A PROJECT REPORT ON

FOOD GRAIN MANAGEMENT SYSTEM

Submitted in partial fulfillment for Degree of

MASTER OF COMPUTER APPLICATION

By

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Under the guidance of

<Name of Internal Guide>
(Department of MCA)

Submitted to

Department of MCA

FINOLEX ACADEMY OF MANAGEMENT AND TECHNOLOGY, RATNAGIRI

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This is to certify that the project report titled:

FOOD GRAIN MANAGEMENT SYSTEM

Carried out by student of MCA

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From Mumbai University

And is/are the bonafide records of the work done by

him/her/them during the Semester II of A.Y 2022-2023

Internal Guide	**HOD**
(<Name of Internal Guide>)	**(Prof. Tejas V. Joshi)**

ABSTRACT

The foundation of my project is the food grain management system. Nutritional food items must be delivered to children in a pandemic condition. The company delivers nutritious food to underprivileged children, malnourished youngsters, and pregnant mothers. During the lockdown, the company also feeds these food grains to pupils at the school.

This is a government project, and the company receives food grains from them. This food is weighed, put into packets, and supplied to the appropriate schools and nurseries. The company manually keeps track of all data records. As a result, my project entails the automation of all business processes. Stock records, billing for distributed stock, and distribution chalans are all included in this project's data. I am working on a software that will allow me to conveniently organize and save all of this data. Admins may access all data in one place with this software.

ACKNOWLEDGEMENT

I wish to express my sincere thanks to The Principal Dr. P. P. Kulkarni, Vice Principal Dr. A. M. Kulkarni, Information Technology Department Coordinator Dr. V. V. Bhide, and HOD of Department of Information Technology Mrs. M. A. Sahasrabuddhe for their support and for the facilities they have made available. I would also like to express my sincere gratitude to everyone for supporting me throughout my project. First, I will thank my guides, Mrs. M. A. Sahasrabuddhe and V. S. Pandit for their enthusiasm, patience, insightful comments, helpful information, practical advice and unceasing ideas that have helped me tremendously at all times.

I am also grateful to the staff of Department of Information Technology for their consistent support and assistance. Finally, last but by no means least; I would thank my parents for their guidance and support on every step of mine, also to everyone in the Department of Information Technology, GJC it was great sharing premises with all of you during last three years. Thanks for all your encouragement.

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1. INTRODUCTION

1.1 Background

During this pandemic, delivery of nutritional food items to the children's is necessary. Company provides healthy food to necessary children's, malnutritional children's and pregnant women. In this lockdown situation, company also provides this food grains to school students.

This is Government project and they provide food grains to the company. This food grains are weighed, packed in packets and then distributed to respective schools and nursery. This all data of activities taken in the Company is very vast and complicated so it's difficult to save it manually. So, our project is automation of all the business task.

This project data contains stock record, billing of distributed stock, chalan of distribution. We are developing a software in which all this data record can be managed and saved easily. Using this software admin can access all the data at one place.

1.2 Objectives

- Our project can store data, update and view records.
- Manage the information of stock, chalan.
- To convert all manual process into computerized process.
- To find any data in single click.
- To generate chalan.
- To generate all stock details into bill report.
- You can easily export PDF for chalan and bill reports.

1.3 Purpose, Scope, Applicability

1.3.1. Purpose

The purpose is to build an easy, interactive and user-friendly system that will reduce the efforts of manual data collection. This will allow admin to store record of stock, packaging and chalan. The admin of this system will be the only one to be allowed to edit the entered data.

1.3.2. Scope

Our project's major goal is to store and update data while also allowing admins to access records. Currently, the scope of the purposed system is limited to the management of the system.

2. SURVEY OF TECHNOLOGIES

2.1 Existing System and its limitations:

Initially, data collecting was carried out by hand. They must manually keep track of stock, number of packets, and packaging details. All of the calculations have to be done by hand. They were storing chalan details in excel sheets and printing chalan books individually after that.

Limitations:

- Manually written records were difficult to manage.
- Making chalans separately was expensive, and printing them was difficult as well.
- Calculating by hand was quite difficult.

2.2 Proposed System and its Advantages:

The current system will have a user-friendly interface and simple forms that will make data entry simple and straightforward. The current system will have a user-friendly interface and simple forms that will make data entry simple and straightforward. All of the massive records will be kept here, and it will be simple to find any data at any moment. Any data will be easier to calculate.

Advantages:

- Easy and convenient
- Without any complicated operations, the entered data can be viewed.
- Calculation becomes less difficult.

3. REQUIREMENTS AND ANALYSIS

3.1 Problem Definition

Create a web-based system that allows admins to access all entered data, which will be stored in a database in the background and processed and analyzed for future work.

3.2 Requirements Specification –

· Simple forms should allow users to submit data into the system.

· Bulk upload of data using .xlsx files should made possible.

· Modification and Chalan Making.

3.3 Planning and Scheduling – Gantt chart

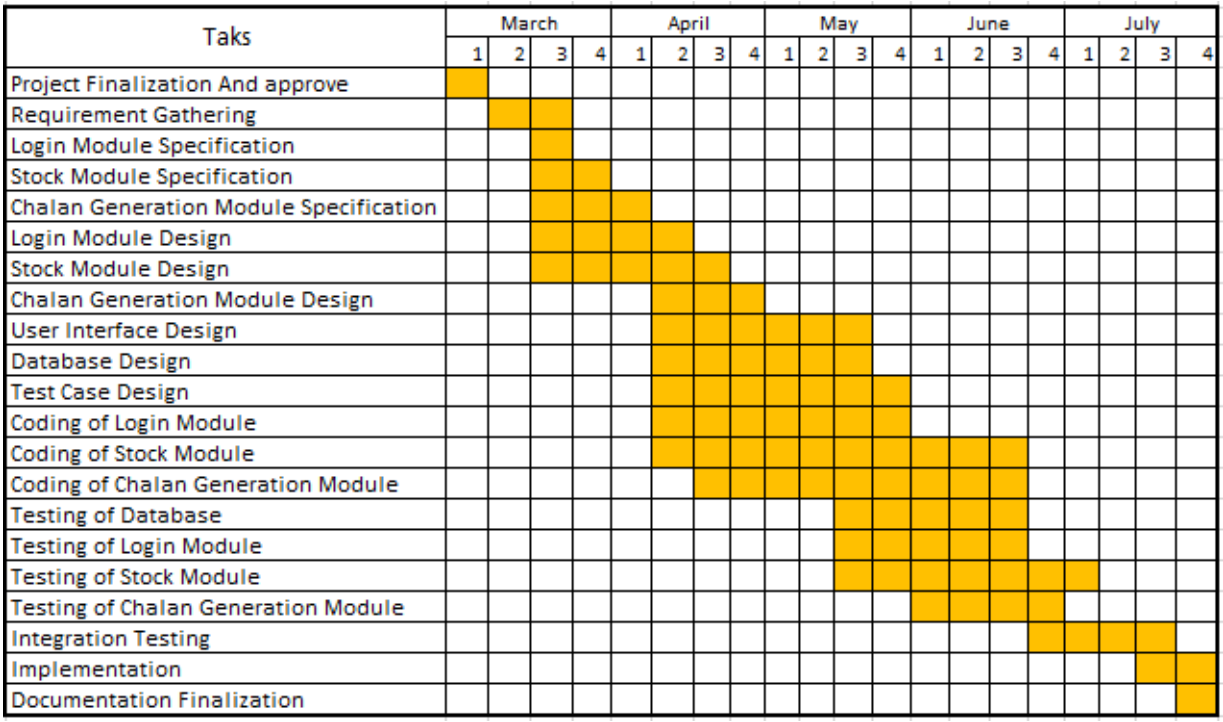

Fig 1: Actual Gantt Chart

3.4 Software and Hardware Requirements

User Side:

A PC with sufficient network connection and a Browser. We recommend using Desktop or Laptop.

Developer Side:

A PC with proper network connection, also ASP.NET, Microsoft SQL Server Management System, installed and a web server for hosting preferred a virtual private one.

3.5 Preliminary Product Description

According to the functionality, the system is divided into three modules. Login module, Stock module, and Chalan generation module are the three modules. All of the modules are accessible to only admin. All the primary details will be entered and a login will be created. Login Module will consist of a login screen. After successful login the page will redirected to the dashboard. Dashboard contains different functions like stock, records, chalan generation etc. Stock module will contain different functions like add stock, check stock etc.

3.6 Diagrams ER

Diagram:

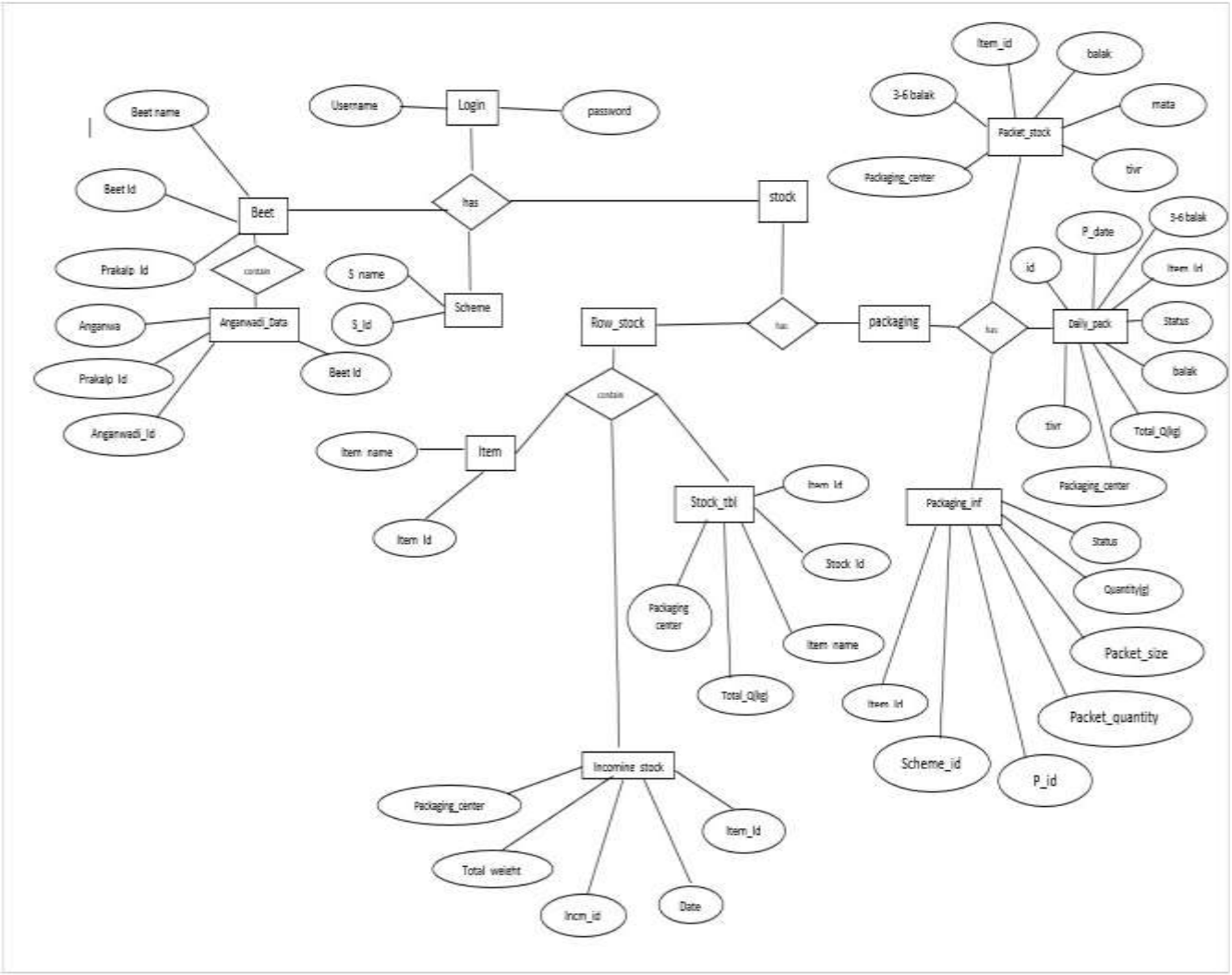

Fig 3: ER Diagram

Usecase Diagram
Beet, Anganwadi and Scheme

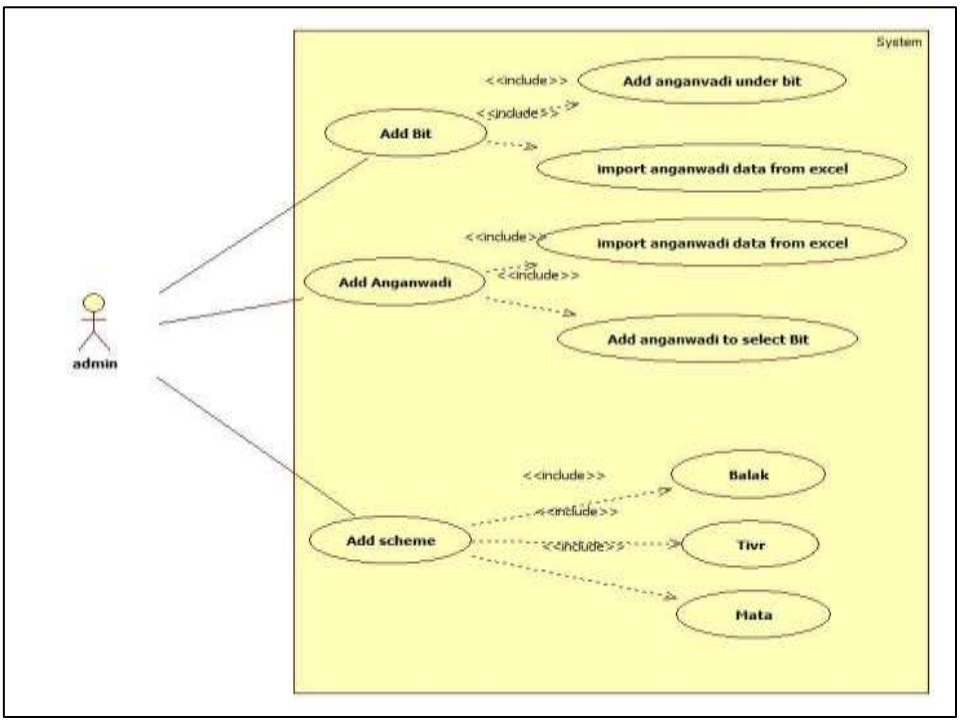

Fig 4: Use Case Diagram of Beet, Anganwadi and Scheme

Packaging

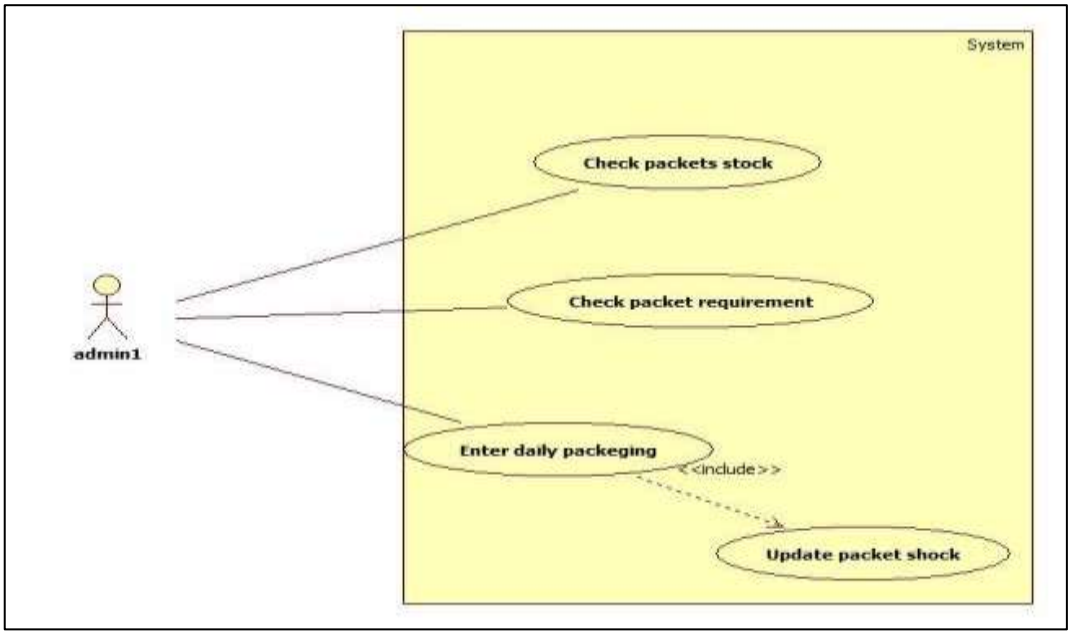

Fig 5: Use Case Diagram of Packaging

PackInfo

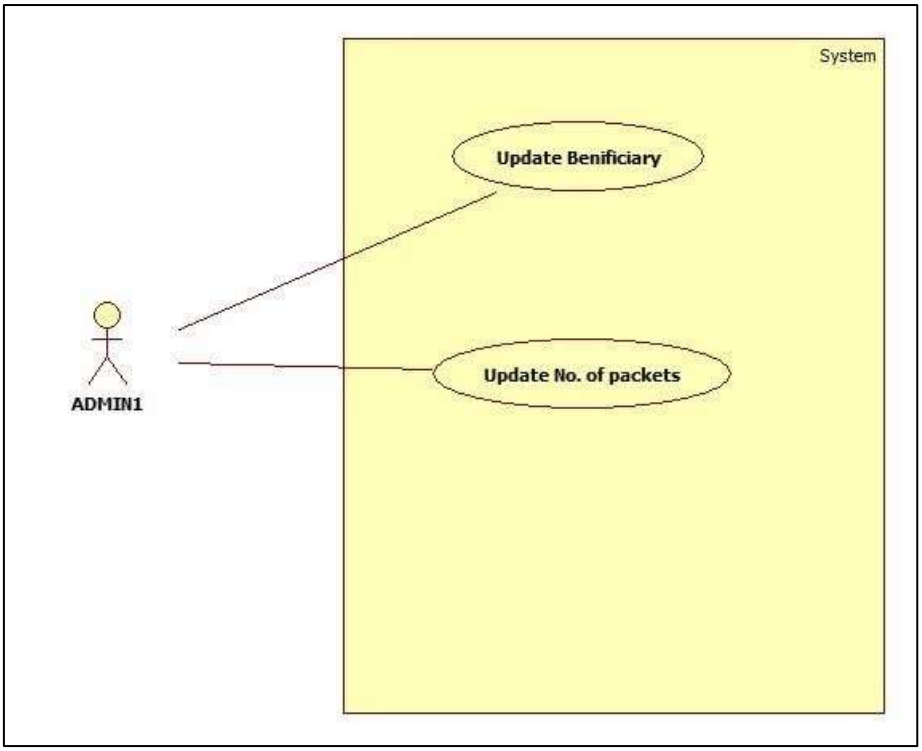

Fig 6: Use Case Diagram of PackInfo

Chalan

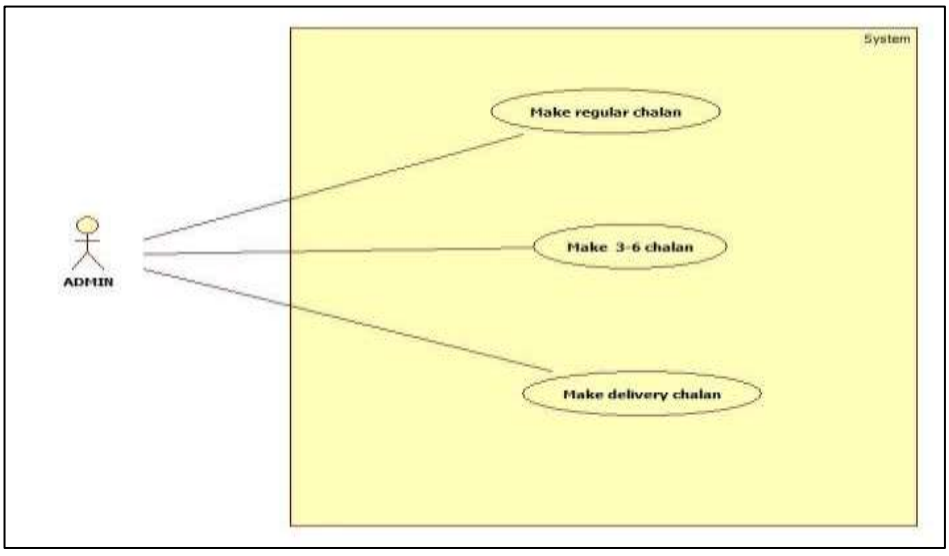

Fig 7: Use Case Diagram of Chalan

Class Diagram

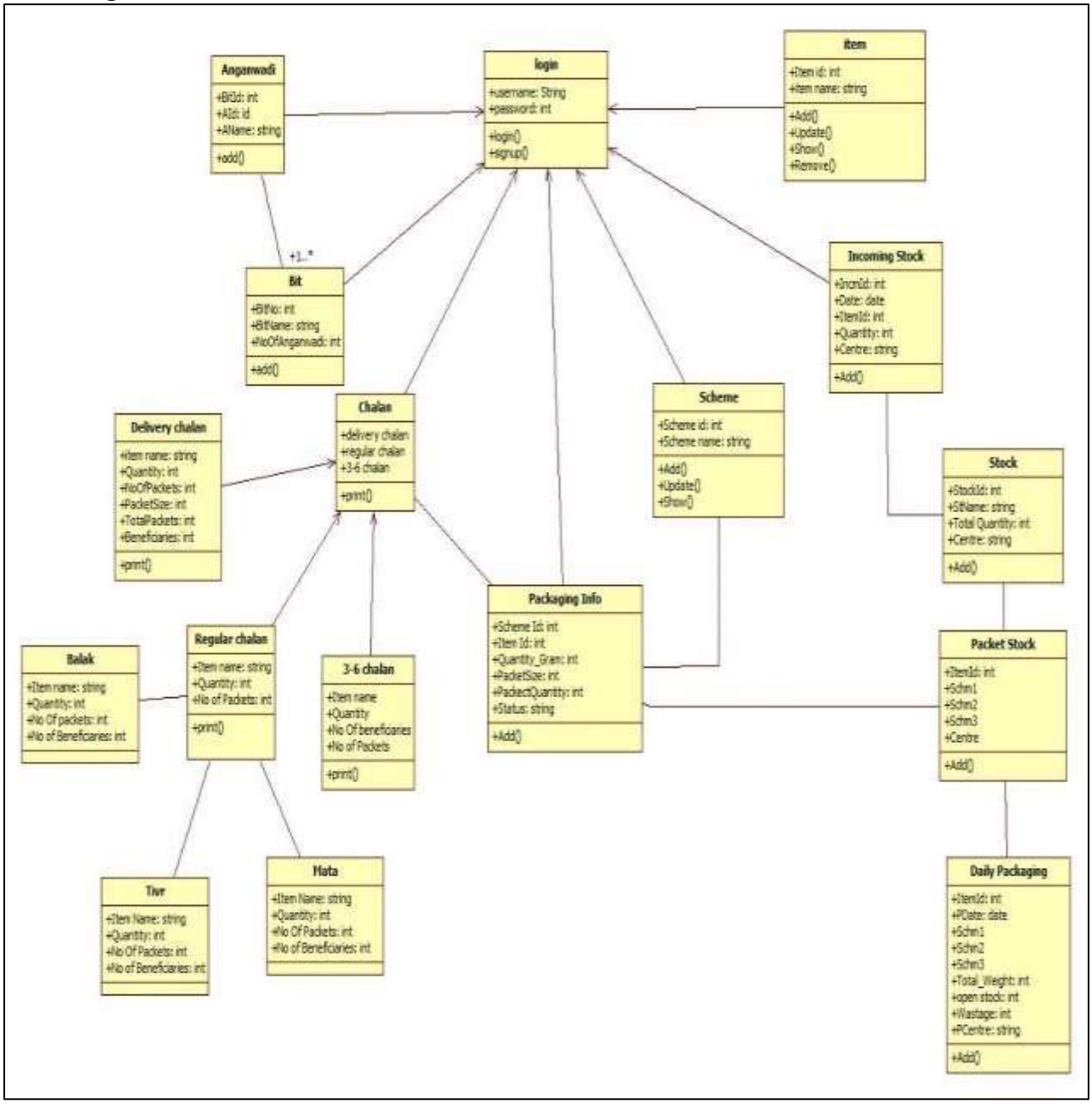

Fig 8: Class Diagram

Sequence Diagram:

Beet, Anganwadi Beneficiaries:

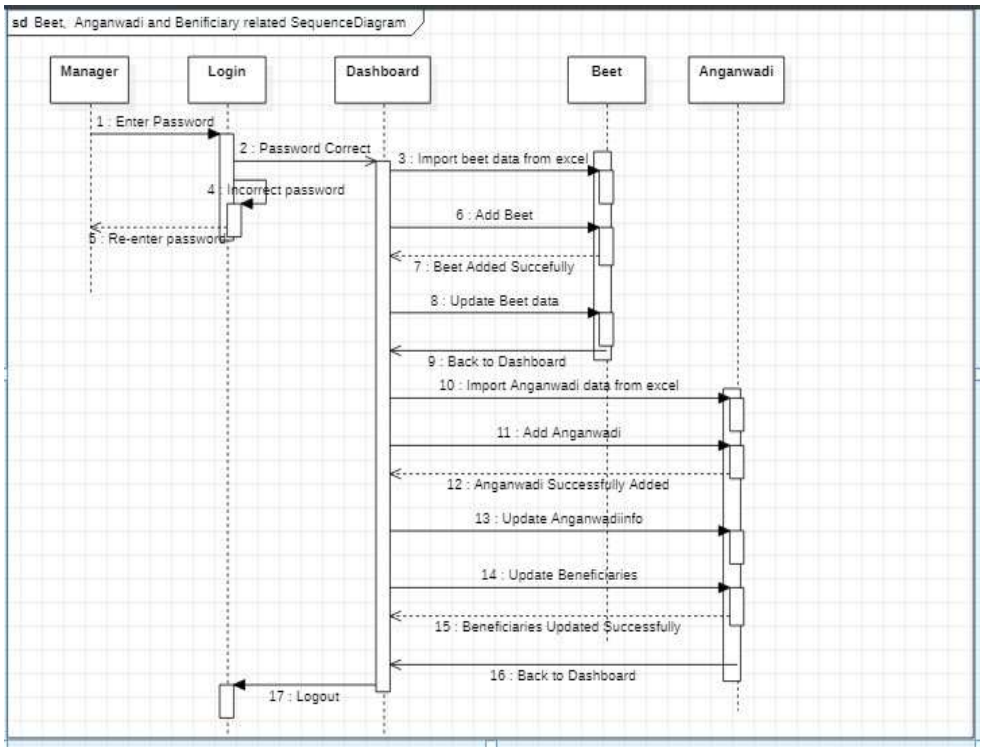

Fig 9: Sequence Diagram of Beet, Anganwadi Beneficiaries Items,

Scheme:

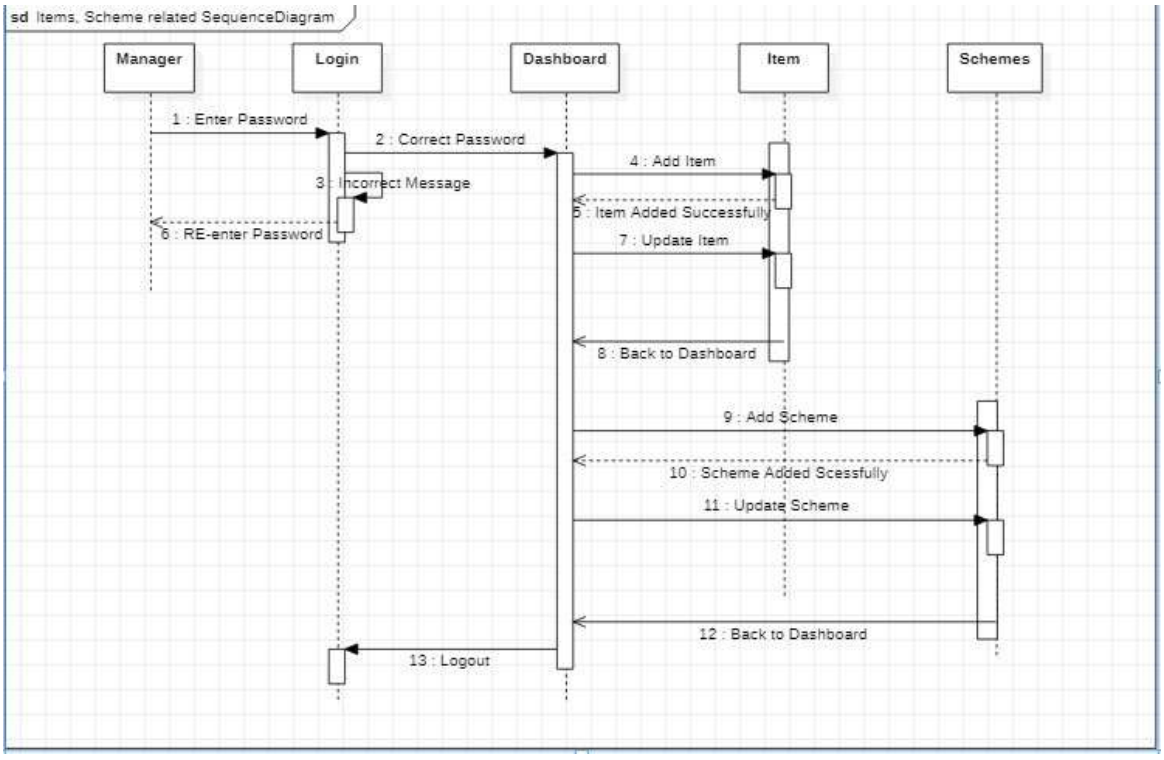

Fig 10: Sequence Diagram of Items, Scheme

Stock, Packaging, Packet Stock:

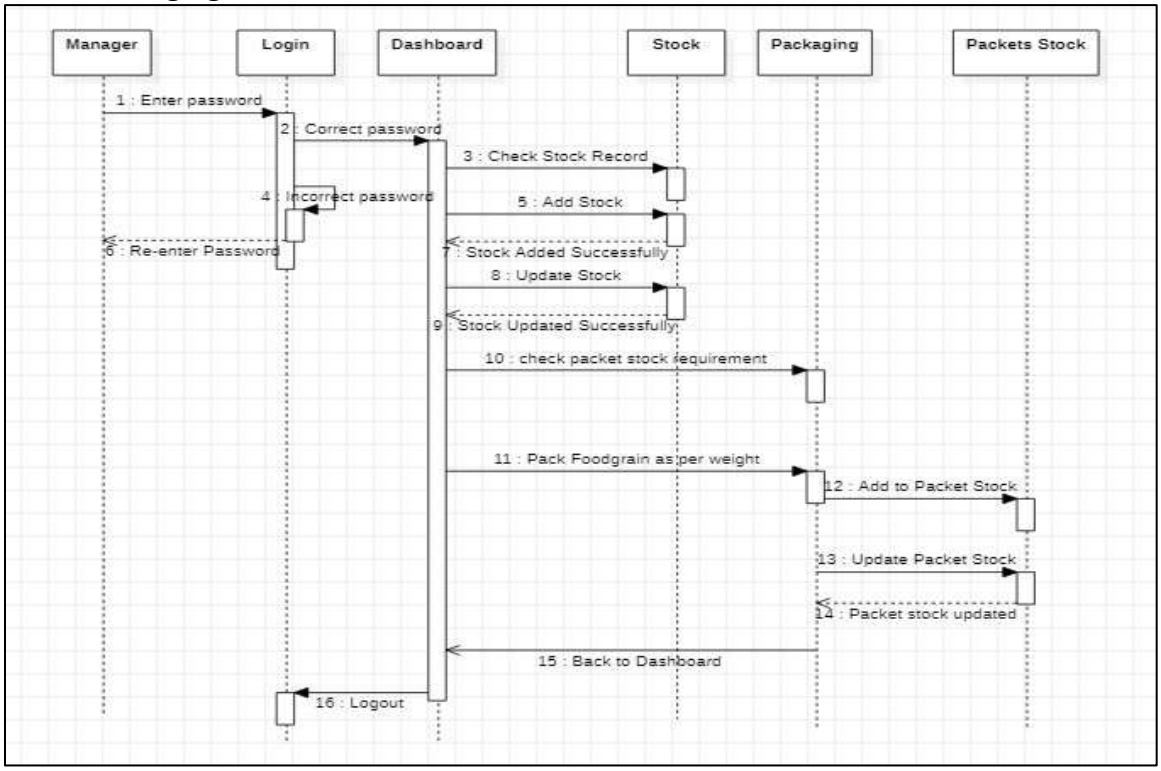

Fig 11: Sequence Diagram of Stock, Packaging & Packet Stock Challan:

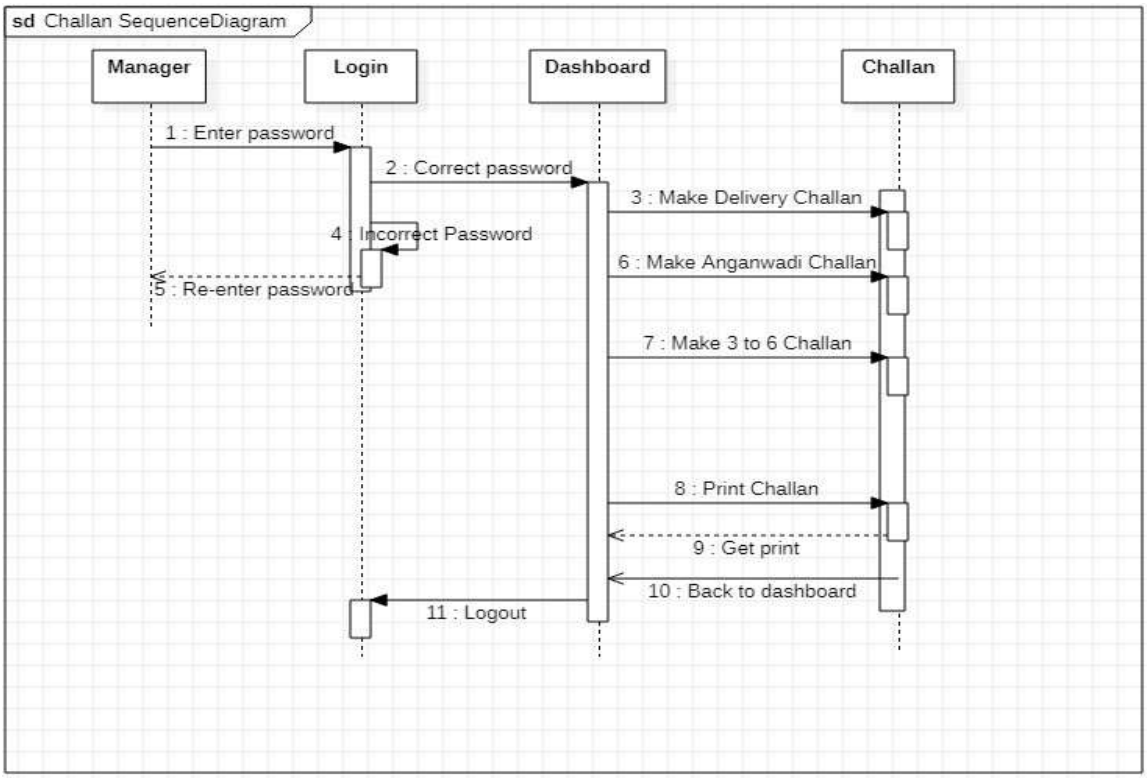

Fig 12: Sequence Diagram of challan

Deployment Diagram:

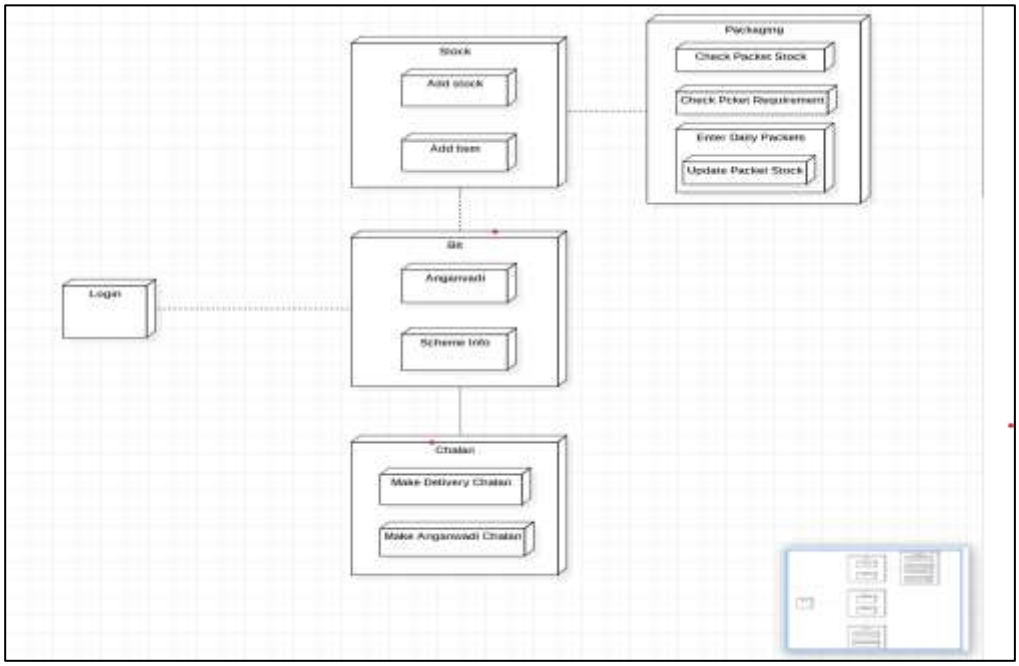

Fig 13: Deployment Diagram A

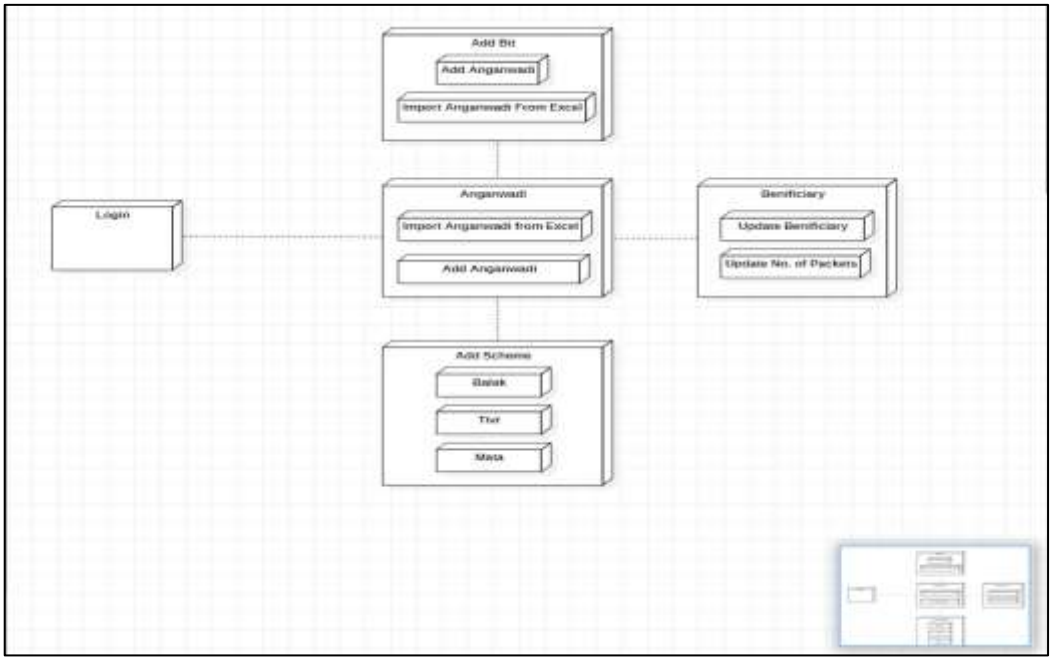

Fig 14: Deployment Diagram B

4. SYSTEM DESIGN

4.1 Basic Modules

The system is basically divided into three modules as per the functionality they are as follows:

Module 1: Login Module

This will consist of a login screen. Here, admin can log into the system using username and password.

Module 2: Stock Module

This will consist of two types of stock that are Raw stock and Packaging stock. In this module add stock, check stock, etc. functions are given as per requirement.

Module 3: Chalan Generation

This module will generate 3types of chalan that are Regular chalan, 3-6 chalan, Delivery chalan. These chalans have their own purpose. These chalans act as a report.

4.2 Data Design (Database tables and database diagram)

1.Login table

Column name	Description	Type	Constraints
Username	Enter username of admins	Varchar(MAX)	Not null
Password	Set password	Varchar(MAX)	Not null

2. Items

Column Name	Description	Type	Constraints
Item Id	ID of items	int	Primary key
Item name	Name of Items	nvarchar(MAX)	Not null

3.Incoming Stock

Column Name	Description	Type	Constraints
Incm Id	ID of items	int	Primary key
Date	Date of Coming stock	Date	Not null
Item id	ID of items	int	Foreign key
Quantity (kg)	Quantity of items	float	Not null
Packaging Center	Name of the Packaging Center	nvarchar(MAX)	Not null

4.Stock Table

Column Name	Description	Type	Constraints
Stock Id	ID of Stocks	int	Primary key
Item Id	Id of items	int	Foreign key
Total Quantity (kg)	Total Quantity of items	float	Not null
Packaging Center	Name of the Packaging Center	nvarchar(MAX)	Not null

5.Scheme

Column Name	Description	Type	Constraints
Scheme Id	ID of Scheme	int	Primary key
Scheme name	Name of Scheme	nvarchar(MAX)	Not null

6.Packaging Info

Column Name	Description	Type	Constraints
Packaging ID		int	Primary key
Scheme Id	ID of Scheme	int	Foreign key
Item Id	ID of items	int	Not null
Quantity in gram	Quantity of items in gram	nvarchar(MAX)	Not null
Packet Size	Size of packet	float	Not null
Packet Quantity	Each packet Quantity	int	Not null
Status	Availability of Items	nvarchar(MAX)	Not null

7. Packet Stock

Column name	Description	Type	Constraints
Item Id	ID of items	Varchar(MAX)	Primary key
Scheme1		Varchar(MAX)	Not null
Scheme2		Varchar(MAX)	Not null
Scheme3		Varchar(MAX)	Not null
Packaging Center	Name of the Packaging Center	Varchar(MAX)	Not null

8.Daily Packaging

Column name	Description	Type	Constraints
ID		int	Primary Key
Item Id	ID of items	int	Not null
Packaging _date	Date of packaging	date	Not null
Balak		int	Null
Tivr		int	Null
3-6 balak		int	Null
Mata		int	Null
Total Quantity		float	Null
Wastage		float	Null
Packaging Center	Name of the Packaging Center	nvarchar(MAX)	Not null

9. Prakalp

Column name	Description	Type	Constraints
Prakalp ID		int	Primary key

Prakalp Name	Name of Prakalp	Nvarchar(MAX)	Not null

10.Bit data

Column name	Description	Type	Constraints
Prakalp ID		int	Primary key
Bit Id	Id of Bits	int	Primary key
Bit Name	Name of bit	nvarchar(MAX)	Not null

11.Anganwadi data

Column name	Description	Type	Constraints
Prakalp No		int	
Bit Id	Id of Bits	int	Primary Key
Anganwadi Id	Id of anganwadi	int	Primary Key
Anganwadi Name	Name of anganwadi	nvarchar(MAX)	Not null

12. Distribution Info

Column name	Description	Type	Constraints
ID		int	Not null
Prakalp		nvarchar(MAX)	Not null
Anganwadi		nvarchar(MAX)	Not null
Month		nvarchar(MAX)	Not null
Balak		nvarchar(MAX)	Not null
Tivr		int	Null
3-6 Balak		int	Null
Mata		int	Null

Status		nvarchar(MAX)	Not null
Chalan		nvarchar(MAX)	Null

13. Distribution Details

Column name	Description	Type	Constraints
ID		int	Not null
Prakalp ID		int	Not null
Bit No		int	Not null
Month		nvarchar(MAX)	Not null
Year		nvarchar(MAX)	Not null
Balak Benefeciaries		int	Null
Tivr Benefeciaries		int	Null
3-6 balak Benefeciaries		int	Null
Mata Benefeciaries		int	Null

4..3 User Interface Design

Fig 15: Signup Page

Fig 16: Signin Page

Fig 17: Dashboard page

Fig 18: Stock_item UI

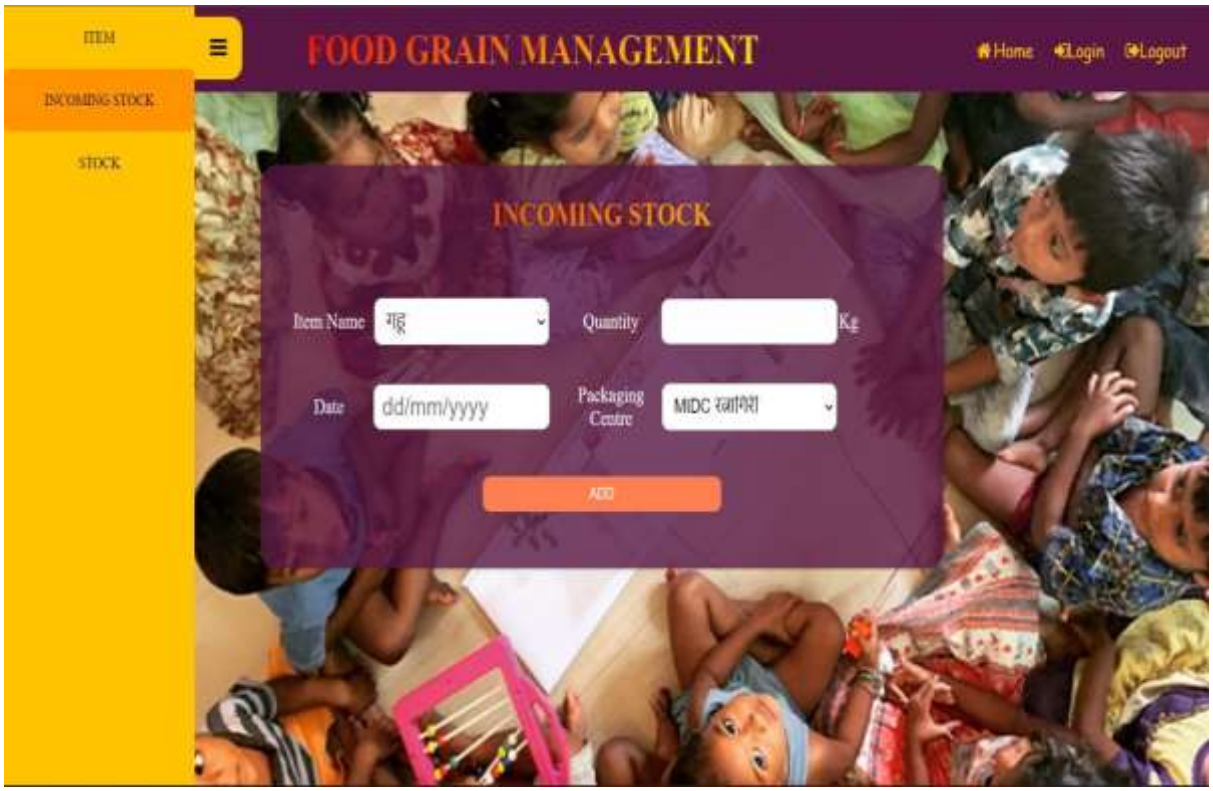

Fig 19: Stock_Incoming Stock UI

Fig 20: Stock_Stock UI

Fig 21: Packaging Scheme Entry UI

Fig 22: Packaging Packet Stock UI

Fig 23: Packaging Daily Packaging UI

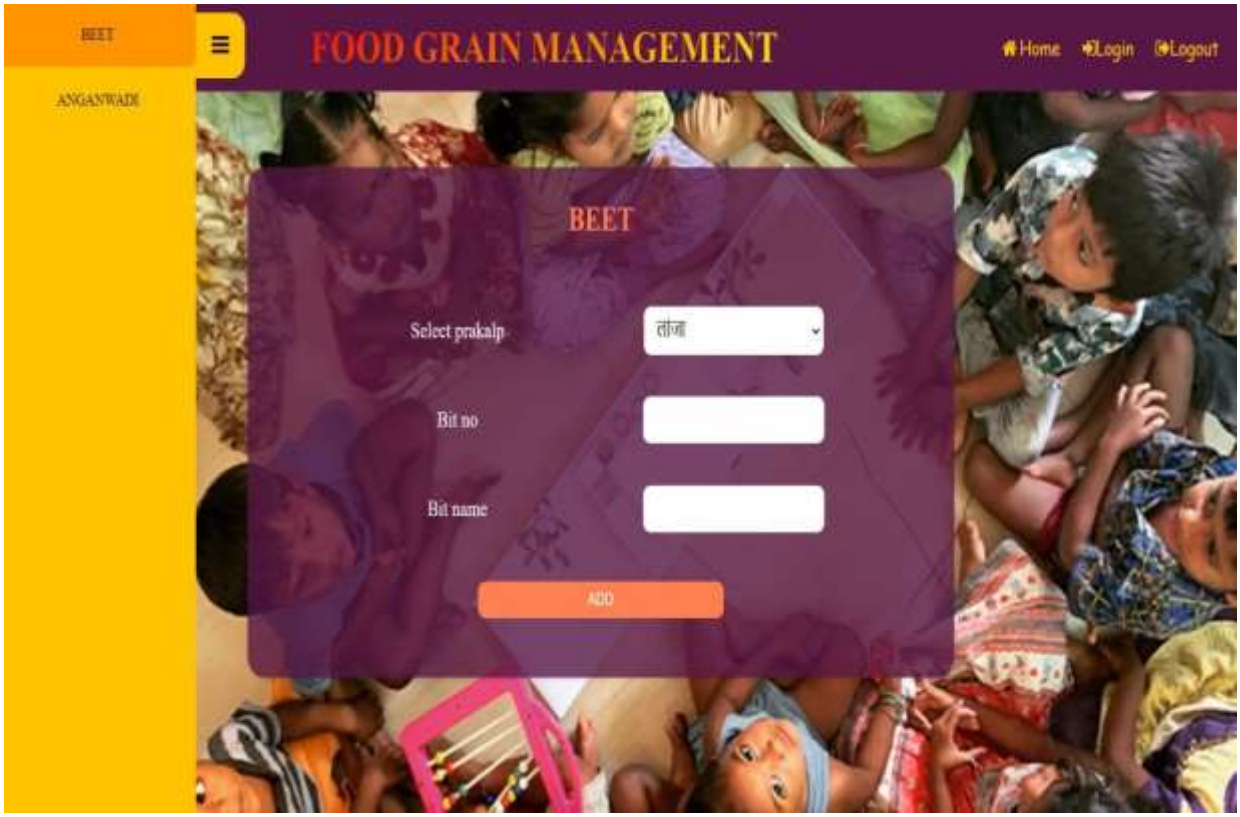

Fig 24: Beet page UI

Fig 25: Anganwadi page UI

Fig 26: Distribution Excel

Fig 27: Anganwadi Excel

Fig 28: Beet Excel

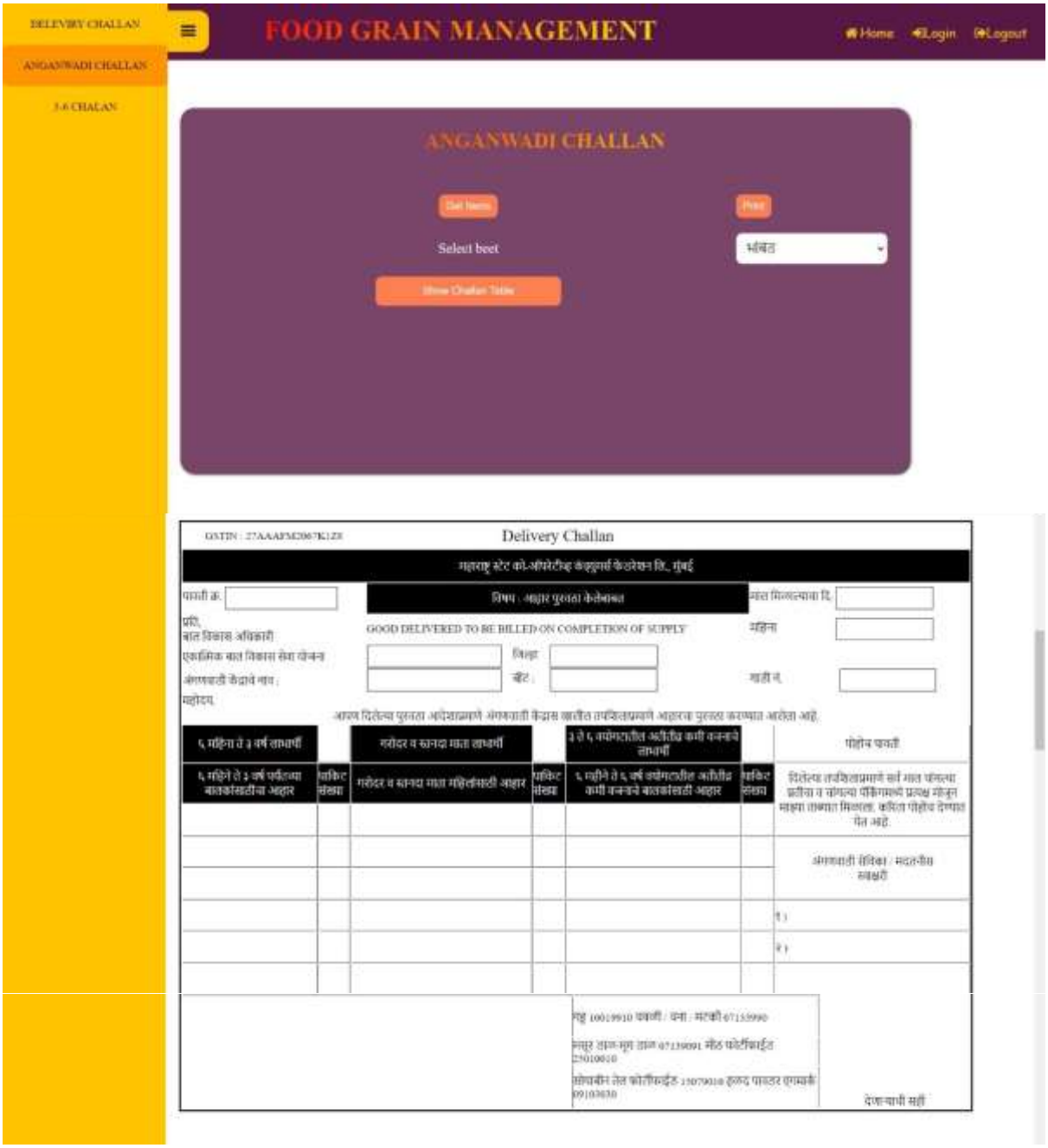

Fig 29: Anganwadi Challan

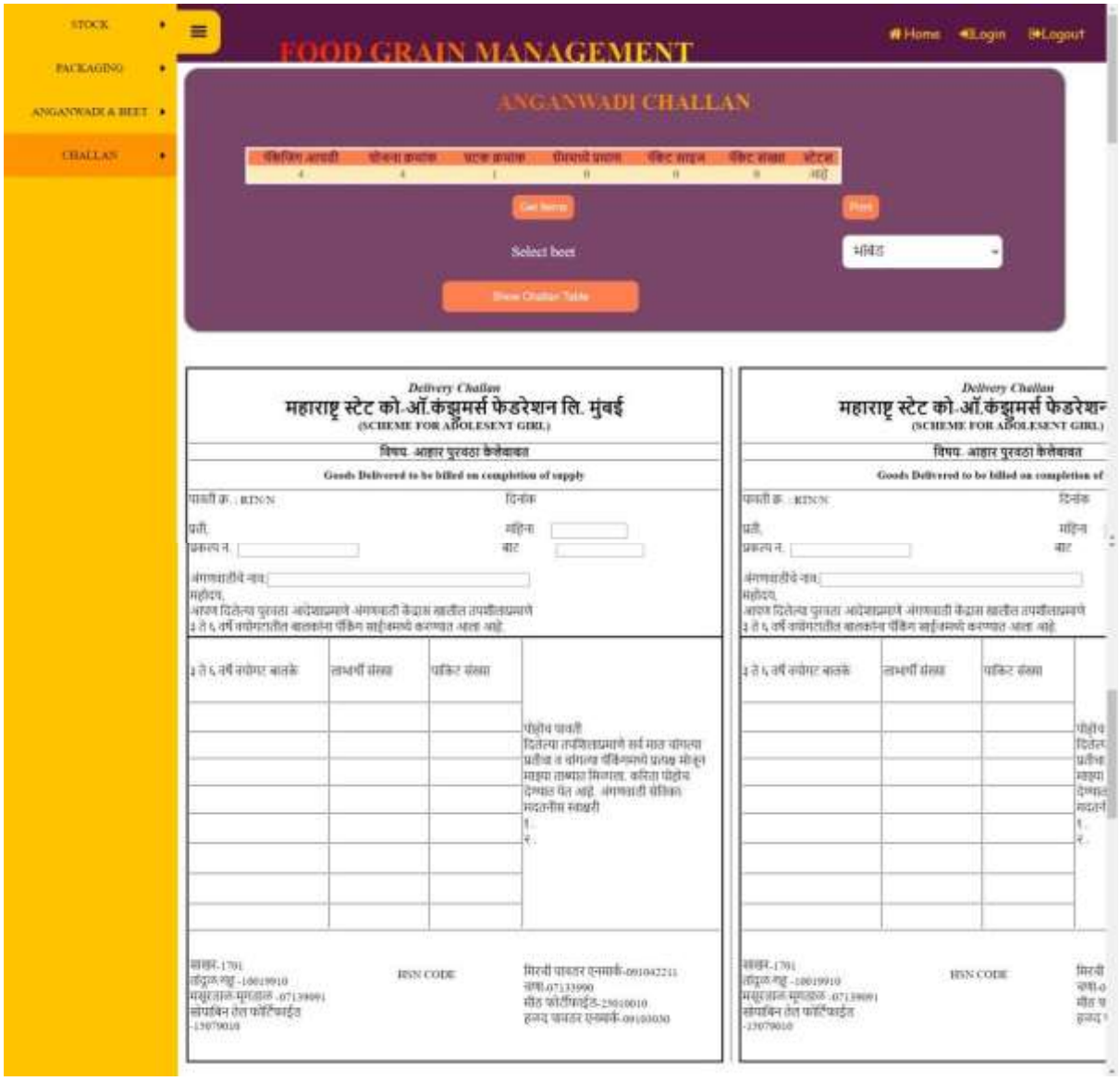

Fig 30: 3-6 Challan

4.4 Test Cases

1. Login Form

Sr. No.	Possible Inputs	Expected Result	Actual Result	Result (pass/fail)
1.	Valid Username and correct Password	Login Success Message and Redirect to dashboard	Login Success Message and Redirect to dashboard	pass
2.	Valid Username and incorrect Password	Login Failure Message and Reload login Page	Login Failure Message and Reload login Page	pass
3.	Invalid Username and correct Password	Login Failure Message and Reload login Page	Login Failure Message and Reload login Page	pass
4.	Invalid Username and incorrect Password	Login Failure Message and Reload login Page	Login Failure Message and Reload login Page	Pass

2. Item

Sr. No.	Operation Title	Possible Inputs	Expected Result	Actual Result	Result (pass/fail)
1.	Add new item	Enter item id and item name and click on Add button	Items entered Successfully	Items entered Successfully	pass

3.Incoming Stock

Sr. No.	Operation Title	Possible Inputs	Expected Result	Actual Result	Result (pass/fail)
1.	Stock Update	Select item name and packaging center and click on Update button	Stock updated of selected packaging center for respective item name	Stock updated of selected packaging center for respective item name	pass
2.					

4.Stock

Sr. No.	Operation Title	Possible Inputs	Expected Result	Actual Result	Result (pass/fail)
1.	Unpacked Table	Select packaging center and click on Add button	Show unpacked stock according to selected packaging center	Show unpacked stock according to selected packaging center	pass

5.Scheme entry

Sr. No.	Operation Title	Possible Inputs	Expected Result	Actual Result	Result (pass/fail)
1.	New Scheme Add	Enter Scheme id and Scheme Name and click on Add button	Scheme added Successfully	Scheme added Successfully	pass

Sr. No.	Operation Title	Possible Inputs	Expected Result	Actual Result	Result (pass/fail)
2.		Select Scheme Name, Item Name and Status and Enter Item Name with Packet size, Quantity and No. of Packets And click on Add Button	Enter packets successfully	Enter packets successfully	pass
3.	Scheme Update (Yes/No)	Select Scheme Name , Item Name with Packet size and Status and click on Update button	Scheme updated of selected scheme name , status and item name	Scheme updated of selected scheme name , status and item name	pass

6.Packet stock

Sr. No.	Operation Title	Possible Inputs	Expected Result	Actual Result	Result (pass/fail)
1.	Packed Stock	Select packaging center and click on show button	Show packed stock according to selected packaging center	Show unpacked stock according to selected packaging center	pass

7.Daily packaging

Sr. No.	Operation Title	Possible Inputs	Expected Result	Actual Result	Result (pass/fail)
1.	Showing Packet Quantity (in gram)	Select packaging center and item name and click on the button show	Show quantity in gram of all schemes	Show quantity in gram of all schemes	Pass
2.	Total Weight	Insert no of packed packets to their respective schemes and calculate total weight	Total weight display in kg successfully	Total weight display in kg successfully	Pass
3.	Wastage	Insert remaining stock and open stock and calculate wastage	Wastage display in kg successfully	Wastage display in kg successfully	Pass
4.	Adding above details	Click on add button	All entries stored to database successfully	All entries stored to database successfully	Pass

8.Beet

Sr. No.	Operation Title	Possible Inputs	Expected Result	Actual Result	Result (pass/fail)
1.	New Beet	Select prakalp and enter beet no & beet name and click on add button	Entries added sucessfully	Entries added sucessfully	Pass

9.Anganwadi

Sr. No.	Operation Title	Possible Inputs	Expected Result	Actual Result	Result (pass/fail)
1.	New Anganwadi	Select prakalp and select beet name & Enter anganwadi id and Enter anganwadi name click on add button	Entries added sucessfully	Entries added successfully	Pass

CONCLUSION

This project was actually a great opportunity for growth of myself and I enjoyed every single period of work. The task took more time to the different parts of the project development and gave its genuine understanding. The struggle and challenges faced by me during the project development was life learning and will always be our actual guide for future. I had put all my best to perform the project.

The project is running effectively and agreeably to satisfy the clients expectations. During the task advancement I truly understood the betterments and facilities those might have been given to upgrade the venture. I look at them as future improvements.

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