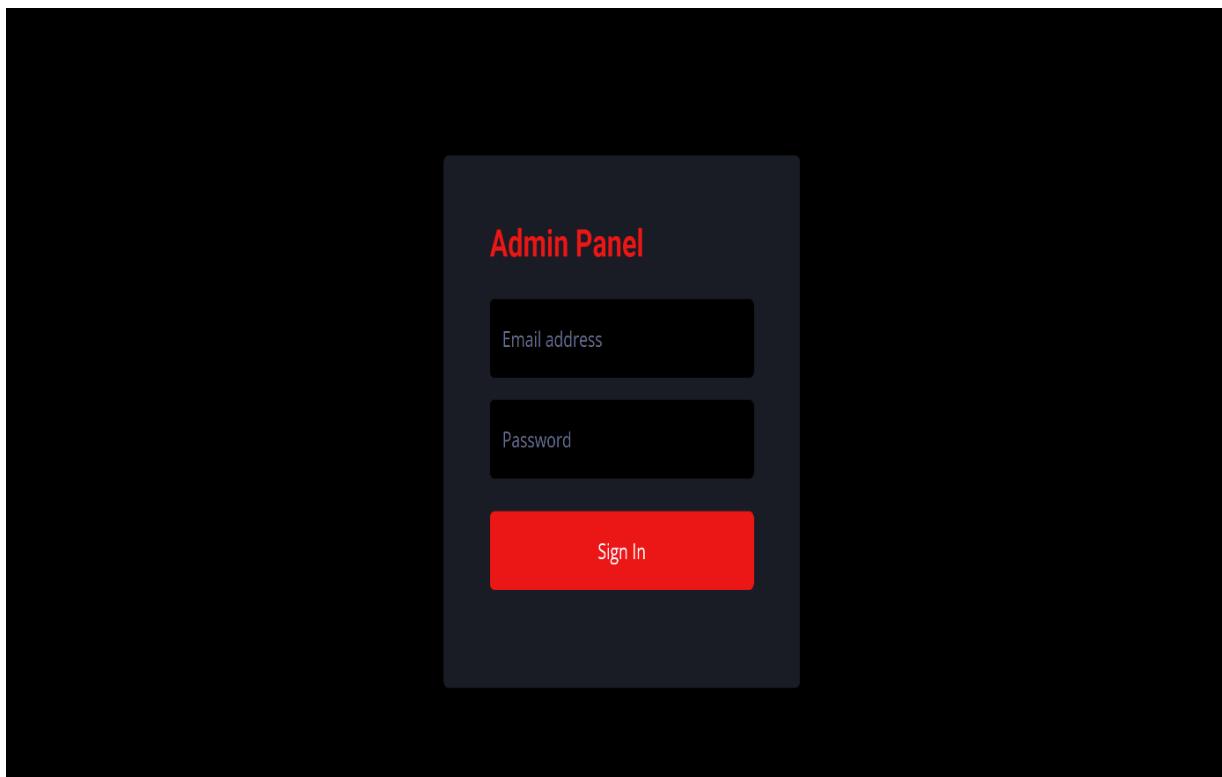


Figure 7.8: Admin Login Page

A screenshot of a dashboard page for "CarSolution". The top navigation bar includes the brand logo, user info ("admin@gmail.com Admin"), a search bar, and a profile icon. On the left, a sidebar lists navigation items: Dashboard, Customer, Services, Categories, Brand, Payment, Contact, and Reports. The main content area features four summary cards with icons and data: "Total User 1234", "Total Service Center 34", "Today Revenue \$1234", and "Total Revenue \$1234". Below this is a section titled "Recent Service Center" with a table showing two service entries. The table has columns: ID, Date, Invoice, Customer, Amount, Status, and Action. Each entry includes a "Detail" button. A red circular button with an upward arrow is located in the bottom right corner of the dashboard area.

Figure 7.9: Dashboard Page

The screenshot shows the CarSolution Admin Dashboard. On the left, there's a sidebar with icons for Dashboard, Customer, Services, Categories, Brand, Payment, Contact, and Reports. The main area has a dark header with the CarSolution logo, a search bar, and a user profile. A large red '+' button with the text 'Create User' is centered above a table titled 'Customer List'. The table has columns for ID, Image, Name, Email, Phone, Address, and Action. It contains two rows of data:

ID	Image	Name	Email	Phone	Address	Action
1		Shuvo	shuvo@gmail.com	01723547898	Uttara	<button>Update</button> <button>Delete</button>
2		Nahid	nahid@gmail.com	01723547797	Dhaka	<button>Update</button> <button>Delete</button>

Figure 7.10: Add User Page

The screenshot shows the CarSolution Admin Dashboard. The sidebar and header are identical to Figure 7.10. In the main area, a red '+' button with the text 'Create Category' is centered above a table titled 'Category List'. The table has columns for ID, Image, Category Name, Status, and Action. It contains two rows of data:

ID	Image	Category Name	Status	Action
1		Taxi	Active	<button>View</button> <button>Update</button> <button>Delete</button>
2		Motor-Cycle	Active	<button>View</button> <button>Update</button> <button>Delete</button>

Figure 7.11: Manage Category Page

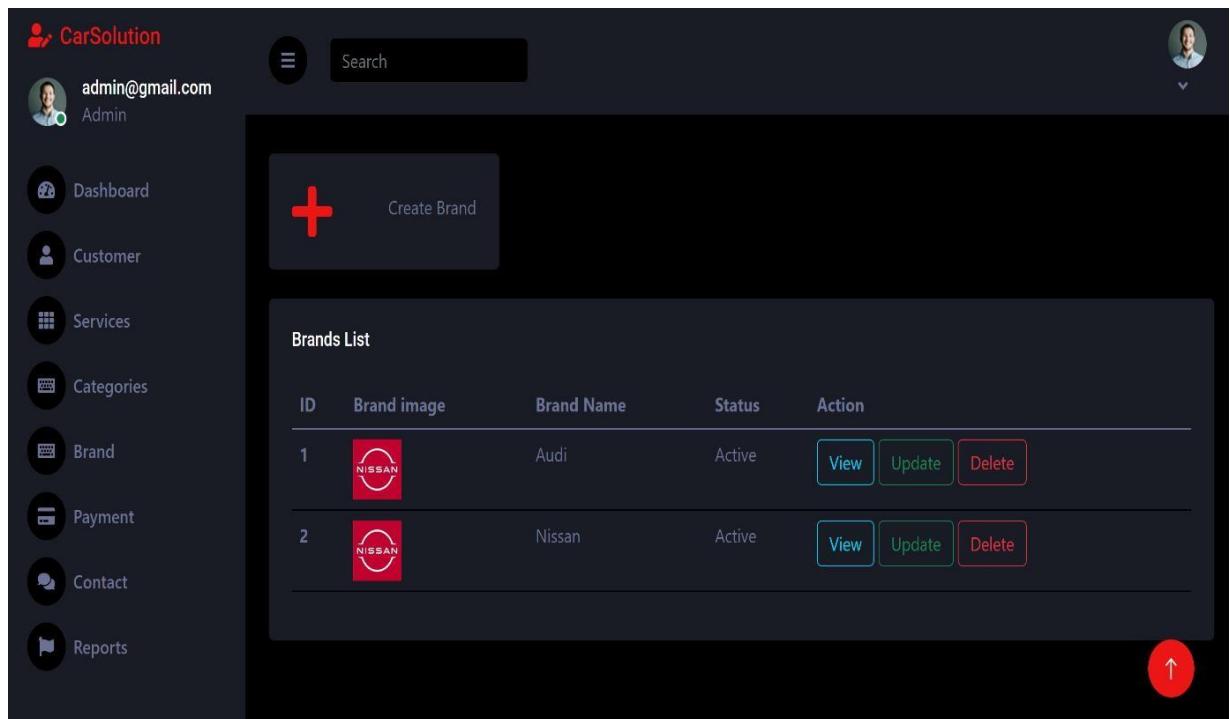


Figure 7.12: Add Brand Page

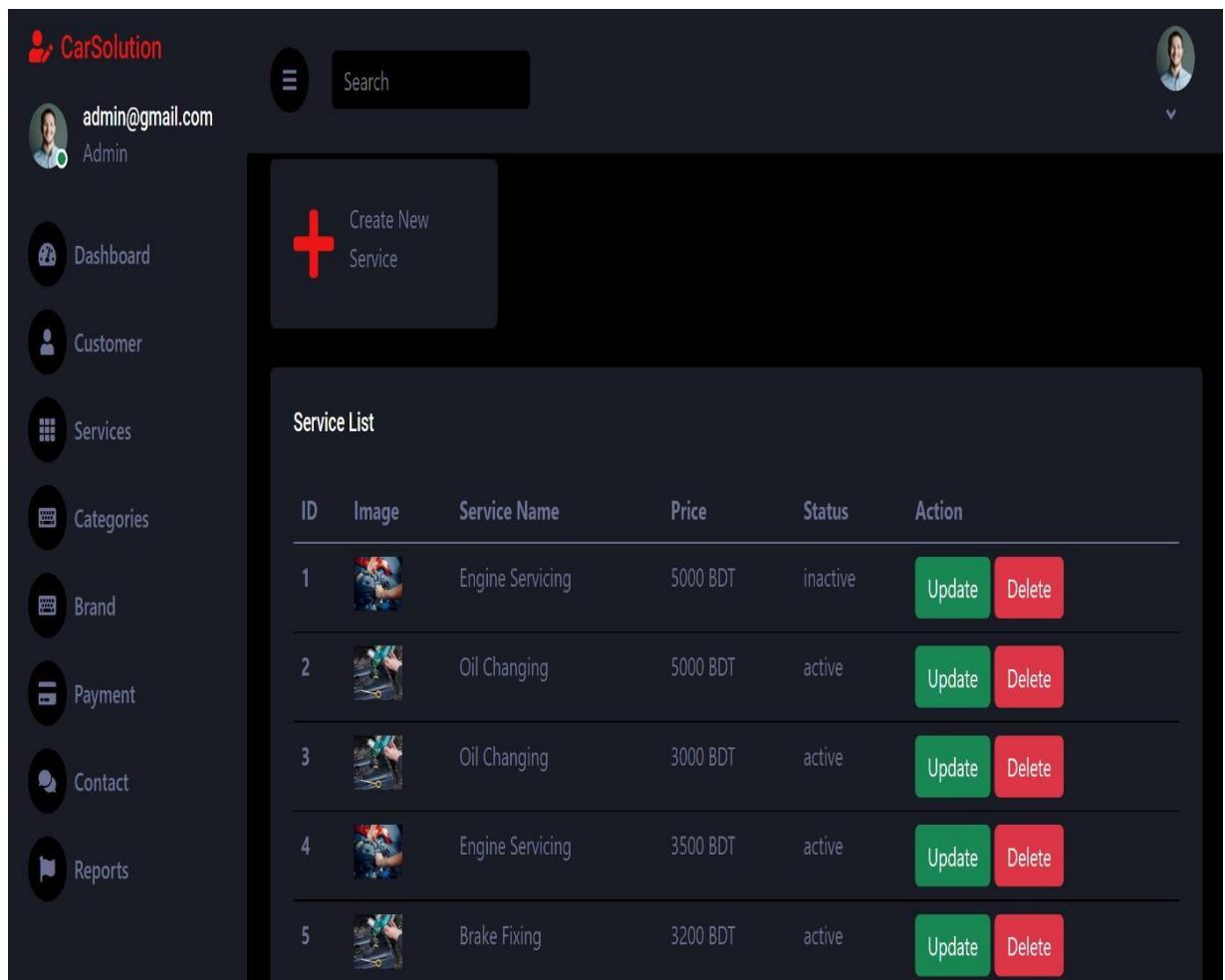


Figure 7.13: Manage Service Page

ID	Name	Phone	Email	Message	Action
1	Minhaz	01700585500	minhaz123@gmail.com	Hello	<button>Delete</button>

Figure 7.14: Contact info Page

// ABOUT US //
CarSolution Is The Best Place For Your Auto Care

It's an open platform for Bangladeshi. Customer & Service Center both are get the access to the platform. Even without registration you also view all the service , category & brands. We hope that everyone will be benifited.

01 Professional & Expert
All the Professional & Expert are provide the service to the customer. So that customer can get the best service from the service center.

02 Quality Servicing Center
Service center are well prepared to provide their service to the customer & they make sure the customer satisfaction as much as possible.

03 Quality Workers
Each end every service center higher quality workers, so they can get more and more booking from the customer. Behind reasone they will be more benifited. Customer also fell relax for servicing.

Figure 7.15: About Page

OUR SERVICE



Engine Servicing
5000 BDT

[DETAILS](#)



Oil Changing
5000 BDT

[DETAILS](#)



Oil Changing
3000 BDT

[DETAILS](#)



Figure 7.16: Service Page

// OUR SERVICE CENTER //
Our Service Center



Name: CarCorner
Email: carcorner@gmail.com
Phone: 01700585588
Location: Dhaka,Uttara

[DETAILS](#)



Name: AutoMobile
Email: auto@gmail.com
Phone: 01700585511
Location: Dhanmondi

[DETAILS](#)



Figure 7.17: Service Center Page

// OUR CATEGORY //

Our Category



Texi
Active

[DETAILS](#)

Motor-Cycle
Active

[DETAILS](#)

Figure 7.18: Category Page

Send your message

Name

Phone

Email

Message

[SEND MESSAGE](#)

Figure 7.19: Contact-US Page

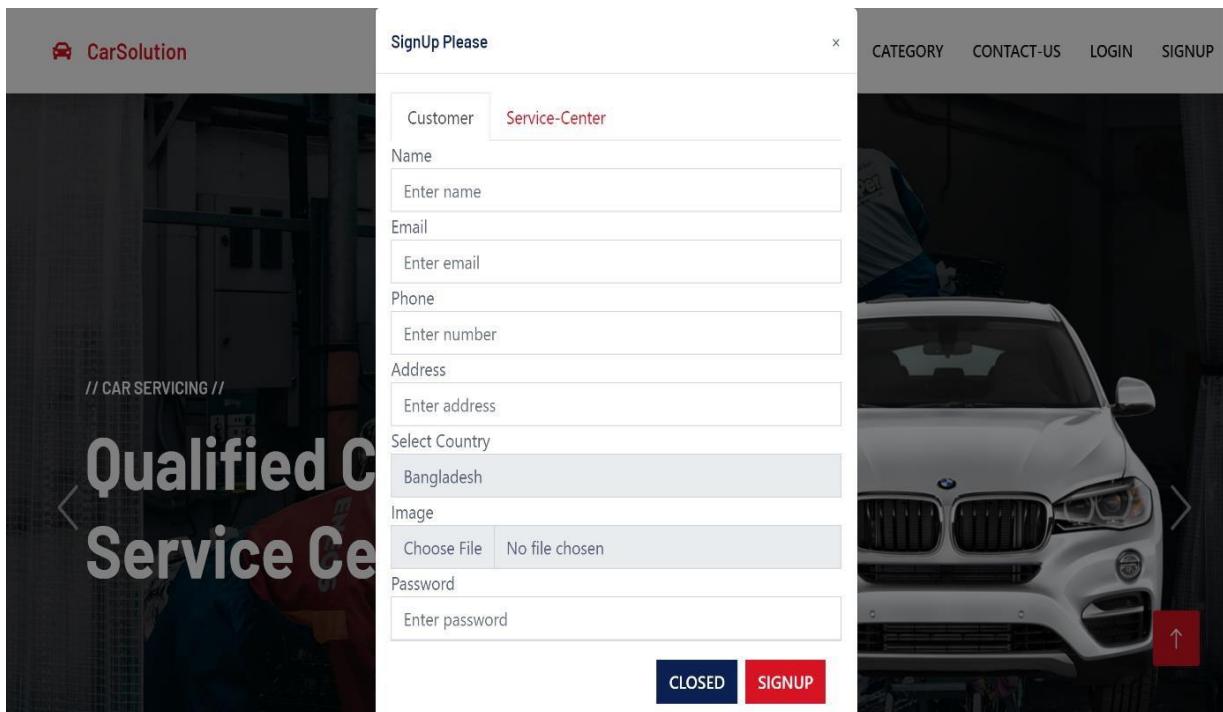


Figure 7.20: User Sign Up Page

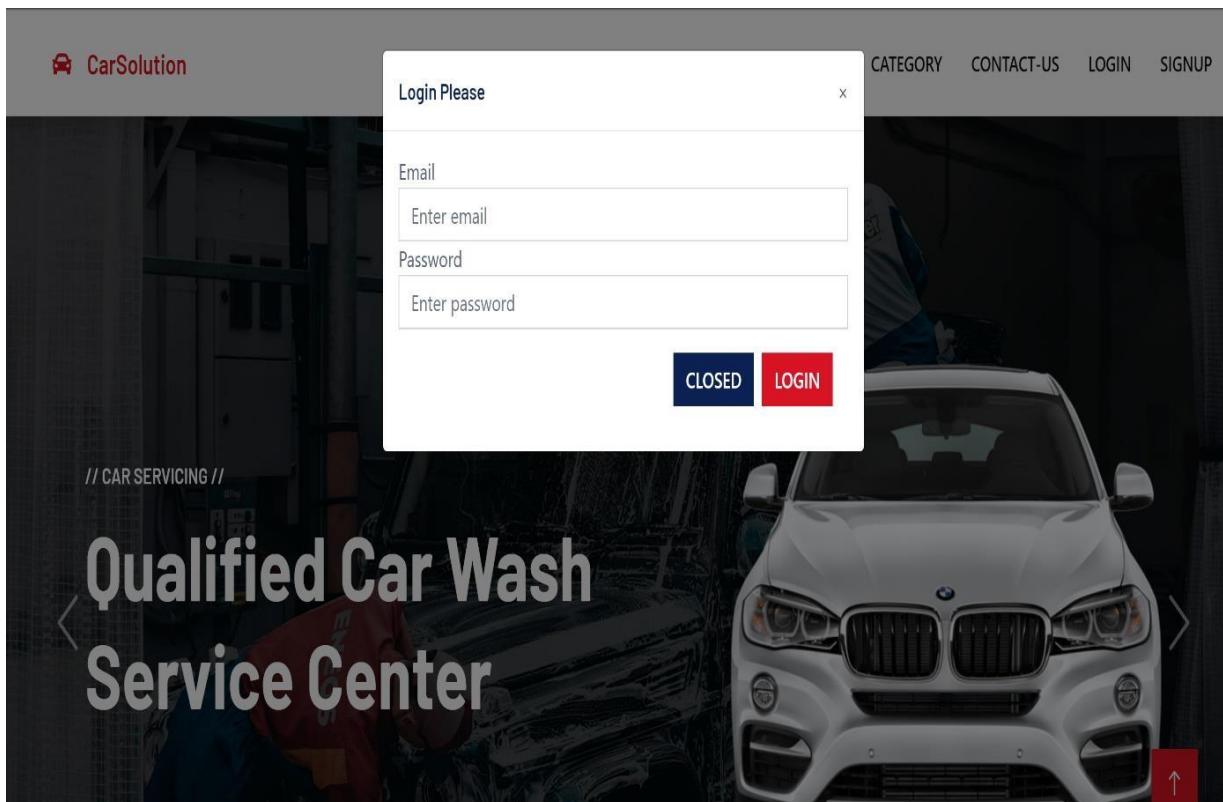


Figure 7.21: User Login Page

Booking Information

ID	Customer	Phone	Service Center	Service	Price	Payment	Status	Transaction	Action
1	Shuvo	01723547898	CarCorner	Engine Servicing	5000	Paid	Released	6396ede5de5a3	DETAILS
2	Shuvo	01723547898	CarCorner	Oil Changing	3000	Paid	Released	6396f4e37f8a4	DETAILS
3	Shuvo	01723547898	CarCorner	Engine Servicing	5000	Paid	Released	6396fd647bc03	DETAILS
4	Shuvo	01723547898	AutoMobile	Brake Fixing	3200	Paid	Released	639712b103be8	DETAILS
5	Shuvo	01723547898	AutoMobile	Oil Changing	5000	Paid	Approved	6399524b374b2	UPDATE DELETE

Figure 7.22: Customer Booking Info Page

Customer Invoice

Customer Name: Shuvo

Customer Phone: 01723547898

Address: Uttara

Pickup Address: Uttara-10

Booking summary

Service Center Name: CarCorner

Service Name: Engine Servicing

Brand Name: Audi

Brand Model: Sports

Special Request: Please check break.

Status: Released

Transaction ID: 6396ede5de5a3

Total Price:

BDT 5000/=

Project Work Status: Released

[INVOICE](#)



Figure 7.23: Customer Invoice Page



Service Table

ID	Image	Service Name	Price	Status	Action
1		Engine Servicing	5000	inactive	UPDATE DELETE
2		Oil Changing	3000	active	UPDATE DELETE

Figure 7.24: Service Add Page

Reports

From



To



SUBMIT

Report Table

Date: 2022-12-15

ID	Customer	Phone	Service	Price	Payment	Status
1	Shuvo	01723547898	Engine Servicing	5000	Paid	Released
2	Shuvo	01723547898	Oil Changing	3000	Paid	Released
3	Shuvo	01723547898	Engine Servicing	5000	Paid	Released



PRINT

Figure 7.25: Service Center Report Page

Chapter 08

Quality Assurance

8.1 System Testing

Testing is the process of examining a system or its components with the goal of determining if they meet the requirements. Simply put, testing is the process of running a system to find any gaps, faults, or missing requirements that are not met by the real requirements.

Knowing a particular feature for which the software was designed allows you to run tests that fully demonstrate each feature while at the same time debugging each feature. This approach is known as black-box testing.

With the internal working software in hand, tests may be run to confirm that internal activities are carried out as expected and that all internal components have been appropriately exercised. White-box testing is the term for this method.

8.2 White Box Testing Results Table

Test Title: User Registration Table

Steps	Test Data	Expectation	Actual Result	Status
Input New user Information	New user	New user will be Added	New User in User Table	PASS
Redirect to Admin Dashboard	Dashboard	Login page to Dashboard	Redirected to Dashboard after	PASS

Test Title: Login Table

Steps	Test Data	Expectation	Actual Result	Status
Login with proper credentials	Email and Password	Respective Dashboard according to user-type	Redirected to respective dashboard according to user-type	PASS

Test Title: Profile Management Table

Steps	Test Data	Expectation	Actual Result	Status
Profile Picture Change	New Image from device	Showphoto	Photo Visible	PASS
Change General Information	Name, Phone, Address	Show Updated Information in My Profile	Information Updated	PASS

Test Title: Added Contents Table

Steps	Test Data	Expectation	Actual Result	Status
Add brand	Brand	Brand will be added	Brand Added	PASS
Add Category	Category	Category Will be Added	Category Added	PASS
Add Service	Service	Service will be added	Service Added	PASS

Chapter 09

Conclusion

9.1 Limitation

- User have limited access to function
- Customer can't add service
- Customer can't manage reports
- Service Center can't manage Category
- Service Center can't manage Brand

9.2 Future Work

- Login or Signup through google account or social media account.
- Send notification for customer booking.
- Email verification also available.
- A mobile app will be developed.
- Service center show on google map direction.

9.3 Conclusion

This application develops for human so that they can easily take any service. And they can easily find out the nearby service center so that they can come easily to get the information from the website about service center. It reduce their time and also view the service have or not. This product help to make the communication between admin and the employees. This project is also help to monitor every ongoing project and their live update. Thus help the admin, mechanice and the customers too.

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