Navoda Rice Mill

E-Commerce Web Application

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Introduction

A rice mill is a piece of food processing machinery used to turn paddy into rice. Before the procedure starts, Paddy is gathered from the fields and checked again. The rice product is obtained from paddy fields, washed using sorting equipment, and then milled & hygienically processed in machinery with a dust-free atmosphere. This rice is subsequently sold to consumers in the market. In order to further generate an edible, white rice, the main goal of rice milling would be to separate the husks and the bran layers. This milling procedure may involve one step, two steps, or multiple stages. Husk and bran strata are removed inside one pass during a one-step process as opposed to two passes during a two-step process. The multi-stage milling method, where rice goes through various numbers of processes ranging from pre-cleaning through weighing of rice, is mostly used for village or local consumption. The marketing of rice uses this multi-stage milling procedure.

1.1 Document Purpose

This paper outlines the Central Agricultural Portal's Software Requirements Specification (CAP). This document's goal is to offer recommendations for the creation of the Central Agricultural Portal.

1.2 Scope

The purpose of this Documentation is to outline the required functionality for the Central Agricultural Portal and related subsystems, such as the National Farmers' Database, Expert Advisory System, Grievance Redress and Management System, and Content Management. Additionally, it specifies the portal's user interfaces, user attributes, sitemap, navigation, etc.It also addresses non-functional requirements such as those related to performance, availability, security, and maintainability, among others.

1.3 Intended Audience and Document Overview

The document is intended for the following occupations:

1. Project managers: project managers are those who supervise the entire project.

2. Implementers or code experts: This category of professionals implements the design stated by the developers using programming languages. They are responsible for all the applications, modules, and graphical user interfaces.

3. Testers: This group of people tests the developed system using specific test cases.

   Determine the efficiency and estimate the performance of the system.

4. Documentation writers: Documentation writers prepare the user manuals and other necessary documents for proper setting of the system in a certain operating environment.

5. Users: The people who wants to use the system .They are responsible for the quality of the software requirement specification document through their valuable comments on the initial requirement documents. The system will provide an easy-to-access web-based service that can give management an effective means of managing all resources.

1.4 References and Acknowledgments

[1] Use Case Diagram [jpg] by Author

1.5 Definitions

Definitions :

1. Users: admin

2. Admin: An application administrator is responsible for system management.

Overall Description

The rice milling market is being driven by factors including the rising production and consumption of rice worldwide. Many nations consider rice to be a crucial part of the diet & anticipate that good-quality rice will be readily available on the market. As a result of the expansion of the rice processing sector, the need for packaging and clean rice has expanded. By removing the husk and grain layers from the rice, rice milling enables us to acquire white rice from of the rice paddies. Additionally, the development of the agricultural sector, industrialization, and technology has given many farmers and enterprises an opportunity to transform paddy into rice. High demand for rice milling in agriculture for post-harvest management technology is one of the determining factors. By boosting the marketability of agricultural products, rice husk in business also can results in sales of paddy to final consumers. The machinery used to mill rice provides a smooth operation. Furthermore, the unit output is lightweight and has a small capacity, which makes it easy to use and saves time. The improvement of milling is now more effective, efficient, and produces better-quality products. The rice milling market, however, may be hampered by elements such as crop loss, significant initial losses, and a lack of storage space. This could alter the situation and prevent the market for rice milling from expanding.

2.1 Perspective

This system is made up of a web application for e-commerce platforms in the system that is used to manage the various rice mills in the system. This system must be compatible with e-commerce platforms.

2.2 Functionality

The E-Commerce Rice Mill is a service that supports the digital rice marketing process and can be divided virtually among several other mills at several different locations. Administrators can manage the system from a dashboard.

2.3 Users and Characteristics

Users of the E-Commerce Rice Mill can be any person who is interested in having E-Commerce Rice Mill service. Mainly, we can categorize the users as admin.

Users: Admin

Admin: As admin, they have the task of maintaining the system, such as maintaining the database, performing regular backups, keeping the system running, and handling any failures of the system. Admin is the only one who has access to change any data in the system.

2.4 Future Requirements

The system could be extended with some of the following features in the future:

- Possibility of editing data rather than read-only functionality
- Include other languages' support.
- Include more functionality in the web application.
- Develop mobile apps for other platforms.

2.5 Design and Implementation Constraints

- The software will be implemented in JAVA to ensure platform independence, so the end user system must have a JAVA runtime environment.
- The user must have Flash Player installed to view videos and animations.
- To view presentation slides, browsers must have plug-ins.
- Good internet connection speed for uninterrupted service.

2.6 Assumptions and Dependencies

- Financial transactions are managed by Admin who ensures their integrity

Specific Requirements

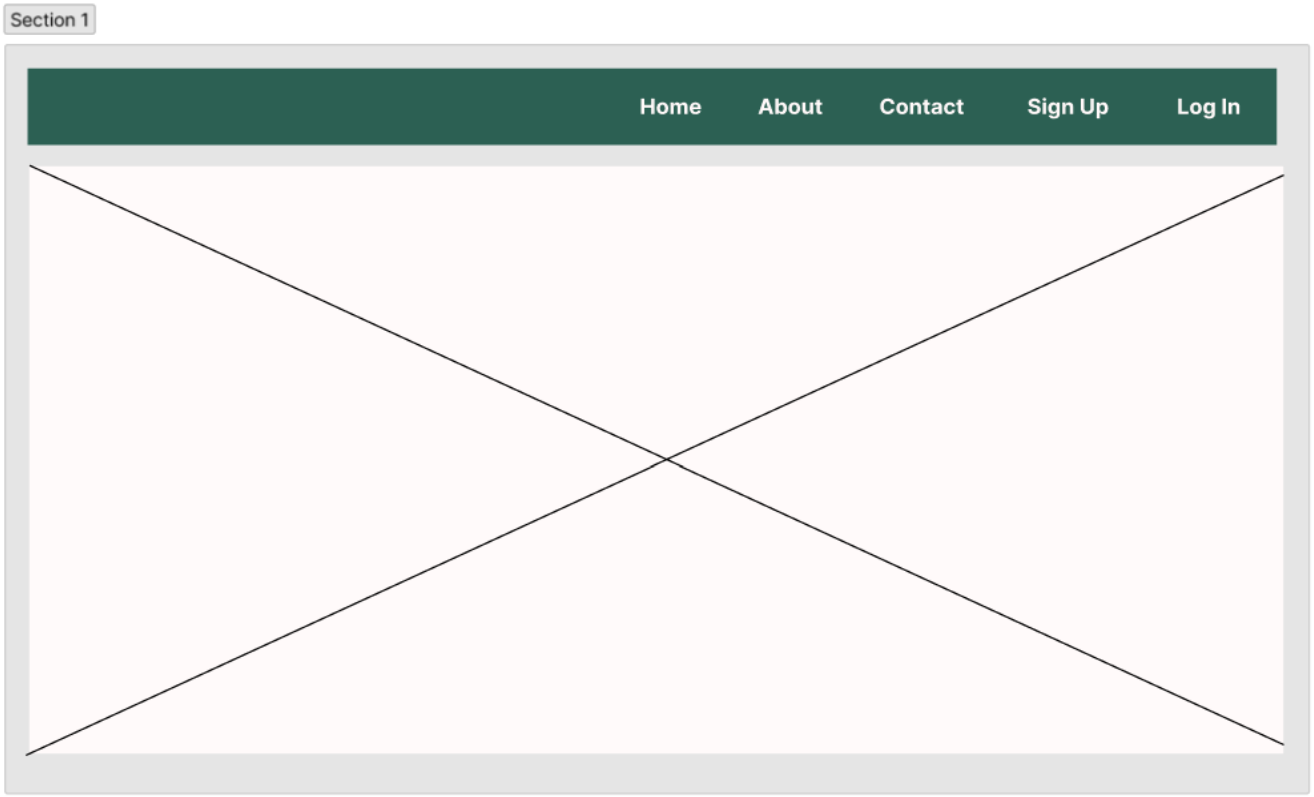
This section contains the specific requirements of the system. In order to define the system completely, the requirement should be, when possible:

3.1 External Interface Requirements

3.1.1 User Interfaces

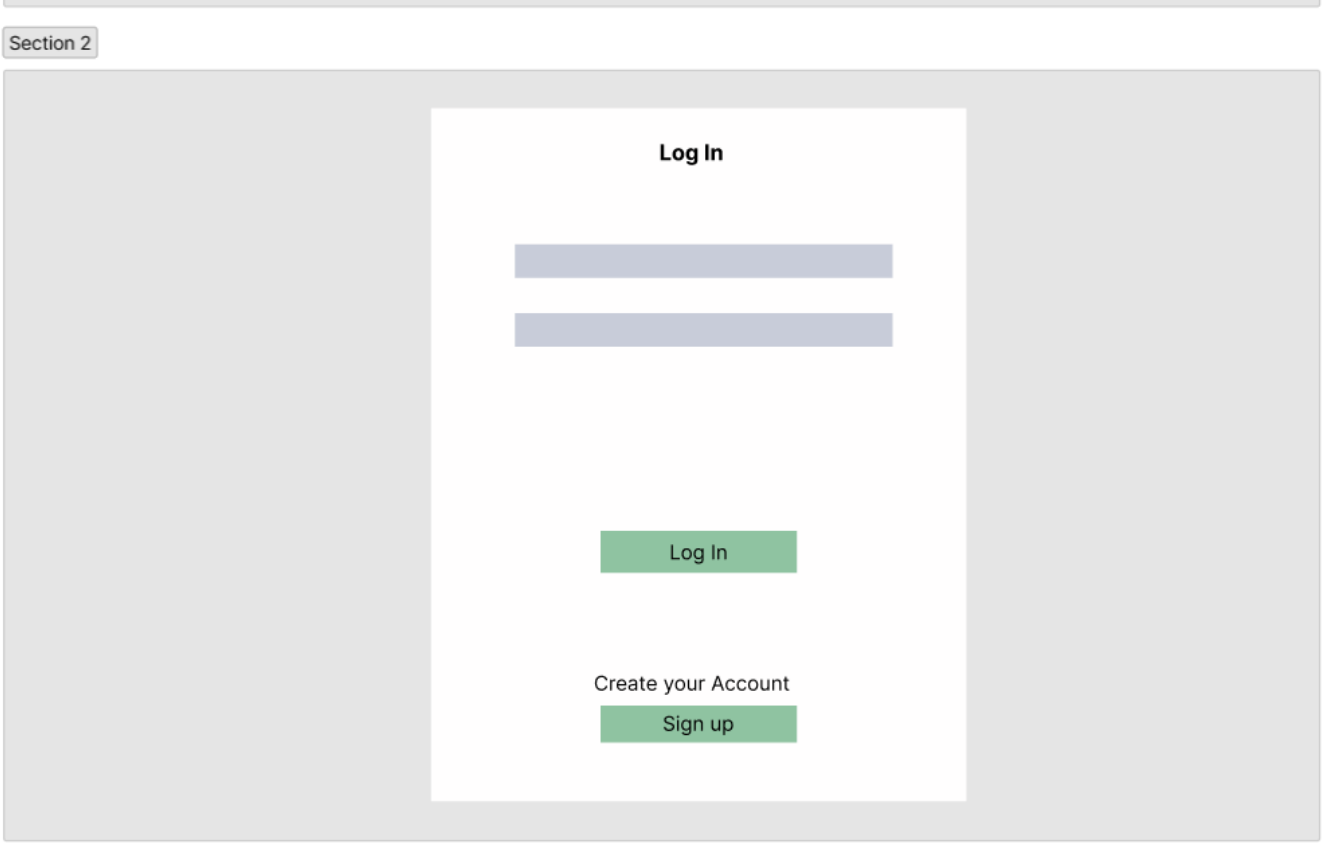
Figma URL – https://www.figma.com/file/Rx9x6i2vjtNYBnrQ9R9QxQ/Rice-Mill?node-id=0%3A1&t=oN6yqtVCJ3AuNo5z-1

Home UI



The home interface enables you to login or register for the system.

Login UI



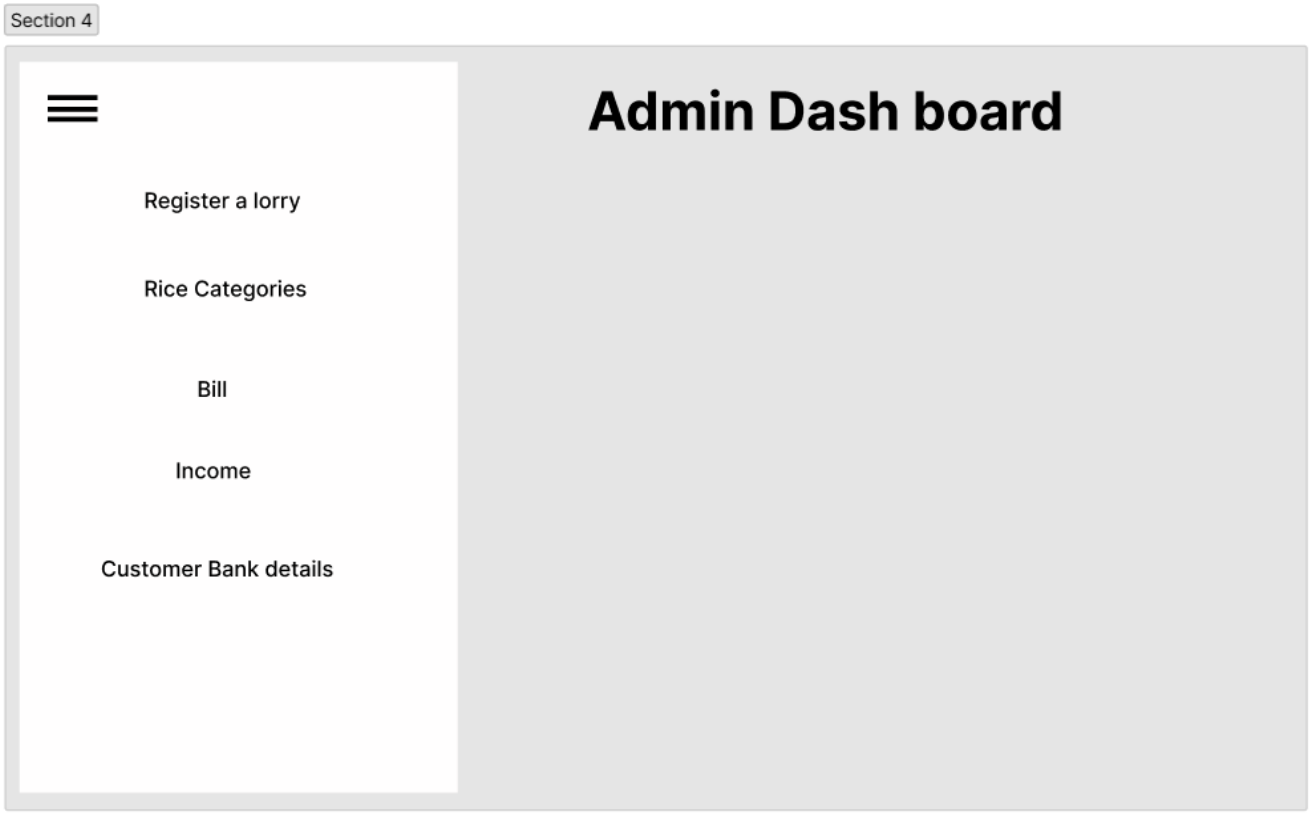
The login interface enables you to integrate user login. The system offers protection by storing passwords in encrypted form.

Register UI

The registration interface enables a new Admin to register with the system.

- Full name
- Address
- Email
- User name
- Pass word

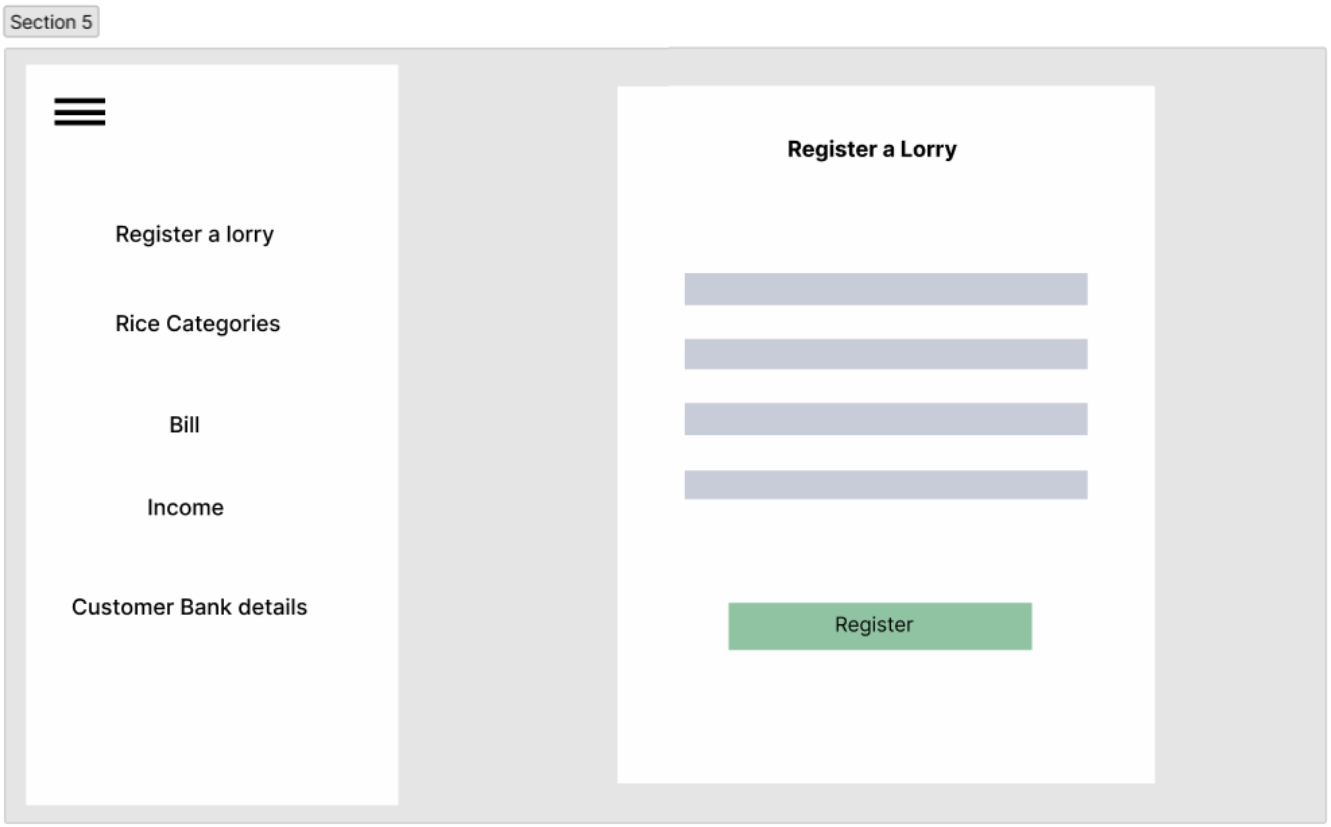
Admin Dashboard UI



The admin dashboard interface shows the functions of the Admin like below,

- Register a lorry
- Rice categories
- Bill
- Income details
- Customer bank details

Register Lorry UI

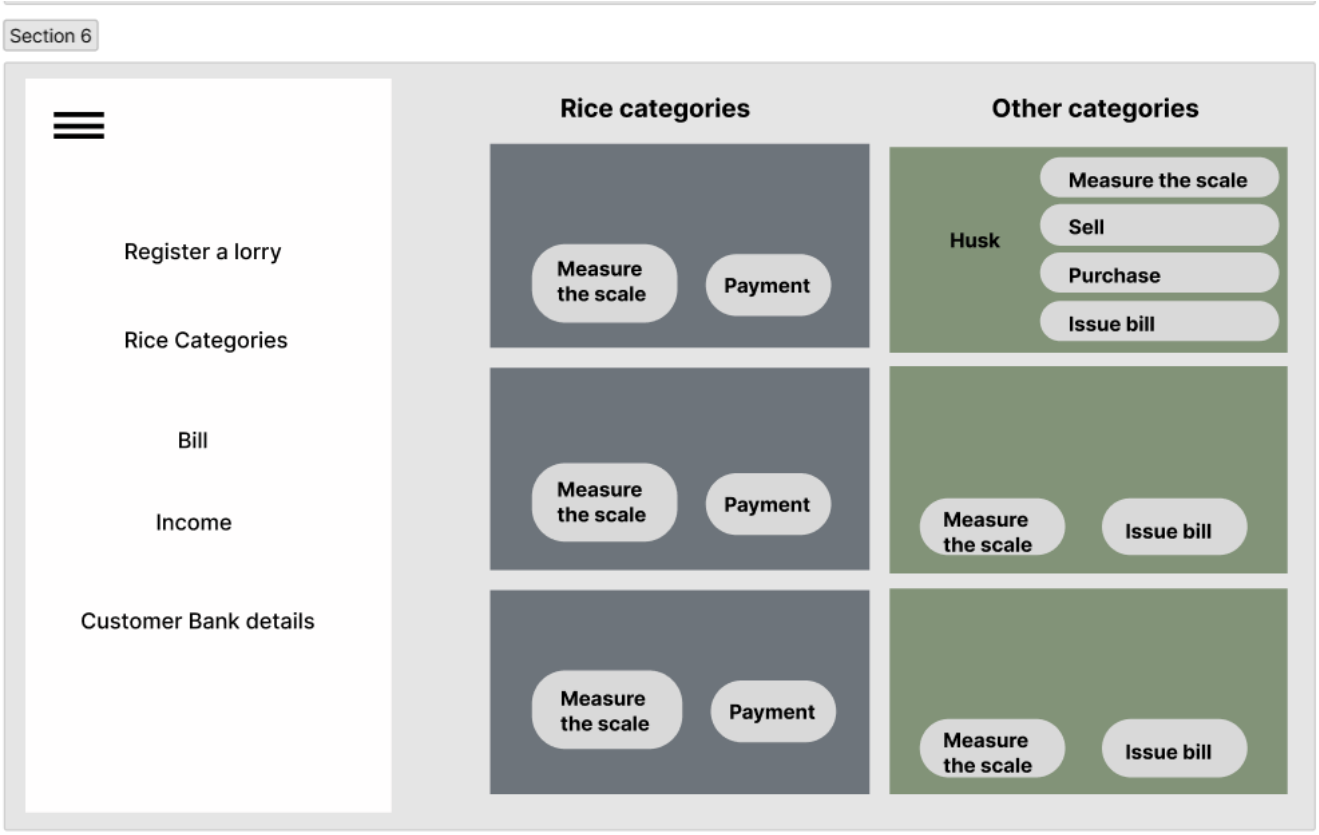


This the lorry registration UI.

Admin can register a lorry by giving below details,

- Register Number
- Chassis Number
- Engine Number
- Vehicle Number

Rice Category UI



There are 2 categories, Rice and Other categories.

Rice categories -

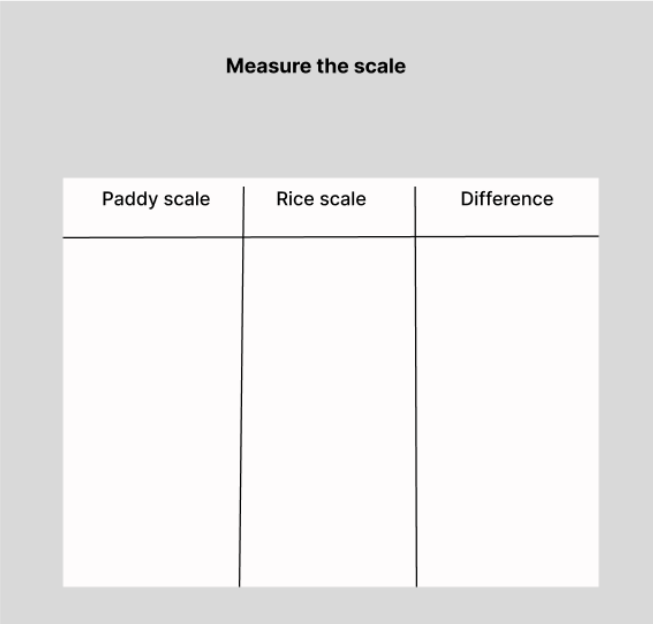
- Kiri samba
- Samba
- Nadu
- White rice
- Red rice
- Kiri white rice
- Red nadu

Other categories –

Broken rice
Black seeds
Polish rice
Husk

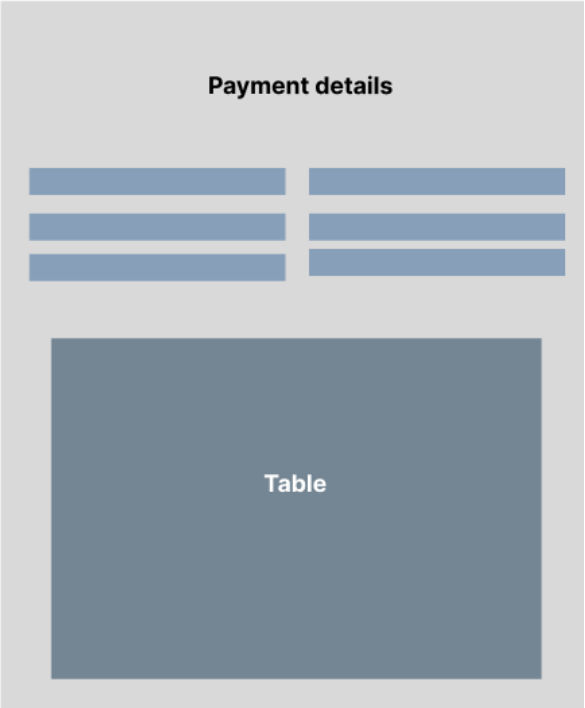
If admin click the button name “Measure scale”, there should be pop a small ui including below details.

Scale of the paddy, Scale of the rice, Difference between the rice and paddy



If admin click the payment button there should be pop up a small ui including below details,

- Customer NIC
- Name
- Bank name
- Branch
- Account Number
- Date and time
- Amount



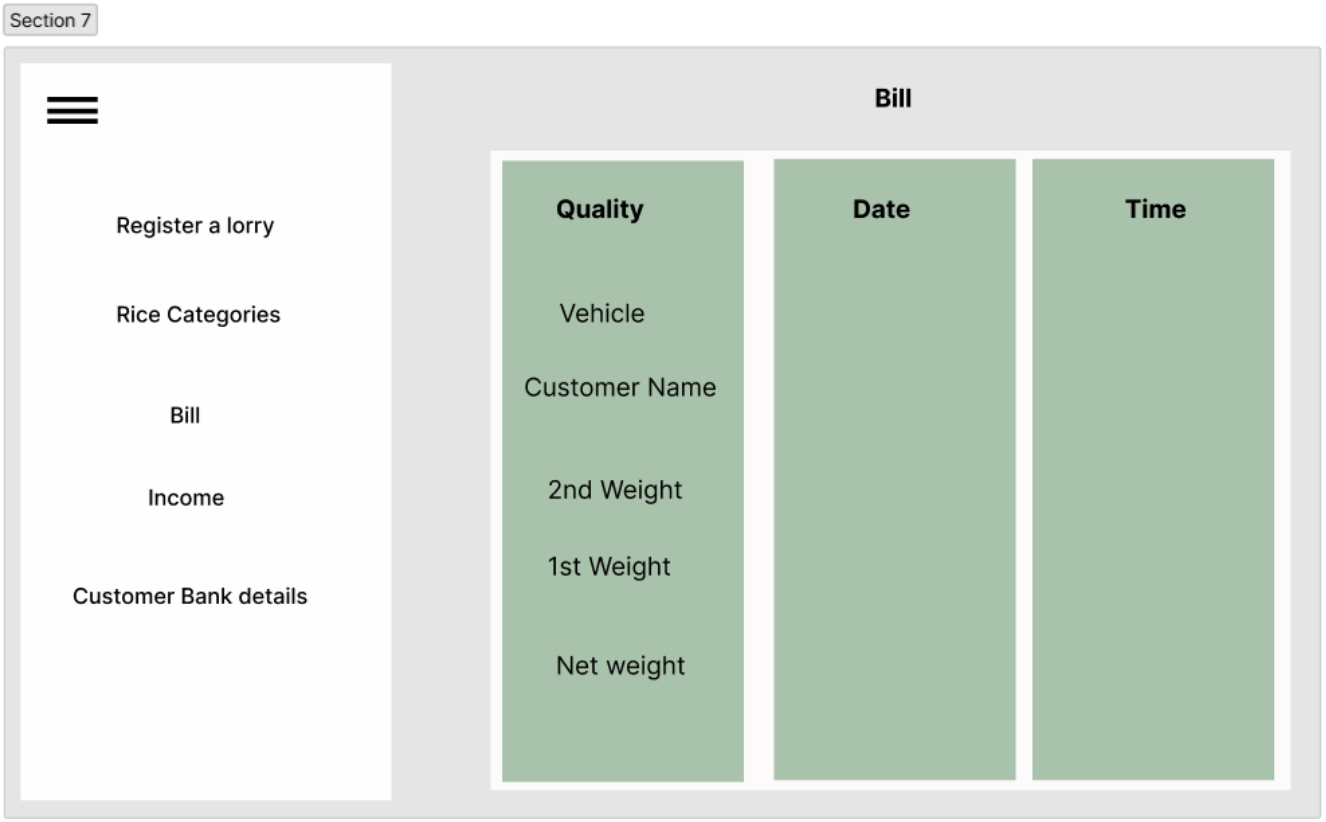
There are other category also. There are husk, polish rice, black seeds and broken rice. Husks are sell and purchase from others by owner. (They purchase husk also sell to others)

Admin can issue a bill and it should be include below details,

- Payment method (bank deposit, card, online)
- Status (Paid or Pending)
- Purchase information
- Withdrawal information
- Customer name
- NIC
- Bank name
- Amount
- Balance

In other category, if admin click the button “Measure the scale” there should be can view the measurement of that category scales.

Bill UI

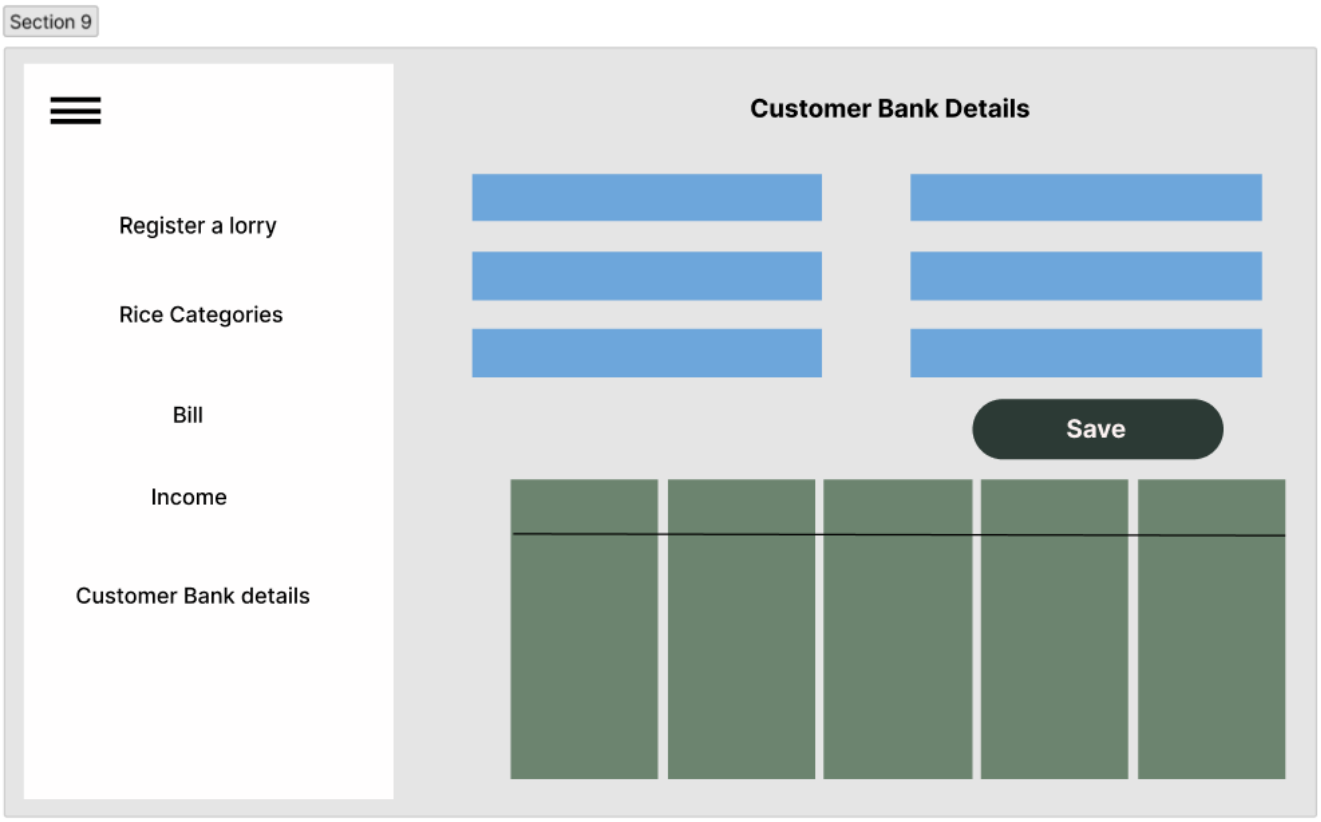


Admin can issues a bill including this details.

Income UI

Admin can view the income yearly, monthly, daily wise.

Customer bank details UI



Admin can save customer’s bank details.

- Customer name
- NIC
- Address
- Bank name
- Branch
- Account number

3.2 Functional Requirements

- The lorry must be registered
- Have category name “Rice”
- Have category name “Paddy Weight”
  1. Have to measure the scale of the paddy.
  2. Have to measure the scale of the rice
  3. Have to measure the weight difference between paddy and rice
- Have to measure the scale of the broken rice.
- Have to measure the scale of black seeds.
- Have to measure the scale of polish rice.
- Have to measure the scale of the husk.
- Husk can purchase or sell
- Income can be checked and viewed on a daily, monthly and annual basis.
- Must be able to issue a bill including the payment methods.
- Can save the customer’s bank details.
- When the weight is measured, the bill may be issued.
- Purchase and withdrawal information should be included in the bill.
- After issuing the bill, the status (paid/pending) may be viewed.

3.2 Non-Functional Requirements

- Maintainability- online web application maintenance should be done properly
- Availability - System should be available at any time except the system maintenance day.
- Usability-The system should be simple to use for all the users. Especially all the functions should be very easy to use.

- Reliability-System should be consistent as it always because it stores important details of all the users. When the system is down, how much time will take to repair the system back again?
- User-Friendliness- Adding interactive simple icons, animations, and informative messages. The application is spontaneous, easy to use, and simple and that the client can rely on the product. Also important is user experience (UX) and user interface (UI).UX means that the app was made for the client to fulfill his needs and expectations.
- Safety and Security-All the user data must be secured well. It validating the user login data. All the deleted information should be removed from the system to avoid system hacking issues. Then the system is protected from hackers.
- Capacity- The exact amount of data that can be stored in the system.
- Performance-Using the latest technologies to develop this E-Commerce Web Application and also data transfer is between the application and the database.

System Design

"Design" is a meaningful engineering representation of something that is to be built. Software design is a process through which the requirements are translated into a representation of the software. Design is the place where quality is fostered in software engineering. Design is the perfect way to accurately translate a customer's requirements into a finished software product. Design creates a representational model and provides detail about software data structure, architecture, interfaces, and components that are necessary to implement a system. This chapter discusses the design part of the project.

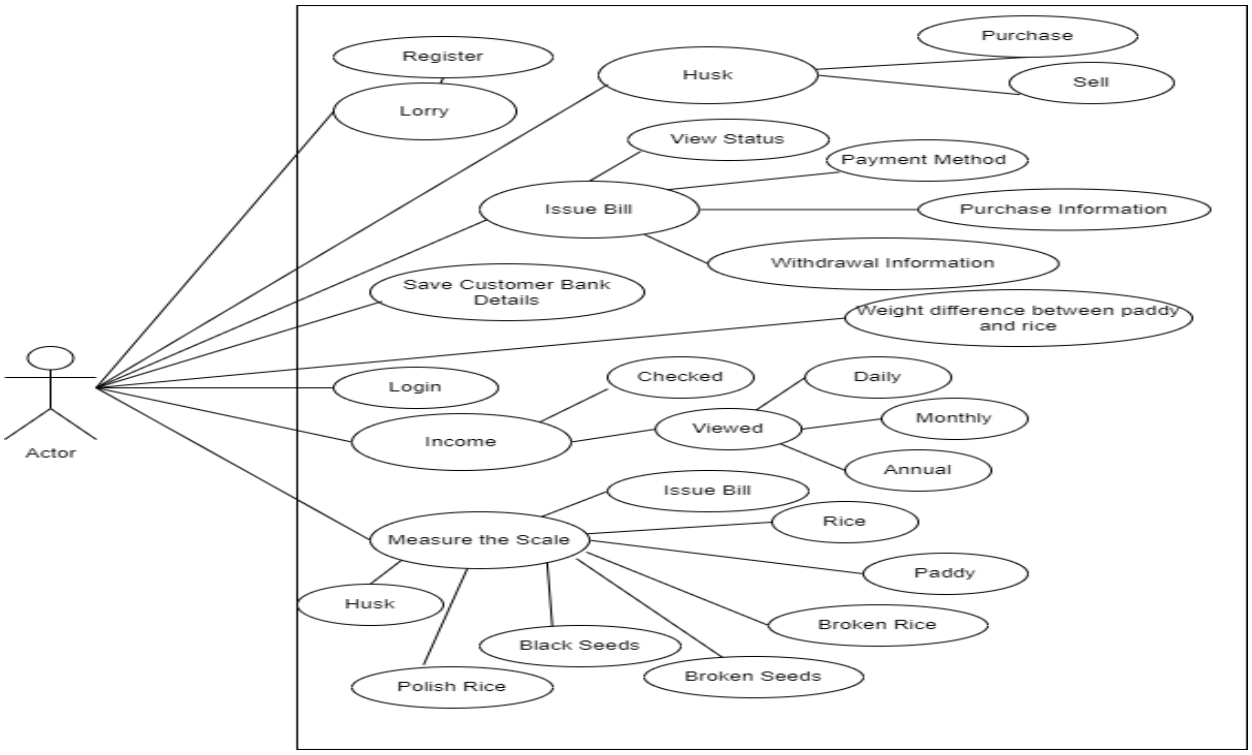
There are two types of diagrams to represent the implementation of a system.

1. Use case Diagrams

4.1 UML Diagrams

4.1.1 Use case Diagrams

A use-case diagram is a type of behavioral diagram created from a use-case analysis. The purpose of each use case is to present an overview of the functionality provided by the system in terms of actors, their goals, and any dependencies between those use cases. Administrator:



Admin:

- Register the lorry.
- Rice, paddy, broken rice, black seeds, polished rice, and husk are all scaled.
- Measure the weight difference between paddy and rice.
- Husks can be purchased or sold.
- Can be checked and viewed daily, monthly, and yearly.
- Bill issued when the weight is measured includes the payment method, purchase, and withdrawal information, and after issuing the bill, the status may be viewed.
- Can save the customer's bank details.

Scope of Extension

The purpose of the this Srs is to outline the functional specifications for the Central Agricultural Portal and related subsystems, such as the National Farmers' Database, Advisory Group System, Grievance Redress and Management System, and Content Management. Additionally, it specifies the portal's user interfaces, user attributes, sitemap, navigation, etc. It also addresses non-functional requirements such as those related to performance, availability, security, and maintainability, among others.