ONLINE MANAGEMENT OF ARMY DOG CENTER

& HORSE STABLE

By

Maj Aaqib Ilyas Rana

Capt Yahya Humayun

Capt Muhammad Saqib Zaman

Supervised by:

Lt. Col Usman Mehmood Malik

Submitted to the faculty of Department of Software Engineering,
Military College of Signals, National University of Sciences and Technology, Islamabad,
in partial fulfillment for the requirements of B.E Degree in Software Engineering.

June 2023

CERTIFICATE OF CORRECTNESS AND APPROVAL

This is to officially state that the thesis work contained in this report

"Online Management Of Army Dog Center & Horse Stable"

is carried out by

Maj Aaqib Ilyas Rana

Capt Yahya Humayun

Capt Muhammad Saqib Zaman

under my supervision and that in my judgement, it is fully ample, in scope and excellence, for the degree of Bachelor of Software Engineering in Military College of Signals, National University of Sciences and Technology (NUST), Islamabad.

Approved by

Supervisor

Lt Col Usman Mehmood Malik

Department of CSE, MCS

Date: _____

DECLARATION OF ORIGINALITY

We hereby declare that no portion of work presented in this thesis has been submitted in support of another award or qualification in either this institute or anywhere else.

ACKNOWLEDGEMENTS

Allah Subhan'Wa'Tala is the sole guidance in all domains.

Our parents, colleagues, and most of all supervisors, _____ without your guidance.

The group members, who through all adversities worked steadfastly.

Plagiarism Certificate (Turnitin Report)

This thesis has a 16% similarity index. The Turnitin report endorsed by Supervisor is attached.

_____

Maj Aqib Ilyas

_____

Capt Yahya Humayun

_____

Capt Muhammad Saqib Zaman

_____

Signature of Supervisor

MOTIVATION

As of now there is not even a single platform available for dog lovers to purchase Dogs or equestrians to book their horse rides and to provide them a healthy outdoor recreational activity.

Talking specifically about Army Dog Centers and Horse Centers, there is a long, protracted, and tedious procedure if someone wants to purchase a dog or book a slot for a horse ride.

This encouraged us to create a pet application where we will be able to log dogs and horses onto a centralized server which would make it easier for the consumers.

Also, for pampered dogs, there is also an option of vet appointments. Through our activities, we want to educate and inspire the urban community to peacefully co-exist with animals on our streets.

ABSTRACT

This project is part of our Final Year Project based on our learning and understanding throughout the tenure of degree. The reason behind this system is that We've developed a new system that is currently not available in the market and that it would help to reduce the paperwork of all the Army Dog Centers and Horse Stables across the country.

Scope: We are responsible for the back-end part of the system, allowing administrator to do all the maintenance in the system, allowing all users to register and use our system and design the basic function to reduce the workload of the users.

Methodology: Node JS is great for developing systems. Most of the back-end classes are built in Node JS. For the database Mongo – Db is used to store data on the system. We have used Flutter for the front End of the mobile application. We have used Flutter because it's a cross platform which can be used on both android and IOS.

Assessment Criteria Used: We must keep the layout as simple and as direct as possible so users can easily understand the purpose of my system.

Development Phases: Firstly, we discussed the project scope with the project supervisor. Next, we accordingly created a strategic plan for the project. I discussed with the team what modules to include in the project. We all split up the project work and built individual modules. After all modules were done, we integrated them and made the entire system work properly. Then we kept our focus on the use-centric design of the website and implemented it accordingly.

Results: Although the results aren't as perfect as we had planned, but the overall outcome is much satisfied as most of the features which we planned have been successfully implemented into the system.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

Chapter 1

INTRODUCTION

1.0. Introduction

Anyone who loves to keep dog as pet and book a horse for riding, this application is for them. The objective of the application is to provide mobile based interface for administrator Army Dog Center and Horse Stable (ADC & HS) to manage their pets' activities. To provide an option for managing the basic information about dogs and horses in respective ADC & HS.

It also provides an option for selling dogs to either army personnel or civilians and book horse rides for the army personnel at their respective formation level. This application would also provide an option for storing and managing the basic information about the customers to track the information about sold pets and products to a customer.

1.1. Overview

This document will provide an overview of the user interface of the mobile application as well as the working of the back-end systems in the form of diagrams. Also, this system will help understand the database management of the mobile application.

This android application is intended for Dog & Horse lovers. Military personnel as well as civilians, anyone who loves to keep dog as pet and book a horse for riding, this application is for them. And this document will provide in-depth information about the system, how it will work and will be used by the users. This document will also display the functionality of the application that will be easy to understand for the users. Different sections of the document will describe the same software product in its entirety.

1.2. References

IEEE. IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications. IEEE Computer Society, 1998.

Chapter 2

Literature Review

2.0. Overview

The project involves the development of an online management system for an Army Dog Center and Horse Stables. This system will help to streamline and automate the management of various activities such as animal care, training, and medical records.

The aim is to provide a more efficient and effective way of managing these facilities, as well as improving communication between staff members and ensuring the safety and well-being of the animals. The system is expected to be user-friendly and accessible to both management and staff, allowing for real-time updates and monitoring of activities.

2.1. Purpose

The main purpose of this application is to enable buying and selling of pets for users. It also aims at promoting the adoption of street dogs.

2.1.1. Existing System

Majority of the people still rely on local markets and dealers for buying their desired pets whereas a part of the money is to be sent to agents as commission. Currently the number of active mobile applications found in our area that provides purchase of pets are either very limited or there are none. Many applications are available in foreign countries like USA, but it is rarely developed in our area.

Proper and timely updating of data is not done in such applications and therefore it is not recommended to use. Similarly, lack of good user interface is a main problem in these cases. Besides these, none of these applications resolve digitization of Army Dog Centers & Horse Stables.

2.1.2. Proposed System

Features and Advantages of Proposed system are: -

a. Digitalize the process of pet marketing.

b. Eliminating the commission paid to agents.

c. Computerization is important for every field because the data is secure in computer.

d. This project reduces human efforts, saves time and resources to an extent.

e. Can locate nearby Army Dog Centers and Horse Stables through maps.

f. An advanced search option for searching desired breeds of pets.

g. Facility to send feedbacks and complaints.

h. Attractive user interface.

Chapter 3

Problem Definition

3.0. Problem Statement

An online centralized platform for users to purchase different categories of Dogs available at Army Dog Centers and to book personalized Horse Rides at respective Horse Stables throughout the country.

Chapter 4

Methodology

4.0. Feasibility Study

Before undertaking any project, it is important to conduct a feasibility study to determine its viability. In the case of online management of an Army Dog Center and Horse Stables, the feasibility study will assess the practicality of implementing an online management system. This study will consider various factors such as technical feasibility, operational feasibility, and economic feasibility to determine whether the project is feasible and viable.

4.0.1. Technical Feasibility

Technical feasibility refers to the assessment of whether the project can be implemented using the available technology. In the case of an online management system for an Army Dog Center and Horse Stables, technical feasibility will involve determining whether the required hardware, software, and network infrastructure are available and capable of supporting the system. This will also include an assessment of the security measures that will be required to protect sensitive information such as medical records and training data.

4.0.2. Economic Feasibility

Economic feasibility refers to the assessment of whether the project is financially viable. In the case of an online management system for an Army Dog Center and Horse Stables, economic feasibility will involve determining the costs involved in developing, implementing, and maintaining the system. This will include an assessment of the return on investment (ROI) and the potential cost savings that can be achieved through the implementation of the system.

4.0.3. Operational Feasibility

Operational feasibility refers to the assessment of whether the project can be implemented within the organization's operational framework. In the case of an online management system for an Army Dog Center and Horse Stables, operational feasibility will involve determining whether the system can be integrated with the existing operational processes and procedures. This will also involve an assessment of the training requirements for staff members and whether the system can be easily adopted and used by all relevant personnel.

4.1. Approach

4.1.1. Research

The first step in developing the online management system for an Army Dog Center and Horse Stables is conducting thorough research. The research will involve gathering information on the existing processes and procedures followed by the organization. This will help in identifying the specific requirements and functionalities that need to be incorporated into the system.

4.1.2. Requirements Gathering

The next step is gathering requirements from the stakeholders. This will involve discussions with the management and staff members to understand their needs and preferences. The requirements gathering phase will also involve identifying any potential roadblocks that may arise during the development of the system.

4.1.3. Design

After gathering the requirements, the project team will move on to the design phase. This will involve creating a detailed design of the system that includes the architecture, data flow, and user interface. The design phase will also involve identifying the necessary hardware and software components required to develop the system.

4.1.4. Development

In this phase, the project team will begin developing the online management system. This will involve programming and configuring the system, integrating it with the necessary hardware and software components, and testing it for any bugs or errors.

4.1.5. Testing

Once the development phase is complete, the system will undergo rigorous testing to ensure that it meets the specified requirements. Testing will include functionality testing, performance testing, and security testing.

4.1.6. Implementation

After successful testing, the system will be implemented in the Army Dog Center and Horse Stables. This will involve training the staff members on how to use the system and providing them with any necessary support.

4.1.7. Maintenance & Support

The final phase of the project will involve providing ongoing maintenance and support to ensure that the system operates optimally. This will involve regular updates, bug fixes, and providing technical support to staff members.

4.2. Proposed Methodology

4.2.1. Enhancement

The main objective of the Pet Shop Management System is to enhance and upgrade the existing system by increasing its efficiency and effectiveness. The software improves the working methods by replacing the existing manual system with the computer-based system.

4.2.2. Automation

The pet Shop Management System automates each activity of the manual system and increases its throughput. Thus, the response time of the system is very less, and it works very fast.

4.2.3. Accuracy

The pet Shop Management System provides the uses a quick response with very accurate information regarding the users etc. Any details or system in an accurate manner, as and when required.

4.2.4. User-Friendly

The software pet Shop Management System has a very user-friendly interface. Thus the users will feel it is very easy to work on it. The software provides accuracy along with a pleasant interface. Make the present manual system more interactive, speedy and user friendly.

4.2.5. Availability

The transaction reports of the system can be retried as and when required. Thus, there is no delay in the availability of any information, whatever is needed can be captured very quickly and easily.

4.2.6. Maintenance Cost

Reduce the cost of maintenance.

4.2.7. Security

This is a very important aspect of the design and should cover areas of hardware reliability, fall back procedures, physical security of data and provision for detection of fraud and abuse. System design involves first logical design and then physical construction of the system. The logical design describes the structure and characteristics of features, like the outputs, inputs, files, database, and procedures. The physical construction, which follows the logical design, produces actual program software, files, and a working system.

4.3. Functional Requirements

Implementation is the stages of project when the theoretical design is turned into a working system. If the implementation stage is not properly planned and controlled, it can cause chaos. Thus, it can be the most crucial stage in achieving a successful new system and in giving the users confidence that the new system will work and be effective. The following are a few of the functional requirements of ADS & HS.

4.3.1. Pet Management

The mobile application should allow the center staff to manage the dogs in their care. This may include features like dog identification, tracking their health records, and managing their training schedules.

4.3.2. Appointment Scheduling

The application should allow staff members to schedule appointments for the dogs, including medical appointments, training sessions, and grooming.

4.3.3. Inventory Management

The application should provide inventory management features that allow staff members to manage the supplies and equipment needed to care for the dogs, including food, toys, and medical supplies.

4.3.4. Reporting & Analytics

The application should have reporting and analytics feature that provides insights into the center's operations, including data on the pets, staff members, and inventory.

4.3.5. Alerts & Notifications

The applicant should be able to send alerts and notifications to staff members regarding upcoming appointments, changes to training schedules, or any other important information related to the center's operations.

4.3.6. Communication

The application should have communication features that allow staff members to communicate with each other, share important information, and collaborate on tasks.

4.3.7. Adoption Management

The application should also provide features that allow staff members to manage the adoption process for the dogs, including creating profiles for the dogs and communicating with potential adopters.

4.4. Non-Functional Requirements

Non-functional requirements are the characteristics that describe how the application should perform, rather than what it should do. Here are some of the non-functional requirements that the Army Dog Center & Horse Stable mobile application may need.

4.4.1. Usability

The application should be user-friendly and intuitive, with a simple and easy-to-use interface. It should also be accessible to all staff members, regardless of their technical expertise.

4.4.2. Performance

The application should perform well and respond quickly to user interactions, even in areas with poor network coverage.

4.4.3. Security

The application should be secure and protect the privacy of the sensitive information it handles. It should implement industry-standard encryption, authentication, and access control measures.

4.4.4. Reliability

The application should be reliable and available whenever staff members and customers need it. It should have a high uptime, with minimal downtime for maintenance or upgrades.

4.4.5. Scalability

The application should be scalable, able to handle a growing number of users, data, and devices over time.

4.4.6. Compatibility

The application should be compatible with a wide range of devices and operating systems to ensure that it can be used by all staff members.

4.4.7. Maintenance

The application should be easy to maintain, with a minimal need for software updates or technical support.

Chapter 5

Design & Architecture

5.0. System Architecture

This section will provide a detailed picture of ADC & HS architecture including high level system design and UML diagrams depicting the system processes. ADC & HS will follow the client server architecture model. Where a customer or the person who wishes to own a dog or ride a horse will be the client and administrator / cloud server will be served in accordance with the model. ADC & HS will allow administrators to upload either the Textual or image files for the customers to search over the uploaded data using single search queries. Cloud Server will be able to store encrypted data and will search over the data based on provided query.

5.0.1. Architectural Design

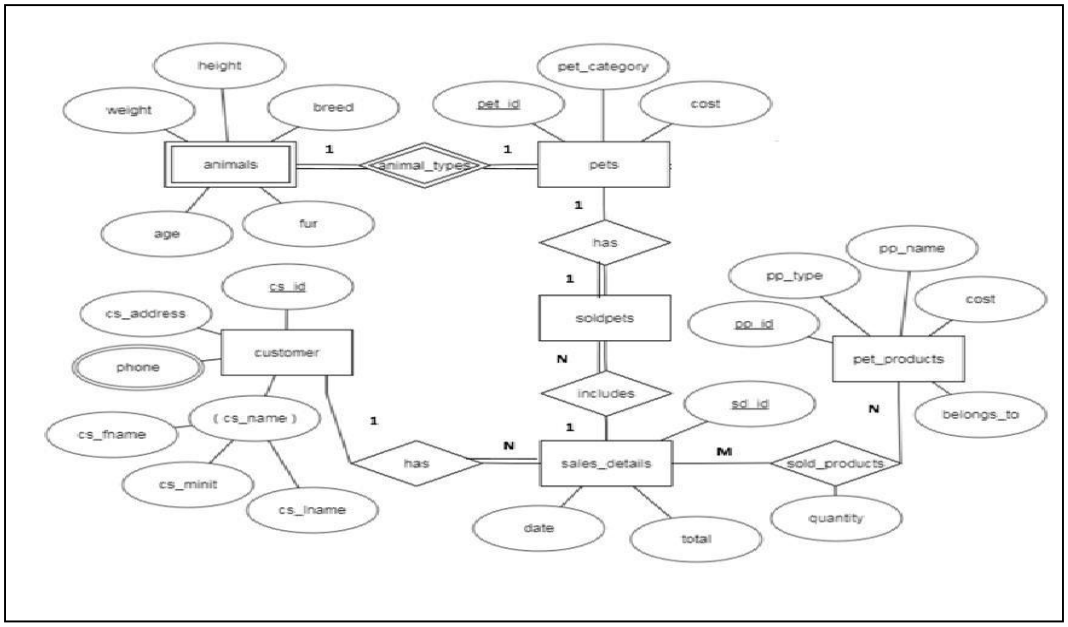

Figure 1: ADC & HS Entity Relationship Diagram

5.0.2. Purpose

The purpose of this document is to give a detailed description of the architecture for the Online Management of Army Dog Center & Horse Stable. It will illustrate the purpose and complete declaration for the development of the system. It will also explain system constraints, interface, and interactions with other external applications. This document is primarily intended to assist users to buy Canines from Army Dog Centers online without any long queues and paperwork.

5.0.3. Scope

Node JS is great for developing systems. Most of the back-end classes are built in Node JS. For the database Mongo – Db is used to store data on the system. We have used Flutter for the front End of the mobile application. We have used Flutter because it's a cross platform which can be used on both android and IOS.

5.0.4. Overall Description

This section will give an overview of our system, Online Management of Army Dog Center & Horse Stable. This project is designed for customers buying of different breeds of Dogs and book horse rides through a unique page of mobile application. Besides these Customers and admins can access our application to register and retrieve information regarding Vets available in the vicinity. The website includes many functions such as new customer registration, admin login and some other features.

5.0.5. Product Perspective

ADS & HS is mainly for Dog lovers. It ensures greater profitability for them. The customers can view all the breeds of Dogs available at the Army Dog Center whereas admins can upload and update pet details that are up and ready for sale.

5.0.6. Context Diagram

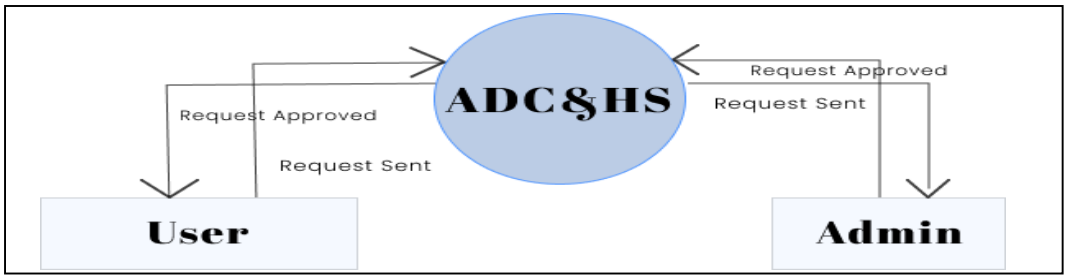

Figure 2: ADS & HS Context Diagram

5.1. Decomposition Description

The decomposition of the subsystems shown in the architectural design is explained in the following ways:

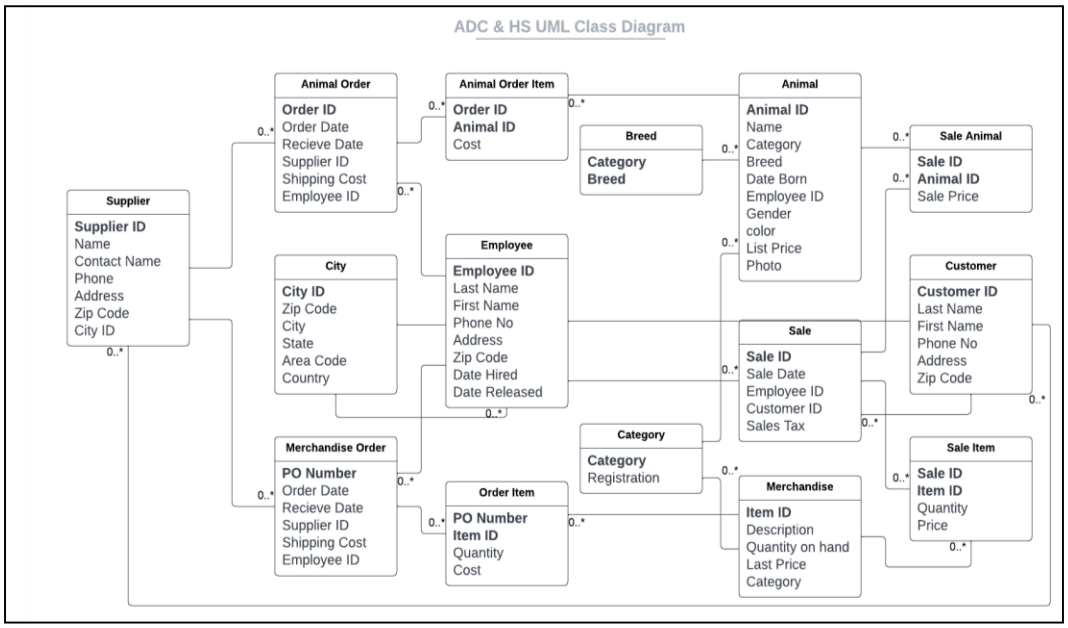

Figure 3: ADC & HS UML Class Diagram

5.1.1. Module Decomposition

As shown in figure 3, ADC & HS has 15 classes, but some of the important ones are as follows:

5.1.1.1. Admin

It has admin login credentials. Admin can validate user registration requests and register them in the database.

5.1.1.2. User

It has attributes of registered users. Unregistered can request registration. Registered users can log in, search for a pet, and put up a request for purchasing. They can perform all the user functionalities of ADC & HS.

5.1.1.3. Animal

It has all the details about the dogs and horses for purchase and booking available at respective ADC & HS.

5.1.2. Process Decomposition

The process decomposition is explained through use case, sequence, process flow diagrams, Admin flow chart and user flow chart which decomposes the system into well-defined and cohesive processes.

5.1.2.1 Use Case Diagram

This use case diagram explains the set of actions that an actor undertakes while dealing with ADC & HS.

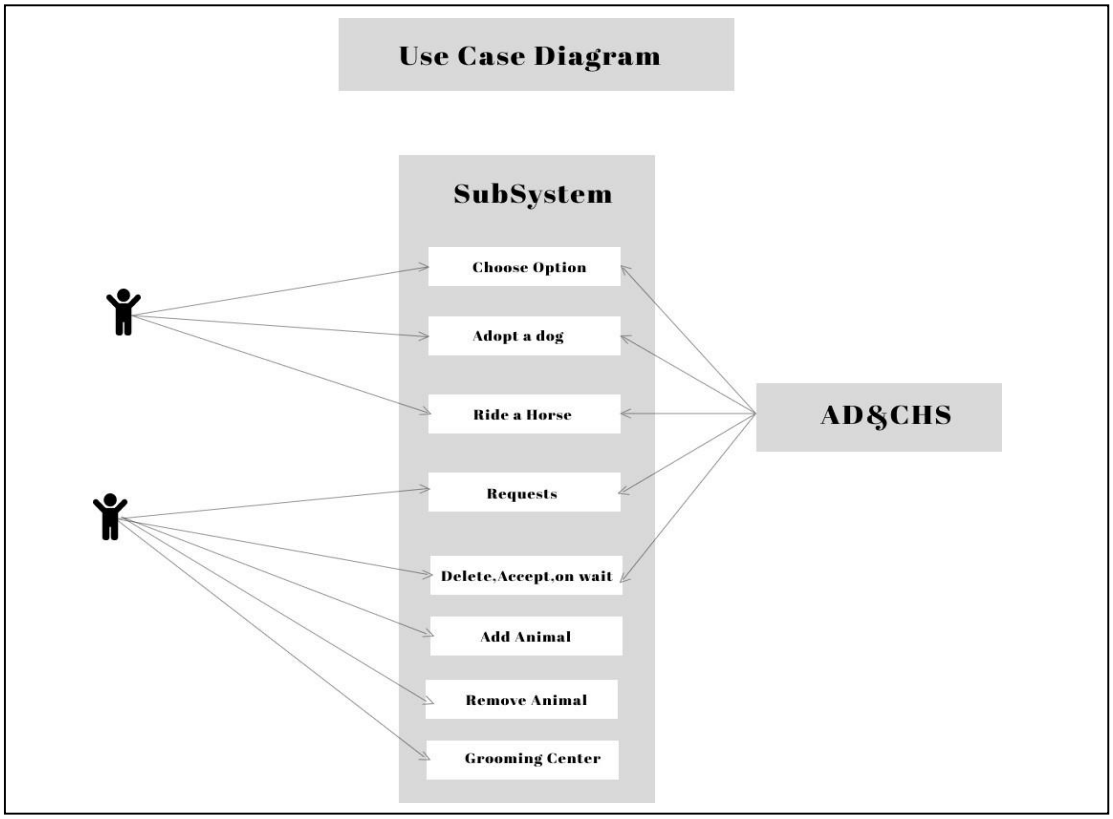

Figure 4: ADC & HS Use Case Diagram

5.1.2.1.1. User Registration

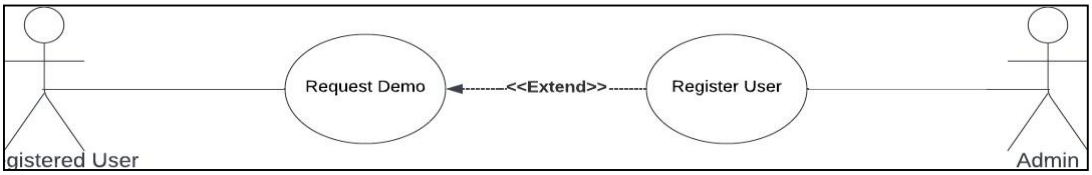

Figure 5: User Registration Use Case

ADC & HS **Use Case 01: Account Creation**	
Actors	User
Pre-Condition	User must be unregistered
Trigger	The user wants to register his account
Main Path (Primary path)	. Anyone can request ADC & HS account registration. . For that he / she must submit his details. . Admin receives the requests and approves them. If the request is valid, Admin will registerthe user in the database. . The user login credentials are mailed to the newly registered users
Exception Path	If user request of account creation is invalid, the error message is displayed on the screen and the user registration process is not performed.
Post Condition	User account is successfully created

Table 1: ADC & HS Account Creation Use Case Narrative

.1.2.1.2. Login

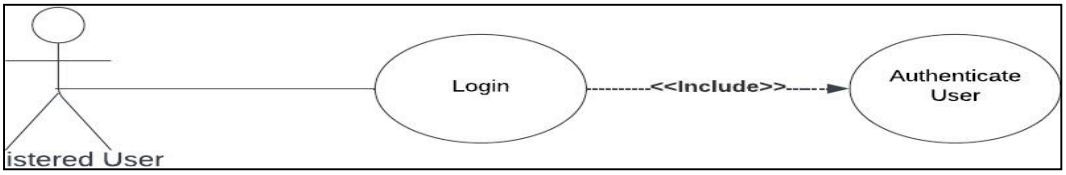

Figure 6: Login Use Case

ADC & HS **Use Case 02: User Login**	
Actors	User
Pre-Condition	User must be Registered
Trigger	The user wants to login to his account
Main Path **(Primary path)**	. Registered users can login to his account by entering the provided credentials. . Login credentials are validated to authenticate the user. . Authenticated users are redirected to the main interface.
Exception Path	If user credentials are invalid, the error message is displayed on the screen.
Post Condition	User account is successfully logged in.

Table 2: ADC & HS User Login Use Case Narrative

5.1.2.1.3. Search For pet

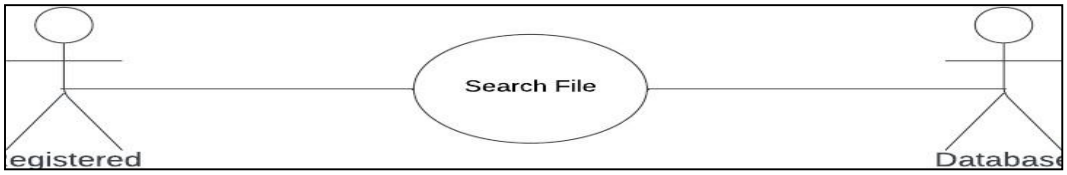

Figure 7: Search Pet Use Case

ADC & HS **Use Case 03: Search Pet**	
Actors	User, Database
Pre-Condition	User must be Logged In.
Trigger	The user wants to search desired pet
Main Path **(Primary path)**	. Users can generate a search query and send it to the database server. . The cloud server will run the query over the encrypted table. . File names are sent back to the user.
Exception Path	If user credentials are invalid, the error message is displayed on the screen.
Post Condition	User account is successfully logged in.

Table 3: ADC & HS Search Pet Use Case Narrative

5.1.2.2. Sequence Diagram

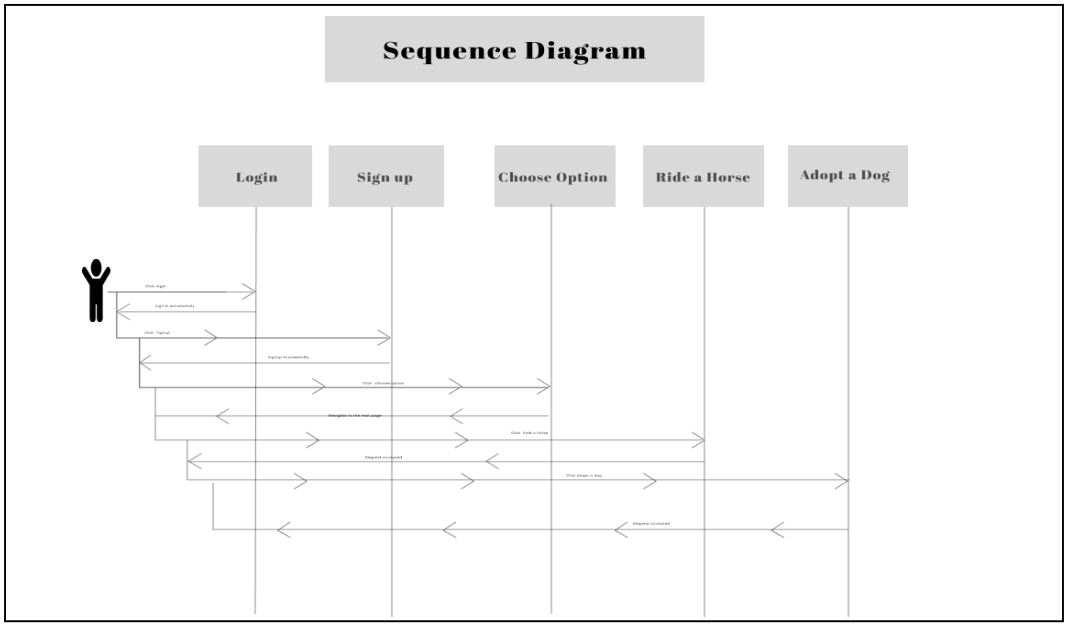

Figure 8: ADC & HS Sequence Diagram

5.1.2.3. Process Flow Diagram

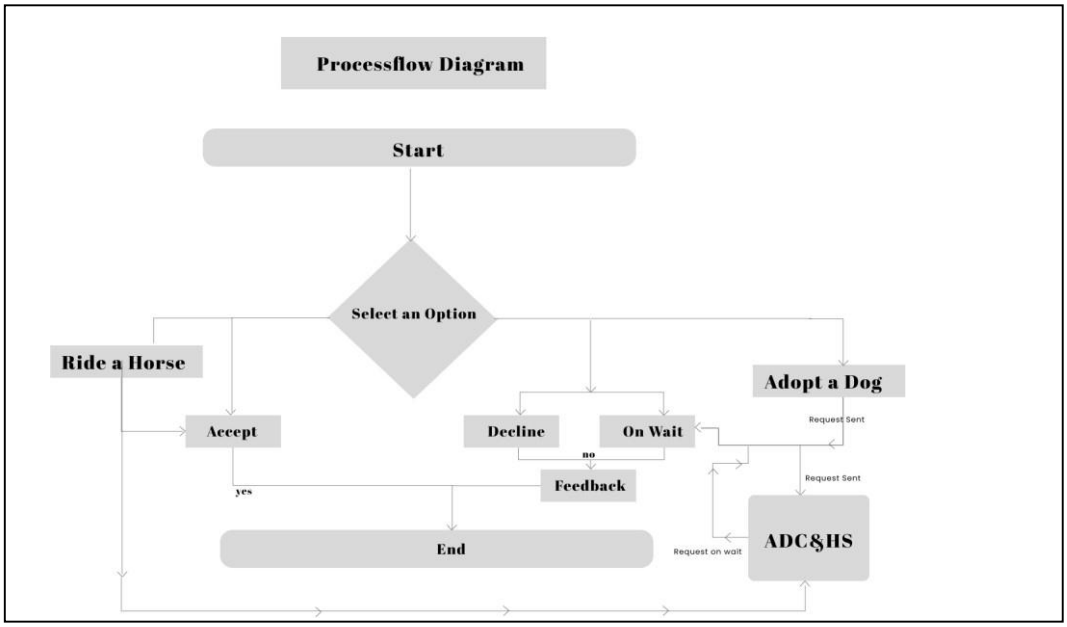

Figure 9: ADC & HS Process Flow Diagram

5.1.2.4. Admin Flow Chart

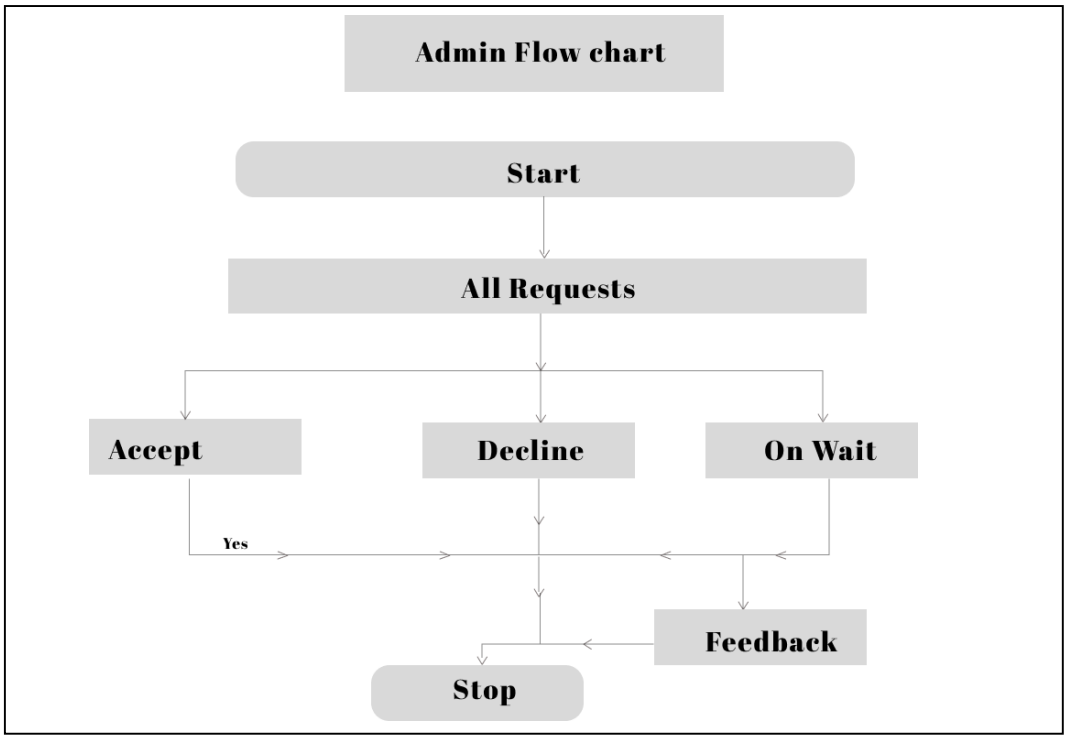

Figure 10: ADC & HS Admin Flow Chart

5.1.2.5. User Flow Chart

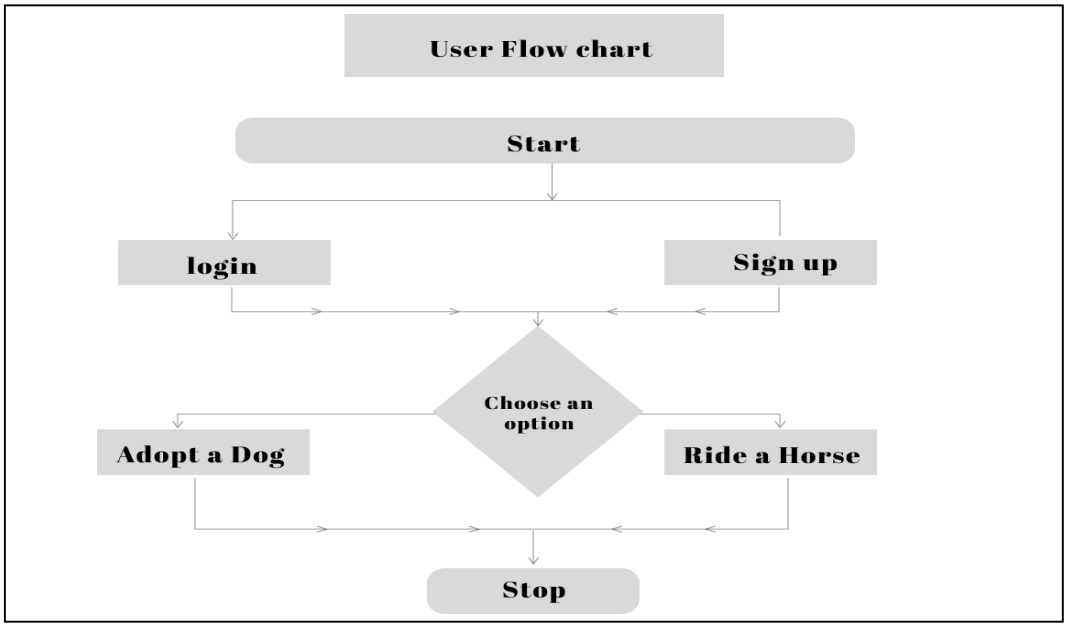

Figure 11: ADC & HS User Flow Chart

5.2. Data Design

5.2.1. Purpose

The purpose of this document is to give a detailed description of the requirements for the Army Dog Center & Horse Stable. It will illustrate the purpose and complete declaration for the development of the system. It will also explain system constraints, interface, and interactions with other external applications. This document is primarily intended to be proposed to users to buy dogs and to book their horse rides.

5.2.2. Scope

Node JS is great for developing systems. Most of the back-end classes are built in Node JS. For the database Mongo – Db is used to store data on the system. We have used Flutter for the front End of the mobile application. We have used Flutter because it's a cross platform which can be used on both android and IOS.

5.2.3. Overview

System design transforms a logical representation of what the system is required to do into the physical specification. The specifications are converted into a physical reality during the development. Design forms a blueprint of the system and adds how the components relate to each other. The design phase proceeds accordingly to an ordinary sequence of steps, beginning with review and assigning of task and ending with package design. Design phase is the lifecycle phase in which the detailed design of the system selected in the study phase is accomplished. A smooth transition from the study phase to design is necessary because the design phase continues the activities in the earlier phase. Simplicity is the most important criteria of design phase. The most creative and challenging phase of the system life cycle is system design. The term design describes the final system and the process by which it is developed. The first step in design is to determine how the output is to be produced and in what format. Second the formats of input screens are to be determined. The input data and the master files must be designed to meet the requirements of the proposed output.

5.2.3.1. Logical Design

The part of the design process that is independent of any specific hardware or software platform is referred to as logical design. During the logical design, all functional features of the system chosen for development in analysis phase are described independently of any computer platform.

5.2.3.2. Physical Design

Physical design is the part of the design in which the logical specification of the system from logical design are transferred into technology-specific details from which all programming and system construction can be accomplished. The system performs information output.

5.2.3.3. Database Design

The objective of database design is to provide auxiliary storage and to contribute to be overall efficiency of the program component one auxiliary storage medium must provide efficient access to the data. The concept behind a database is an integrated collection of data and provides centralized access to the data from a program. A database is a collection of logically related data stored with minimum redundancy to serve many users quickly and efficiently.

5.2.3.4. Primary Key

A primary key is a special relational database table column (or combination of columns) designated to uniquely identify all table records. A primary key's main features are: It must contain a unique value for each row of data. It cannot contain null values.

5.2.3.5. Foreign Key

A foreign key is a key used to link two tables together. This is sometimes also called a referencing key. A Foreign Key is a column or a combination of columns whose values match a Primary Key in a different table.

5.3. Normalization

Normalization is a systematic approach of decomposing tables to eliminate data redundancy(repetition) and undesirable characteristics like Insertion, Update and Deletion Anomalies. It is a multi-step process that puts data into tabular form, removing duplicated data from the relation tables. There are three main types of normal forms:

a. First Normal Form (1NF)

b. Second Normal Form (2NF)

c. Third Normal Form (3NF)

5.3.1. First Normal Form

a. As per the rule of first normal form, an attribute (column) of a table cannot hold multiple values.

b. It should hold only atomic values. This table holds only the atomic values company id and the companyname, and no multiple values are stored in this table so it can be considered as the 1NF.

5.3.2. Second Normal Form

A table is said to be in 2NF if both the following conditions hold:

a. Table is in 1NF (First normal form)

b. No non-prime attribute is dependent on the proper subset of any candidate key of table.

c. An attribute that is not part of any candidate key is known as a non-prime attribute.

5.3.3. Third Normal Form

A table design is said to be in 3NF if both the following conditions hold:

a. The table must be in 2NF.

b. Transitive functional dependency of non-prime attribute on any super key should be removed.

c. An attribute that is not part of any candidate key is known as a non-prime attribute. In other words, 3NFcan be explained like this.

5.4. Creation of Tables

5.4.1. Creation of Pet Table

	Column Name	Data Type	Allow Nulls
🔑	Id	int	☐
	PetCategory	varchar(50)	☑
	Cost	int	☑

Table 4: Creation of Pets Table

5.4.2. Creation of Animals Table

	Column Name	Data Type	Allow Nulls
🔑	Id	int	☐
	Breed	varchar(50)	☑
	Weight	float	☑
	Height	float	☑
	Age	int	☑
	Fur	varchar(50)	☑
	PetId	int	☑

Table 5: Creation of Animals Table

5.4.3. Creation of Pet Products Table

	Column Name	Data Type	Allow Nulls
🔑	Id	int	☐
	ProductsName	varchar(50)	☑
	ProductsType	varchar(50)	☑
	Cost	int	☑
	BelongsTo	varchar(50)	☑

Table 6: Creation of Pet Products Table

5.4.4. Creation of Customer Table

	Column Name	Data Type	Allow Nulls
🔑	Id	int	☐
	FirstName	varchar(50)	☑
	LastName	varchar(50)	☑
	Address	varchar(50)	☑
	PhoneNo	bigint	☑

Table 7: Creation of Customer Table

5.4.6. Creation of Sales Details table

	Column Name	Data Type	Allow Nulls
🔑	Id	int	☐
	CustomerId	int	☑
	Date	date	☑
	Total	int	☑

Table 8: Creation of Sales Details Table

5.4.7. Creation of Sold Pets Table

	Column Name	Data Type	Allow Nulls
🔑	Id	int	☐
	PetId	int	☑
	SalesDetailsId	int	☑

Table 9: Creation of Sold Pets Table

5.4.8. Creation of Sold Products Table

	Column Name	Data Type	Allow Nulls
🔑	Id	int	☐
	SalesDetailsId	int	☑
	PetProductsId	int	☑
	Quantity	int	☑

Table 10: Creation of Sold Products Table

Chapter 6

Implementation And Testing

6.1. System Testing

System testing would be used to test the Army Dog Center mobile application. It would involve verifying that all the components and subsystems of the application work together seamlessly and meet the requirements and specifications.

6.2. Unit Testing

Unit testing would be used to test individual units or components of the Army Dog Center mobile application. It would involve testing each unit in isolation to ensure that it performs as expected and is free from defects.

6.3. Integration Testing

Integration testing would be used to test how different units or components of the Army Dog Center mobile application work together. It would involve testing the interaction between units to ensure that they integrate and work together seamlessly.

6.4. Validation Testing

Validation testing would be used to test the Army Dog Center & Horse Stable mobile application against a set of predefined acceptance criteria. It would involve testing the application to ensure that it meets the user's needs and is free from defects.

6.5. Output Testing

Output testing would be used to test the output of the Army Dog Center & Horse Stable mobile application. It would involve checking that the application produces the expected output in response to user input and is free from defects.

6.6. White Box Testing

White box testing would be used to test the internal workings of the Army Dog Center & Horse Stable mobile application. It would involve examining the code, data structures, and algorithms used in the application to identify defects and ensure that they are working correctly.

6.7. Black Box Testing

Black box testing would be used to test the Army Dog Center & Horse Stable mobile application from the user's perspective. It would involve testing the application without any knowledge of its internal workings to ensure that it performs as expected and is free from defects.

Overall, a combination of these testing techniques would be used to ensure that the Army Dog Center & Horse Stable mobile application is thoroughly tested and free from defects before it is deployed. This would ensure that the application is user-friendly, performs well, meets all the requirements, and is secure and reliable.

Chapter 7

Conclusion & Future Scope

7.1. Conclusion

As part of the project a detailed study has been made about the designing and development aspects of the project "Online Management of Army Dog Center & Horse Stable" which is an opening to the component world of computerization. We have tried our best to achieve our goals. The project must meet all the requirements that were collected during analysis and designing phase.

In this project, we will be designing a simple platform for buying and selling pets. Besides these we also provide users with an option to adopt different breeds of dogs with the help of Army Dog Centers and to book horse rides at suitable Horse Stables.

The main objectives are to avoid the middleman in dealings and to decrease the count paperwork. Furthermore, as of now, there is currently no application in the market that allows the users to purchase dogs same as there is an application for purchasing cars through Pak-Wheels.

The project is developed in such a way that it can undergo future enhancement in a reliable, secure manner. The successful completion of this project has expanded my boundaries of imagination, invoked confidence, raised my creativity, and has provided me with knowledge and experience.

7.2. Future Scope

Following features can be updated in Future:

a. To include all varieties of breeds available at Army Dog Centers.

b. Home delivery of pet accessories.