IT314 Software Engineering

Group 25

Name	Student Id
TEJABWALA MOHAMMAD JABIRBHAI	202001406
PRARTHEE BHAVINBHAI DESAI	202001257
AASTHA JAGDISH SHETTY	202001260
PATEL NISARG NAGINBHAI	202001436
DETROJA ARTH JITESHBHAI	202001274
BHUVA MEHULKUMAR VISABHAI	202001437
RUSHABH MAHESH PATEL	202001419
JAIMIN RATHWA (GR)	202001423
GANVIT GAURANG SHANKARBHAI	202001247
DAMOR ANIRUDDH RATANBHAI	202001255

LAB - 3

Functional Requirements:

Front of the card	Back of the card
As a warehouse owner I should be able to enter the name, location, storage capacity, type of goods stored and other details so that the farmer can find and see details of the warehouse	- The system must enforce data validation rules to ensure that required fields are entered and that the data is in the correct format - The system must be accessible to farmers, who can view warehouse details and search for warehouses based on their needs and preferences
As a warehouse owner I should be able to keep track of the warehouse storage capacity so that the farmer can see the availability for storing the goods.	-Admin will be able to approve the request then give access to details of the warehouses to the farmer. -The warehouse owner should be able to view the current capacity of the warehouse. -The warehouse owner should be able to add and remove items from the warehouse inventory. -The warehouse owner should be alerted when the storage capacity reaches a certain threshold to prevent overcapacity.
As a warehouse owner, I want to update the status of my warehouse as crops are added or removed in real time so that the farmers can know about the storage space that is available in the warehouse	-The warehouse owner should be able to update the warehouse inventory status in real-time as crops are added or removed. -The system should be able to automatically adjust the inventory levels and available storage space after any changes are made. -The system should display the current inventory status and available storage space in real-time, to allow farmers to make informed decisions.

	-The farmer should be able to view the updated inventory status and available storage space before making a reservation for storing their crops.
As a warehouse owner I should be able to generate reports of warehouse current goods storage so that I can be able to know the current status of the warehouse.	-The system should allow the warehouse owner to generate a report of the current goods storage in the warehouse. -The report should display the total amount of goods stored in the warehouse, broken down by type of goods. -The report should show the current capacity utilization of the warehouse, indicating how much space is available for additional storage. -The report should display the age and condition of the goods currently stored in the warehouse, to ensure that the warehouse is not overstocked with expired or damaged goods.
As a warehouse owner I want to store the type of crops and their storage life so that I can manage the goods stored in my warehouse efficiently	- User can add a new crop type to the system with their name and expected storage life - User can view a list of all crop types in the system - User can search for crop types by name - The system must enforce data validation rules to ensure that required fields are entered and that the data is in the correct format - The system must provide alerts when a crop type is approaching its expected storage life or has expired - The system must allow the user to set a default storage life for new crop types
As warehouse manager, I want all details of incoming and outgoing goods, so that I can utilize the warehouse resources.	-The system should capture all incoming and outgoing goods, including the type of goods, quantity, source, destination, and date of arrival/departure.
As a farmer I should be able to keep track of the goods that I have stored so that I can get	The system should allow the farmer to view the details of their stored goods, including the

a better understanding of it.	type of goods, quantity, location, and date of storage. The farmer should be able to search for specific goods or filter the goods based on different criteria, such as storage location or date of storage.
As a farmer I should be able to book storage space in advance so that I do not need to worry about getting space for my goods when I reach the warehouse.	-The system should allow the farmer to view the available storage space at the warehouse and reserve the required amount of space. -The system should display the availability of storage space in real-time, to prevent double booking or overbooking of storage space.
As a farmer, I want to be able to receive alerts when my crops are approaching their storage life limit so that I can sell or use them before they go bad.	The system should track the storage life limit of the crops stored by the farmer in the warehouse, based on their type, condition, and storage environment. The farmer should be able to set up alerts or notifications for specific crops, with a configurable threshold for when the alerts should be triggered.
As a farmer, I want to be able to cancel or modify my reservation.	-The farmer can log in to the system and view their reservation history. -The farmer can select the desired reservation to cancel or modify. -If modifying, the farmer can update the crop type, reservation dates, or other information as allowed by the warehouse owner's policies. -The system confirms the cancellation or modification and updates the storage capacity for the affected dates. -If modifying, the system confirms the modification and updates the reservation details.
As a warehouse owner, I want to be able to view the reservation history for my warehouse.	-The warehouse owner can log in to the system and select the desired warehouse. -The system displays a list of past and current reservations for the selected warehouse. -The system shows the crop type, reservation dates, and reservation status for each

	reservation in the list. -The warehouse owner can filter and sort the list by crop type, reservation dates, or other criteria. -The system updates the list in real-time as the warehouse owner adjusts the filters or sorts the list.

Non-Functional Requirements:

As a user, I want a user-friendly interface so that I can have clear instructions and intuitive navigation.	- The user interface should be clear, simple, and intuitive, with easy-to-understand instructions and labeling - The system should use consistent and familiar design patterns and navigation elements, so that users can easily understand how to interact with the interface - The system should use appropriate fonts, colors, and visual elements to make the interface aesthetically pleasing and easy to read - The system should provide feedback to users when they perform actions, so that they know that the system is processing their requests - The system should be accessible to users with different levels of technical proficiency and different physical abilities, with support for assistive technologies and other accessibility features - The system should be tested with real users to ensure that it is easy to use and meets their needs
As a user, I want the system to be secure so that I can protect my sensitive information from unauthorized people.	- The system should check that a user logged in is not a robot or any computerized application. - The system should use strong encryption and secure communication protocols to protect sensitive information from unauthorized access or interception

	- The system should enforce access controls and authentication mechanisms to ensure that only authorized users can access sensitive information
As a user, I want the system to be scalable so that it can accommodate future growth and increased usage.	- Ensure that the system architecture and infrastructure can handle future growth and increased usage without compromising performance, reliability, or security. - Design the system to be modular and easily extendable to accommodate new features or functionality.
As a user, I want the system to be fast and responsive so that it can provide real time updates to farmers about the storage capacity and availability of nearby warehouses	- The system should be able to provide real-time updates about storage capacity and availability of nearby warehouses to farmers, with a response time of no more than 2 seconds - The system should be optimized for high performance, with minimal latency and delays when processing requests and handling data - The system should be able to handle a high volume of concurrent user requests without experiencing performance issues or slowdowns - The system should use caching and other optimization techniques to reduce the load on the server and improve response times
As a user, I want that the system is highly available and reliable, so that I can ensure that I have access to the information whenever I need it	- The system should be available and accessible to users at all times, with minimal downtime or interruptions - The system should be designed with high availability and fault tolerance in mind, with redundant systems and failover mechanisms to minimize the impact of any failures or outages - The system should be able to recover quickly and automatically from any failures or outages, without requiring manual intervention - The system should provide users with clear and timely notifications in the event of any planned or unplanned downtime or maintenance
As a user, I want the system to be compatible with different platforms and devices, such as laptops, smartphones, and tablets, and	- The system should be compatible with different platforms and devices, such as laptops, smartphones, and tablets - The system should be accessible through a

should be accessible through a web browser so that I can access the system from any device.	web browser on any device with an internet connection - The user interface should be responsive and adaptive, adjusting to the screen size and resolution of the device being used to access the system - The system should be designed to provide a consistent user experience across different platforms and devices, with all features and functionality available on each platform - The system should be tested on different devices and browsers to ensure compatibility and functionality
As a user, I want the system to provide reports on the usage of each warehouse over time, including which crops are stored and when, and the eviction rate of each warehouse.	- Design a reporting module that allows farmers to generate usage reports for each warehouse over a specified time period. - The system should store historical data on crop storage and eviction rates for each warehouse to enable accurate reporting. - The reports should be customizable and allow the farmer to filter and sort the data based on various criteria, such as crop type, storage period, or warehouse location.
As a user, I want the system to have a robust data backup and recovery system so that data is protected in case of system failure.	- The backup system should be designed to take regular, automated backups of all system data, including user information and other critical data - The backup system should be securely stored off-site, preferably in a separate geographic location to ensure that data is protected in case of natural disasters or other emergencies - The recovery system should be tested regularly to ensure that backups can be restored quickly and efficiently in case of system failure or other disasters
As a user, I want the system to have error handling mechanisms in place so that errors and exceptions are handled gracefully and do not impact the operation of the system.	- The system should be designed with robust error handling mechanisms to handle errors and exceptions gracefully - Error messages should be clear and informative, providing users with a clear understanding of the issue and any steps that can be taken to resolve it - The system should log errors and exceptions, providing developers and system administrators with the information they need to diagnose and resolve issues

	- Error handling mechanisms should not impact the overall operation of the system, and should be designed to minimize any impact on users - The system should be tested thoroughly to ensure that all possible errors and exceptions are handled correctly, and that error messages are clear and informative - Error handling mechanisms should be reviewed and updated regularly to ensure that they remain effective and up-to-date with any changes to the system or underlying technologies

Product Backlog:

Sprint 1: Warehouse Management

1. As a warehouse owner I should be able to enter the name, location, storage capacity, type of goods stored and other details so that the farmer can find and see details of the warehouse.
2. As a warehouse owner I should be able to keep track of the warehouse storage capacity so that the farmer can see the availability for storing the goods.
3. As a warehouse owner I want to store the type of crops and their storage life so that I can manage the goods stored in my warehouse efficiently.

Sprint 2: Real-time Warehouse Updates

1. As a warehouse owner, I want to update the status of my warehouse as crops are added or removed in real time so that the farmers can know about the storage space that is available in the warehouse.
2. As a farmer, I should be able to book storage space in advance so that I do not need to worry about getting space for my goods when I reach the warehouse.
3. As a farmer, I want to be able to cancel or modify my reservation.

Sprint 3: Warehouse Reporting

1. As a warehouse owner, I want to be able to generate report of warehouse current goods storage so that I can be able to know the current status of the warehouse.
2. As a warehouse manager, I want all details of incoming and outgoing goods, so that I can utilize the warehouse resources.
3. As a warehouse owner, I want to be able to view the reservation history for my warehouse.

Sprint 4: Farmer Alerts and Tracking

1. As a farmer, I should be able to keep track of the goods that I have stored so that I can get a better understanding of it.
2. As a farmer, I want to be able to receive alerts when my crops are approaching their storage life limit so that I can sell or use them before they go bad.
3. As a warehouse owner, I want to be able to view the reservation history for my warehouse.

Sprint 5: System security and Availability

1. As a user, I want the system to be secure so that I can protect my sensitive information from unauthorized people.
2. As a user, I want the system to have a robust data backup and recovery system so that data is protected in case of system failure.
3. As a user, I want the system to have error handling mechanisms in place so that errors and exceptions are handled gracefully and do not impact the operation of the system.
4. As a user, I want that the system is highly available and reliable, so that I can ensure that I have access to the information whenever I need it.

Sprint 5: System optimization and error handling

1. As a user, I want a user-friendly interface so that I can have clear instructions and intuitive navigation.
2. As a user, I want the system to be scalable so that it can accommodate future growth and increased usage.
3. As a user, I want the system to be fast and responsive so that it can provide real time updates to farmers about the storage capacity and availability of nearby warehouses
4. As a user, I want the system to be compatible with different platforms and devices, such as laptops, smartphones, and tablets, and should be accessible through a web browser so that I can access the system from any device.
5. As a user, I want the system to provide reports on the usage of each warehouse over time, including which crops are stored and when, and the eviction rate of each warehouse.