**Class diagram:**

Diagram

Description automatically generated

**Description**:

There are 10 classes of total which consolidates and completes the requirement.

Classes:

|  |  |
| --- | --- |
| Buyer | Authentication |
| Cart | Products |
| Inquiry | Vendor |
| Feedback | News |
| Announcements | Organic farming |

**Buyer:** Account ID, Name, Age, Sex, Profession, Locality, Address, Years of Farming in practice, Land owned, Challenges faced, Daily activities, Phone.

**Authentication:** Username, Password, Security question.

**Cart:** Buyer ID, Product ID, Selected item.

**Products:** Name, Image, Description, Price, Locality, Quality, Quantity, Total quantity, Type of Product.

**Inquiry:** Buyer ID, Topic of the Query, Locality, Details.

**Vendor:** Username, Password.

**Feedback:** Buyer ID, Comments**.**

**News:** News ID, Details, vendorID.

**Announcements:** Announcement ID, Details, vendorID.

**Organic farming:** Crop ID, Crop Name, Best practices, Articles, vendorID.

**Relations**:

1. One account is linked to only one buyer, so authentication has **one to one** relation with buyer class.
2. One buyer can have only one cart, so buyer has **one to one** relation with the cart class.
3. A cart can never be empty, one or many products should be in cart, so product has **one to many** with the cart.
4. Vendor cannot update zero products, it must be more than zero products, so vendor has **one to many** with products class.
5. Vendor can delete profiles of the buyers, so vendor has **one to many** with buyer profile.
6. As it is not a must for a buyer to create an inquiry and he can raise multiple requests buyer has **zero to many** relations with inquiry.
7. As it is not must for a buyer to submit the feedback and he can submit feedback multiple times, so buyer has **zero to many** relations with inquiry.
8. Vendor should update/delete at least one record or many from news, announcements, organic farming, so vendor has **one to many** with news, announcements, organic farming classes.

**Summary:**

This application is a marketplace for people to purchase fresh farmed crops. The buyer will log in and create an account to purchase any item(s). The buyer can browse through a list of products available and add them to the cart and then checkout in order to buy them. The vendor will be able to add, remove, and update the available products. The buyer can also raise an inquiry and give feedback on any issue. The vendor will be able to add news and announcements to the homepage so that buyers can view them. There will also be a webpage for organic farming which will display the areas and practices for a particular crop.

**Common use case diagram:**

**Diagram

Description automatically generated**

**Use Cases:**

**Home Page:**

Name: Homepage Navigation

Participating Actor: Buyer/ Guest user

Entry condition:

1. Actor is on the homepage

Exit condition:

1. Buyer/Guest user views details in Announcements.

Event flow:

1. Actor navigates to the dashboards in the webpage. Diagram

   Description automatically generated

Name: Homepage Navigation

Participating Actor: Buyer/ Guest user

Entry condition:

1. Actor is on the homepage

Exit condition:

1. Buyer/Guest user views details in Activites.

Event flow:

1. Actor navigates to the Activities dashboards in the webpage.

Diagram

Description automatically generated with medium confidence

Name: Homepage Navigation

Participating Actor: Buyer/ Guest user

Entry condition:

1. Actor is on the homepage

Exit condition:

1. Buyer/Guest user views details in News.

Event flow:

1. Actor navigates to the News dashboards in the webpage.

**Diagram

Description automatically generated**

**Name:** Homepage Navigation

**Participating Actor:** Buyer

**Entry condition:** Buyer should be logged in.

**Exit condition:**

1. Buyer see the message “Feedback successfully submitted”.

**Event flow:**

1. Buyer navigate to feedback in the buyer homepage.
2. Buyer click feedback.
3. Buyer enters feedback details.
4. Buyer clicks submit feedback button.

Chart, line chart

Description automatically generated

**Name:** Homepage Navigation

**Participating Actor:** Guest user

**Entry condition:** Guest user in on the homepage.

**Exit condition:**

1. Guest user see the message “Feedback successfully submitted”.

**Event flow:**

1. Guest user navigate to feedback in the homepage.
2. Guest user clicks feedback.
3. Guest user enters feedback details like name, comments.
4. Guest user clicks submit feedback button.

A picture containing text, shoji

Description automatically generated

**Name:** Homepage Navigation

**Participating Actor:** Vendor

**Entry condition:** Vendor is logged in.

**Exit condition:**

1. Feedback results gets displayed which are submitted by the buyer/guest user.

**Event flow:**

1. Vendor navigate to feedback page.

Chart

Description automatically generated with medium confidence

**Name:** Create Account.

**Participating Actor:** Buyer

**Entry condition:**

1. Buyer is on the home page.

**Exit condition:**

1. Buyer see the message “Account successfully created”.

**Event flow:**

1. Buyer navigates to the create account page.
2. Buyer fills the details like username, password, and security question.
3. Buyer clicks submit.

A picture containing text, businesscard

Description automatically generated

**Login:**

**Name:** Login

**Participating Actor:** Buyer

**Entry condition:**

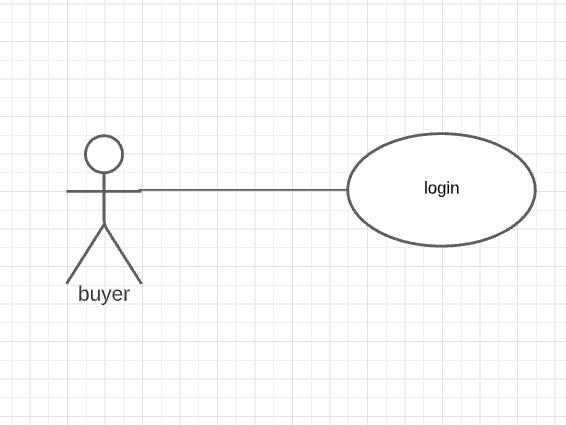
1. Buyer is on the homepage.

**Exit condition:**

1. Buyer see the message “Welcome Buyer”.

**Event flow:**

1. Buyer navigates to login page.
2. Buyer fills the username and password.
3. Buyer clicks submit



**Name:** Login

**Participating Actor:** Vendor

**Entry condition:**

1. Vendor is on the homepage.

**Exit condition:**

1. Vendor successfully logged into the account.

**Event flow:**

1. Vendor navigates to the login page.
2. Vendor fills the username and password.
3. Vendor clicks submit.

A picture containing text, businesscard

Description automatically generated

**Vendor View:**

**Name:** Prepare Cart

**Participating Actor:** Vendor

**Entry condition:**

1. Vendor logs in to the account

**Exit condition:**

1. Vendors see the message “Product details are updated”

**Event flow:**

1. Vendor navigates to the products page.
2. Vendor clicks update the products.
3. Vendor fills the product details with images, description, name, quantity, quality.
4. Vendor clicks submit.

Diagram

Description automatically generated

**Name:** Update Dashboard

**Participating Actor:** Vendor

**Entry condition:**

1. Vendor logs in to the account.

**Exit condition:**

1. Vendor see the message “Dashboard updated.”

**Event flow:**

1. Vendor navigates to the update dashboard.
2. Vendor select dashboard type Announcement, News, Activities.
3. Vendor fills the details.
4. Vendor clicks submit.

Diagram, schematic

Description automatically generated

**Name:** Delete Data

**Participating Actor:** Vendor

**Entry condition:**

1. Vendor logged in to the account.

**Exit condition:**

1. Vendor see the message “Product details are deleted”.

**Event flow:**

1. Vendor navigates to the products page.
2. Vendor clicks delete products.
3. Vendor fills the productid to delete.
4. Vendor clicks the submit.

Diagram

Description automatically generated

**Buyer Profile:**

**Name:** Create Profile

**Participating Actor:** Buyer

**Entry Condition:**

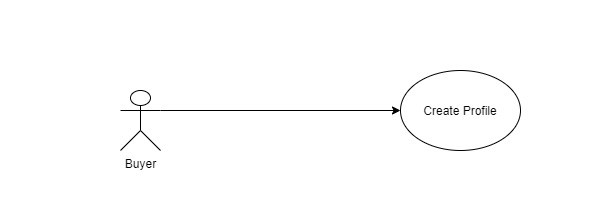
1. Buyer logs in to the account.

**Exit Condition**

1. The Buyer see the message “Profile created successfully.”

**Event Flow:**

1. The Buyer navigates to profile.
2. The Buyer will fill out the details Name, Age, Sex, Profession, Locality, Address, Years of Farming in practice, Land owned, Challenges faced, Daily activities, Phone.
3. The Buyer will click the submit button.



**Name:** Update Profile

**Participating Actor:** Buyer

**Entry Condition:**

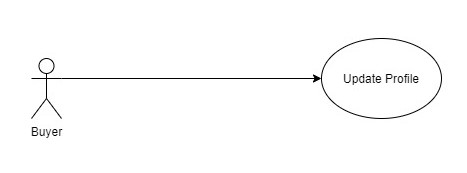
1. Buyer logs in to the account.

**Exit Condition:**

1. The Buyer see the message “ Profile updated successfully.”

**Event Flow:**

1. Buyer navigates to the profile page.
2. The Buyer clicks the Update profile.
3. The Buyer updates the fields.
4. The Buyer clicks submit.



**Name:** Change Password

**Participating Actor:** Buyer

**Entry Condition:**

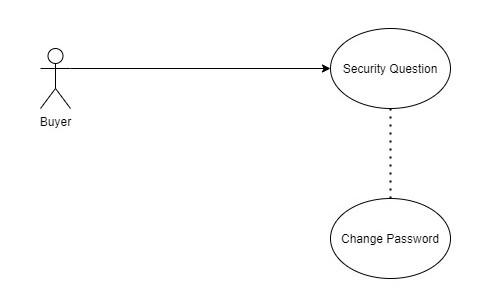
1. Buyer logs in to the account.

**Exit Condition:**

1. Buyer see the message “Password successfully changed.”

**Event Flow:**

1. Buyer navigates to homepage.
2. Buyer clicks Change Password.
3. Buyer answer security question.
4. Buyer enter the password.
5. Buyer clicks submit.



**Inquiry:**

**Name:** Inquiry

**Participating Actor:** Buyer

**Entry condition:**

1. Buyer logs in to the account.

**Exit condition:**

1. Buyer see the message “Inquiry form submitted”.

**Event flow:**

1. Buyer navigate to inquiry webpage.
2. Buyer fills topic, locality, details.
3. Buyer clicks submit.

Diagram

Description automatically generated

**Name:** Inquiry

**Participating Actor:** Buyer

**Entry condition:**

1. Buyer logs in to the account.

**Exit condition:**

1. Buyer sees the profile of another buyers matched with the search criteria.

**Event flow:**

1. Buyer navigate to inquiry webpage.
2. Buyer clicks search for profile.
3. Buyer enters details like locality or name or crop.
4. Buyer clicks submit.

Diagram

Description automatically generated

**Name:** Checkout

**Participating Actor:** Buyer

**Entry Condition:**

1. Buyer logs in to the account.

**Exit Condition:**

1. Buyer see the confirmation receipt with product details.

**Event Flow:**

1. Buyer navigates to the webpage.
2. Buyer clicks the products.
3. Buyer selects the product with desired quality and quantity.
4. Buyer then adds to the cart.
5. Buyer submits the cart.
6. Buyer clicks the cash on delivery option.
7. Buyer clicks the submit.

Chart

Description automatically generated with low confidence

**Organic Farming:**

**Name:** Organic Farming

**Participating Actor:** Buyer

**Entry Condition:**

1. Buyer logs in to the account.

**Exit Condition:**

1. Buyer sees the results of the search.

**Event Flow:**

1. Buyer navigates to the organic farming webpage.
2. Buyer selects the dropdown to navigate through the crops.
3. Buyer selects the crop.
4. Buyer clicks submit.

Diagram

Description automatically generated

Buyer

**Participating Actor:** Vendor

**Entry Condition:**

1. Vendor logs in to the account.

**Exit Condition:**

1. Vendor sees the message “Details successfully updated.”.

**Event Flow:**

1. Vendor opens the form to view the webpage.
2. Vendor navigates the webpage to Organic Farming.
3. Vendor fills the details Crop Name, Best practices, Articles.
4. Vendor clicks submit.

Diagram

Description automatically generated

**Test Cases:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Testcase No | Traces to Requirement No. | Test Steps | Expected Output | Comments | Pass/Fail |
| **Homepage Navigation** | | | | | |
| 1. | 1.ii | 1. Buyer Navigate to the homepage.  2. Buyer navigates to dashboards news, announcements, activities. | 1.Details available in the dashboard. |  |  |
| 2. | 1.iv | 1. Buyer navigates to the homepage.  2. Buyer clicks feedback button.  3. Fill up the details like sai, “Design is nice please include more delivery options”  4. Clicks the submit button. | 1. Feedback is submitted message will be displayed. |  |  |
| 3. | 1. iv | Buyer navigates to the homepage.  2. Buyer clicks feedback button.  3. Fill up the details like (empty space), “Design is nice please include more delivery options”  4. Clicks the submit button. | 1. Message displays “ Please enter the name”. |  |  |
| 4. | 1.ii | 1. Guest user navigate to the homepage.  2. Guest user navigates to dashboards news, announcements, activities. | 1.Details available in the dashboard. |  |  |
| 5. | 1.iv | 1. Guest user navigates to the homepage.  2. Guest user clicks feedback button.  3. Fill up the details like sai, “Design is nice please include more delivery options”  4. Clicks the submit button. | 1. Feedback is submitted message will be displayed |  |  |
| 6. | 1.iv | Guest user navigates to the homepage.  2. Guest user clicks feedback button.  3. Fill up the details (empty space), “Design is nice please include more delivery options”  4. Clicks the submit button. | 1. Message displays  “Please enter the name”. |  |  |
| 5 | 1.iv | 1. Vendor logs in to the account.  2. Vendor navigates to feedback the webpage. | 1. Feedback requests submitted by seller/guest user will be displayed. |  |  |
| **Login:** | | | | | |
| 6. | 2.a | 1.Buyer navigates to login page.  2. Buyer clicks create account.  3. Buyer enter username: sai, password: S@i123.  4. Buyer select security Question: “Mother’s maiden name.” enters answer “Vijaya”.  5. Buyer clicks submit. | Message “ Account created successfully.” |  |  |
| 7. | 2.a | 1.Buyer navigates to login page.  2. Buyer clicks create account.  3. Buyer enter username: ( empty), password: S@i123.  4. Buyer select security Question: “Mother’s maiden name.” enters answer “Vijaya”.  5. Buyer clicks submit. | Message “ Please enter required field” |  |  |
| 8. | 2.a | 1.Buyer navigates to login page.  2. Buyer clicks create account.  3. Buyer enter username: sai, password: 123.  4. Buyer select security Question: “Mother’s maiden name.” enters answer “Vijaya”.  5. Buyer clicks submit. | Message  “Please enter password with minimum requirements  Should be 5 minimum with (@,$,!,&) and atleast one numerical and uppercase” |  |  |
| 8. | 2.b | 1.Buyer navigates to login page.  2.Buyer enters username: sai and password:S@i123  3.Buyer clicks submit. | Message “Welcome Sai” |  |  |
| 9. | 2.b | 1.Buyer navigates to login page.  2.Buyer enters username:(empty) and password:S@i123  3.Buyer clicks submit. | Message “Please enter required field.” |  |  |
| 10. | 2.d | 1. Buyer navigates to login page.  2. Buyer clicks login.  3. Buyer enters username: sai and password: kjfcl | Error message “Please enter correct username or password”. |  |  |
| 11. | 2.e | 1.Vendor navigates to login page.  2.Vendor enters username: vendor and password: V@i123  3.Vendor clicks submit. | Message “Welcome Vendor” |  |  |
| 12. | 2.e | 1.Vendor navigates to login page.  2.Vendor enters username: (empty) and password: V@i123  3.Vendor clicks submit. | Message “Please enter required field.” |  |  |
| 13. | 2.d | 1.Vendor navigates to login page.  2.Vendor clicks login.  3.Buyer enters username: vendor and password: kjfcl. | Message “Please enter correct username or password”. |  |  |
| **Vendor View:** | | | | | |
| 14. | 3.a.i | 1. Vendor logs in.  2. Vendor navigates to the products page.  3. vendor fills the details such as price per qt: 100, quantity(qt):5, quality: High, details: paddy, image: Image object, Type: crop.  4. Vendor clicks update details. | Message “Products are Updated” |  |  |
| 15. | 3.a.i | 1. Vendor logs in.  2. Vendor navigates to the products page.  3. vendor fills the details such as price per qt: 100, quantity(qt): (empty), quality: High, details: paddy, image: Image object, Type: crop.  4. Vendor clicks update details. | Message “Please enter required field.” |  |  |
| 16. | 3.b.i | 1. Vendor navigates to the update dashboards.  2.vendor selects the type of dashboard: activity  3. vendor enters details: Farmers meeting at Denton on 10/22/2021.  4. Vendor clicks submit. | Message “Dashboard updated” |  |  |
| 17. | 3.b.i | 1. Vendor navigates to the update dashboards.  2.vendor selects the type of dashboard: activity  3. vendor enters details: (empty)  4. Vendor clicks submit. | Message “Please enter required field.” |  |  |
| 18. | 3.b.ii | 1. Vendor navigates to the organic farming.  2.vendor enters Crop Name: paddy, Best practices: use the best seeds, Articles: url to best practices.  3. Vendor clicks submit. | Message “Details updated successfully.” |  |  |
| 19. | 3.b.ii | 1. Vendor navigates to the organic farming.  2.vendor enters Crop Name: (empty), Best practices: use the best seeds, Articles: url to best practices.  3. Vendor clicks submit. | Message “Please enter required field.” |  |  |
| 20. | 3.c.i | 1. Vendor navigates to the delete account in homepage.  2. vendor enter the account id of the buyer.  3. vendor clicks submit. | Message “Buyer account Successfully deleted.” |  |  |
| 21. | 3.c.ii | 1. Vendor navigates to the delete product in homepage.  2. vendor enter the product id to delete.  3. vendor clicks delete. | Message “Product successfully deleted.” |  |  |
| **Buyer Profile:** | | | | | |
| 22. | 4.a.i | 1.Buyer logs in to the account.  2. Navigate to the Buyer profile.  3.Click on “Create a Profile”.  4. Buyer enters details Name: sai, Age:25, Sex: Male, Profession: Farmer, Locality: Denton, Address: Stella street, denton. | Message” Profile created successfully”. |  |  |
| 23. | 4.a.i | 1.Buyer logs in to the account.  2. Navigate to the Buyer profile.  3.Click on “Create a Profile”.  4. Buyer enters details Name: (empty), Age:25, Sex: Male, Profession: Farmer, Locality: Denton, Address: Stella street, denton. | Message “Please enter required field.” |  |  |
| 24. | 4.a.iv | 1. Buyer logs in to the account  2.Navigate to Buyer profile.  3.Click on Update Profile.  4. Buyer enters details to update age:26, Land Information: 20 Acres  5.click update profile. | Message “Profile Updated.” |  |  |
| 25. | 4.a.iv | 1. Buyer logs in to the account  2.Navigate to Buyer profile.  3.Click on Update Profile.  4. Buyer enters details to update age (empty), Land Information: 20 Acres  5.click update profile. | Message “Please fill the details.” |  |  |
| 26. | 4.a.iii | 1.Buyer logs in to the account  2.Navigate to Buyer profile.  3. Click on Change Password.  4. Buyer enters password: S@ii123  5. Clicks change Password. | Message: “Password has been updated.” |  |  |
| 27. | 4.a.iii | 1.Buyer logs in to the account.  2. Navigate to Buyer profile.  3. Click on Change Password.  4.Enters password: qwerty  5.Clicks change Password Button. | Message  “Please enter password with minimum requirements  Should be 5 minimum with (@,$,!,&) and atleast one numerical and uppercase” |  |  |
| 28. | 4.a.iii | 1. Buyers logs in to the account.  2.Navigate to Buyer profile  3.Click on Change Password.  4.Enters password: (empty).  5.Click on change Password Button | Message: “Please fill required fields.” |  |  |
| **Inquiry:** | | | | | |
| 29. | 4.b.ii | 1. Buyer logs in to the account.  2. Navigate to the Inquiry.  3. Fills the details like topic of the query: Pesticide query, locality: Denton, query details: What pesticides can we use for paddy crop?  4. clicks on submit. | Message: “Inquiry form successfully submitted.” |  |  |
| 30. | 4.b.ii | 1. Buyer logs in to the account.  2. Navigate to the Inquiry.  3. Fills the details like topic of the query: Pesticide query, locality: (empty), query details: What pesticides can we use for paddy crop?  4. clicks on submit. | Message:  “Please fill required fields.” |  |  |
| 31. | 4.b.iv | 1. Buyer logs in to the account.  2. Buyer navigates to inquiry page.  3. Buyer clicks Search profiles.  4. Buyer selects values in the dropdown locality: Denton  5. Buyer clicks submit. | 1. Displays profile and details of the buyers in denton. |  |  |
| **Checkout:** | | | | | |
| 32. | 4.c.x | 1. Buyer logs in to the account.  2. Navigate to the cart page.  3. Buyer selects the product with the desired quality: High and quantity:1  4. Buyer clicks add products to the cart.  5. Buyer submits the cart.  6. Buyer selects the cash on delivery option.  7. Buyer clicks on submit. | 1. Buyer gets a confirmation receipt displayed over the screen. |  |  |
| 33. | 4.c.vi | 1. Buyer logs in to the account.  2. Navigate to the cart page.  3. Buyer selects the product with no desired quality and quantity (0).  4. Buyer clicks add products to the cart. | 1. Buyer will get displayed an error message as “Quality or quantity is not selected”. |  |  |
| 34. | 4.c.vii | 1. Buyer logs in to the account.  2. Navigate to the cart page.  3. Buyer clicks add products to the cart. | 1. Buyer will get displayed an error message as “Cart is empty. Please select atleast one product”. |  |  |
| **Organic Farming** | | | | | |
| 35. | 4.d.i | 1. Buyer logs in to the account.  2. Buyer navigates to the organic farming webpage.  3. Buyer selects the dropdown to navigate through the crops.  4. Buyer selects the crop (Rice).  5. Buyer clicks submit. | 1. Buyer sees the results of the search. |  |  |