**Nurturing Process - Capstone Project1 – Part -2/3 V2D2- August 2024**

**Online Agriculture Products Store**

**Question 1 – Audits - 5 Marks**

4 Quarterly Audits are planned Q1 , Q2, Q3, Q4 for this Project What is your

knowledge on how these Audits will happen for a BA ?

**Answer:**

**Requirement Gathering Phase**

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| --- | --- |
| **Stages** | Requirement Gathering Phase-8weeks(week 1- week 8) |
| **Status-completed** | 6 weeks(week 1 to week 6) |
| **Checklist** | BRD template |
|  | Elicitation results report |
|  | Grouping of functionalities/features- Client sign-off |
|  | Duplicate requirements report |
|  | BRD Template |
|  | Email communication-To,CC,BCC |

**Requirement Analysis Phase**

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| --- | --- |
| **Stages** | Requirement Analysis Phase-16weeks(week 7- week 24) |
| **Status-completed** | 10 weeks |
| **Checklist** | UML Diagrams |
|  | Business to Functional Requirements mapping |
|  | Client Signoff |
|  | RTM Document version control |
|  | Email communication-To,CC,BCC |

**Design Phase**

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| --- | --- |
| **Stages** | Design Phase-27weeks(week 23- week 50) |
| **Status-completed** | 20 weeks |
| **Checklist** | Utilization of Tools |
|  | Documented evidence on client communication. |
|  | Stakeholder MOM |
|  | Collaborate with stakeholders |
|  | Risk assessment |
|  | Email communication-To,CC,BCC |

**Development Phase**

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| --- | --- |
| **Stages** | DevelopmentPhase-31weeks(week 43- week 74) |
| **Status-completed** | 25 weeks |
| **Checklist** | Creating detailed checklist of requirement. |
|  | Creating timeline and task with list of deliverable and deadlines |
|  | Meeting with Project development team |
|  | Performance optimization |
|  | Code documentation |
|  | Functional implementation |
|  | Document code changes and updates |
|  | Email communication-To,CC,BCC |

**Testing Phase**

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| --- | --- |
| **Stages** | Testing Phase-47weeks(week 32- week 79) |
| **Status-completed** | 35 weeks |
| **Checklist** | Meeting with testers to check on possible outcome. |
|  | Meeting with QA team to identify where the tests will run |
|  | Review and validate test requirements |
|  | Execute test cases as per test plan |
|  | Log and track the defects |
|  | Maintain test logs |
|  | Generate test reports |
|  | Prepare defect summaryDocument lessons learned |
|  | Email communication-To,CC,BCC |

**Question 2 – BA Approach Strategy - 6 Marks**

Before the Project is going to Kick Start, The Committee asked Mr Karthik to submit BA Approach Strategy

Write BA Approach strategy (As a business analyst, what are the steps that you would need to follow to complete a project – What Elicitation Techniques to apply, how to do Stakeholder Analysis RACI/ILS, What Documents to Write, What process to follow to Sign off on the Documents, How to take Approvals from the Client, What Communication Channels to establish n implement, How to Handle Change Requests, How to update the progress of the project to the Stakeholders, How to

take sign-off on the UAT - Client Project Acceptance Form.

**Answer**

**What Elicitation Techniques to apply?**

There are various elicitation techniques such as interviews,workshops,surveys and observations to gather requirements from stakeholders. This will helps in understanding their needs,pain points and expectations related to online agricultural product store.

**Objective:** Gather and understand all necessary business and functional requirements.

**Techniques to Apply:**

**Brainstorming:** Organize sessions with key stakeholders (e.g., farmers, suppliers) to generate ideas and identify key features for the platform.

**Document Analysis:** Review existing documentation from similar projects or internal data to gain insights into the current processes.

**Interviews:** One-on-one or group interviews with farmers (end-users) to understand their requirements for the online agriculture store.

**Reverse Engineering:** Analyze existing systems (if any) to identify gaps or opportunities for improvement.

**Focus Group:** Engage a selected group of stakeholders, including farmers (Peter, Kevin, Ben), to discuss their needs and pain points.

**Observations:** Visit farming sites to observe day-to-day activities and better understand the challenges faced by the stakeholders.

I would be using the Brainstorming Technique

In Brainstorming elicitation technique where a problem or topic is presented to the group, and participants are asked to produce as many ideas to solve/address the topic as possible. As ideas are presented, a scribe documents the ideas and ensures the participants can see what is being captured.

**How to do Stakeholder Analysis RACI/ILS?**

Below is list of stakeholders

**Project Stakeholders:**

-Business Analyst – Jaishree

-Delivery Head – Mr Karthik

-Project Manager – Mr Vandanam

-Development Team – MS Juhi, Mr. Teyson, Ms Lucie, Mr. Tucker, Mr. Bravo

-Testing Team – Mr. Jason and Ms Alekya

-Network Admin – Mr. Mike

-DB Admin is John

**Business Stakeholders:**

Business Sponsor - Mr. Henry

Influencers - Peter, Kevin and Ben.

Finance team - Mr Pandu

Project Team - Mr Dooku

**Responsible:** BA for gathering and documenting requirements.

**Accountable:** Project Manager (Mr. Vandanam) for project delivery.

**Consulted:** Stakeholders (Peter, Kevin, Ben), manufacturers, the Committee (Mr. Henry, Mr. Pandu, Mr. Dooku).

**Informed:** Development and Testing Teams.

**What Documents to Write ?**

1. Scope

2. In-Scope Features/Services

3. Out scope Features/Services

4. Solution Architecture Diagram

5. Technology Specifications

6. FRD – Functional and Non-Functional

7. BRD-Business Requirements Document

8. Project timeline

9. Risks and mitigation plan

10.Change management

11. Standard terms and conditions

12.Use cases

13.User stories

14.Process Flows

**What Process to follow to Sign off on the Documents ?**

Project sign-off is typically executed during the contract closure phase – the company presents the results of the work done to the client and then, after getting the necessary acceptance from them, should get a client statement to verify that the job was completed.

* Name of the project.
* All relevant dates.
* Key roles in the project.
* Project deliverables.

**Key Document:** Software Requirements Specification (SRS)

**Steps:**

Present the SRS to the Committee and stakeholders for review.

Ensure all feedback is incorporated into the document.

Use email confirmation for formal sign-off, which will be stored as part of the project documentation.

**How to take Approvals from the Client?**

Establish a formal process to obtain approvals from the client at key milestones or stages of the project.This may include conducting review meetings,walk throughs and obtaining written acceptance on deliverable.

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**What Communication Channels to establish and implement?**

* Establish effective communication channels with stakeholders,regular meetings,status updates and progress reports.
* Use tools such as email,project management software and collaboration platforms to facilitate effective communication and information sharing.

**Channels**:

**Emails**: For formal communication and document distribution.

**Meetings**: Weekly status updates with the project team and stakeholders.

**Instant Messaging (Slack):** For quick, informal communications.

**Project Management Tool (Jira):** Track progress and tasks collaboratively.

**How to Handle Change Requests?**

* During or upon further deliverable review following the session, the approvers/reviewers may provide changes/feedback to be incorporated into the deliverable.
* The team lead will drive the deliverable to completion integrating all changes submitted during or after the review session into the deliverable. Ensure to communicate any major changes to the reviewers and to track these in the Version Tracking section of the deliverable (In tracking mode).
* The Technical Team will coordinate and conduct a review session of the functional team deliverables. The team will review the deliverable prior to the session and come prepared with questions. Any significant changes resulting from the technical review will require updates to the deliverables before sign off can be obtained. Any minor changes (i.e., formatting) will simply be captured in the technical team scope document
* When a key deliverable is deemed 95% complete and where possible the Technical Lead has completed sign off, a final review session will be scheduled with key approvers and reviewers (A, C) toreview deliverable content and solicit feedback.
* Any material changes to the final deliverable will be updated in the original final deliverable, with Track Change functionality turned on. The document should be saved with these changes, and posted back to the Document Repository Tool so approvers can easily identify changes from the PDF version which has been signed off. The deliverable owner should contact the approvers to make

them aware of any such changes for review.

**How to update the progress of the project to the Stakeholders, how to take signoff on the UAT Client Project Acceptance Form)?**

* User Acceptance Testing (UAT) is a type of testing performed by the end user or the client to verify/accept the software system before moving the software application to the production environment.
* UAT is done in the final phase of testing after functional, integration and system testing are done. Deliverables for UAT testing are Test Plan, UAT Scenarios and Test Cases, Test Results and Defect Log
* Once execution is over, and as many defects as possible are resolved, it is time to sign off on UAT and go live.
* The sign-off approval indicates that the change meets business requirements and is ready for deployment.
* Business Analysts or UAT Testers needs to send a sign off mail after the UAT testing. After sign-off, the product is good to go for production.

**Question 3 – 3-Tier Architecture - 5 Marks**

Explain and illustrate 3-tier architecture?

**Answer:**

Application Layer

Presentation Tier

(Client)

Business Logic

Layer

Logic Tier (Server)

Database Layer

Data Tier

Database

Three-tier architecture also known as multi-tier architecture,is a software design pattern that divides an application into three interconnected layers

1. Presentation layer
2. Business Logiclayer
3. Data storage layer

**Presentation tier (front end)**

* The topmost level of the application is the User interface (UI).
* It focusses onnuser interaction.
* It handles user interface,user input and presentation logic.
* It consists of web pages,user interfaces,forms and client side scripts.
* The main function of the interface is to translate task and result to something that user can understand.
* Technologies used: HTML, CSS, JavaScript, Angular, React, etc.

**Example: E-Commerce website**

**Business Logic Tier**

* It is also known as Application layer or middle layer.
* This layer coordinates the application process commands, makes logical

decisions and evaluations and perform calculations.

* It contains the core functionality and business rule of the application.
* It orchestrates the flow of data between presentation and data storage layer.
* It also moves and processes data between to 2 surrounding layers. A dynamic content processing and generation level application server.
* It is often implemented using programming languages such as Java,C#,python.
* Technologies used: Java, C#, Python, Node.js, etc.

**Example: Printer and Payment gateways**

**Data Tier (Back end)**

* It is referred as the data access layer or persistence layer is responsible for managing data storage and retrieval.
* It handles tasks like data access,data manipulation,data querying and data integrity
* Here information is stored and retrieved from database or file system.
* The information is passed back to the logic tier for processing and eventually back to the user.
* Technologies used: SQL Server, MySQL, Oracle, MongoDB, etc.

**Example: MYSQL, Oracle database**

**Question 4 – BA Approach Strategy for Framing Questions – 10 Marks**

Business Analyst should keep What points in his/her mind before he frames a Question to ask to the Stakeholder

( 5W 1H – SMART – RACI – 3 Tier Architecture – Use Cases, Use case Specs, Activity

Diagrams,Models, Page designs)

**Answer:**

Before framing a question to ask stakeholders as a BA,its essential to keep the following points

1. **Purpose and context:**

Understand the purpose and context of the project or initiative.Have a clear understanding of the goals,objectives and scope of the project.It will helps to ask relevant questions that align with the project’s objectives

1. **Stakeholder Analysis**

Identify the stakeholders involved in the project and analyze their roles,interests and influence.

**3.5W 1H**

This framework ensures comprehensive coverage of the information needed.

**Why :**

Asking ‘Why’ entails clarifying why the issue, problem or situation at hand occurred. It aims to identify the triggers and rationalizes the occurrence of an issue or a problem. It explains in detail the reason and objectives behind the need for action or why there’s a need to do the 5W1H method in the first place. This last W is also often asked five times to discover the root cause of the situation and to prevent it from recurring.

**What** :

What element should clearly describe the situation, the specific problem, or basically explain the purpose of the method usage. If possible, it should also state the overall goal for implementing the solution that would be identified.

**Who:**

Who refers to the specific people or group relevant to the issue or the situation. It should include the person who discovered the problem, who can possibly solve it, and who will be responsible for implementing the possible solution

**Where:**

Where element should contain the exact location or position of the recognized issue. It can be a place, facility, or even a certain process where the solution is to be implemented.

**When:**

When should include all the components of the situation pertaining to anything related to dates. It should state the timeline, deadline, duration, or any other details that could help in the resolution of the problem.

**How:**

How, as the last element of the method, specifies the steps on how the identified plan/s should be carried out. It should also include all the resources, tools, methods, means, and even the expenditure needed for the endeavour to be effective.

**Why it's Important:**

This approach ensures comprehensive coverage of all aspects of the requirement, leaving no critical gaps.

**When to Use:**

Use this approach when gathering initial requirements or clarifying project scope. In the case study, this can be used to frame questions around how the online platform should support farmers, when the platform should be launched, and why the solution is critical for rural farming

**4.SMART - Specific, Measurable, Attainable, Relevant, and Time-Bound**

SMART helps to clarify requirements,gather specific information and ensure that the responses are actionable and measurable.

* **Specific** - A Strategy to Set a Specific goal.
* **Measurable** - Measuring the process or procedure of attaining a goal at each phase.
* **Attainable or Achievable** - Concept of deciding whether a goal is achievable or not.
* **Relative** - Relevant to the other same business goals.
* **Time-bound** - To set a specific period to achieve the target goal.

**Why it's Important**:

This approach ensures that the requirements and objectives set are clear, realistic, and can be measured, avoiding vague or impractical goals.

**When to Use**:

Use SMART questions when finalizing project requirements and milestones. In the case study, this can be used to frame questions like "What measurable outcomes will determine the platform's success?" or "What is the timeline for delivering specific features?"

**5.RACI Matrix**

RACI Matrix helps to identify roles and responsibilities of stakeholders.This helps to identify to determine who should be involved in decision making,who should provide input,and who needs to be informed about certain aspects.

**Responsible** - Responsible designates the task as assigned directly to this person (or group of people). The responsible person is the one who does the work to complete the task or create the deliverable. Every task should have at least one responsible person and could have several. Responsible parties are typically on the project team and are usually developers or other creators. Here PM is the responsible.

**Accountable** - The accountable person delegates and reviews the work involved in a project. Their job is to make sure the responsible person or team knows the expectations of the project and completes work on time. Every task should have only one accountable person and no more. Accountable parties are typically on the project team, usually in a leadership or management role.

**Consulted** - Consulted people provide input and feedback on the work being done in a project. They have a stake in the outcomes of a project because it could affect their current or future work. Project managers and teams should consult these stakeholders ahead of starting a task to get input on their needs, and again throughout the work and at the completion of a task to get feedback on the

outcome.

**Informed** - Informed folks need to be looped into the progress of a project but not consulted or overwhelmed with the details of every task. They need to know what’s going on because it could affect their work, but they’re not decision makers in the process. Informed parties are usually outside of the project team and often in different departments. They might include heads or directors of affected teams and senior leadership in a company.

1. **Three tier architecture**

This helps to seek clarity on how information flows between these layers and how they interact with each other.

* **Application layer**-GUI-Graphical user interfaces like screens and pages,validations on pages ,organization specific business logic will be on the application layer.
* **Business logic layer**-All reusable components (logic pertaining to industry),frequently changing components,governing body rules and regulations,compliance should go to middle layer.

Example:

Printer,payment gateways,mail servers,RBI rules for banlks,IRDA rules for insurance.

* **Data layer**-Data base components connecting to databases will be at data layer.

1. **Usecases**

**Use Cases:** Frame questions to understand the user interactions with the system. E.g., "How should a farmer interact with the online store when purchasing seeds?"

A usecase is a way to document how users interact with a system or product.

**Use Case Specs:** Ask for detailed scenarios. E.g., "What happens if a product is out of stock? What alternate options should be available?"

**Activity Diagrams:** Visualize workflows by framing questions that help map out processes.

**Why it's Important:**

Helps in understanding the functional requirements and how users will interact with the system, providing a clear roadmap for development.

**When to Use:**

This is crucial when gathering functional requirements and identifying user scenarios. For the case study, this approach can be used to frame questions around the different user journeys (farmers purchasing items, manufacturers listing products

**Actors:**Represent the roles of users or other systems in the interaction.

Henry, PM, all the stakeholders.

**Pre-condition:** Events that must occur before a use case can begin.System must be connected to the network.

**Post -Condition:** After a successful login a notification mail is sent to the User mail id.

**Use case Description:** A user login to System to access the functionality of the system.

Every use case will have its own use case description document or use case specification.

1. Usecase name
2. Usecase description
3. Actors

* Primary actors
* Secondary actors

1. Basic flow
2. Alternate flow
3. Exceptional flows
4. Pre-conditions
5. Post-conditions
6. Assumptions
7. Constarints
8. Dependencies
9. Inputs and Outputs
10. Business rules
11. Miscelleneous Information

**Question 5 – Elicitation Techniques - 6 Marks**

As a Business Analyst, What Elicitation Techniques you are aware of? ( BDRFOWJIPQU)

**Answer**:

**Brainstorming**

* Brainstorming can be done either individually or in groups. The ideas collected during the brainstorming session are reviewed or analyzed.
* Brainstorming is an effective way to generate lots of ideas on a specific issue and then determine which idea is the best solution.

**Document Analysis**

Document analysis is done through reading a document and understanding the product, process and project.

**Reverse Engineering**

* Reverse engineering, also called back engineering, is the processes of extracting knowledge or design information from anything man-made and reproducing it or re-producing anything based on the extracted information.
* The process often involves disassembling something and analyzing its components and workings in detail. Majorly used in migration projects.

**Focus Groups**

A focus group is a means to elicit ideas and attitudes about a specific product, service or opportunity in an interactive group environment.

**Observation**

Observing, shadowing users or doing a part of their job, can provide information of existing processes, inputs and outputs.

**Workshop**

A requirement workshop is a structured approach to capture requirements. A workshop may be used to scope, discover, define, prioritize and reach closure on requirements for the target system.

**JAD**

Application developed through JAD has higher customer satisfaction and less number of errors as user is directly involved in the development process.

**Interview**

Interview of a user and stakeholders are important in creating software.

An interview is a systematic approach where interviewee is going to ask relevant questions related to software and documenting the responses.

**Prototyping**

Prototyping is an attractive idea for complicated and large systems for which there is no manual process or existing system to help determining the requirements.

**Questionnaire**

Questionnaire can be useful for obtaining limited system requirements details form the users/ stakeholders, who have minor input or are geographically remote.

**Usecases**

Describes interactions between actors(users) and the system to illustrate how the system should behave and what actions it should support.

**Question 6 – This project Elicitation Techniques - 5 Marks**

Which Elicitation Techniques can be used in this Project and Justify your selection of Elicitation Techniques?

Prototyping

Use case Specs

Document Analysis

Brainstorming

**1. Prototyping**

Justification: Prototyping allows for the visual representation of the application’s user interface and functionalities. Given that Mr. Henry and stakeholders expressed specific needs (e.g., login, product catalog, search option, payment process), a prototype can help validate these requirements by demonstrating how users will interact with the application. It enables stakeholders to provide immediate feedback, ensuring that their expectations are met before development begins.

**2. Use Case Specifications**

Justification: Use case specs detail how different users (farmers and manufacturers) will interact with the system. They help clarify the functional requirements and capture the specific actions users can perform, such as browsing products, creating accounts, and processing payments. This technique is essential for understanding user workflows and ensuring that all stakeholder needs are considered in the design.

**3. Document Analysis**

Justification: Analyzing existing documents, such as market research reports or current processes used by farmers and manufacturers, can provide valuable context and insights. It helps in understanding industry standards, identifying gaps in existing solutions, and ensuring that the new application aligns with user needs and expectations.

**4. Brainstorming**

Justification: Brainstorming sessions with stakeholders like Peter, Kevin, and Ben can generate ideas and gather additional requirements that might not have been captured in initial discussions. This collaborative approach encourages open dialogue, allowing stakeholders to express their thoughts and needs creatively, leading to a more comprehensive understanding of user requirements.

Business Requirements

BR001: Farmers should be able to search for available products in fertilizers, seeds, and pesticides.

BR002: Manufacturers should be able to upload and display their products in the application.

**Stakeholder Requirements**

SR001: Farmers must log in using their email ID and password before purchasing or saving products.

SR002: New users should have the option to create an account by submitting their email ID and a secure password.

SR003: The application should have a product catalog that allows farmers to browse available products.

SR004: The application should include a search function to find specific products quickly.

SR005: The payment gateway should support multiple payment options, including cash-on-delivery (COD), credit/debit cards, and UPI.

SR006: Users should receive email confirmations regarding their order status.

SR007: The application must provide a delivery tracking feature to allow farmers to monitor their orders.

**Question 7 – 10 Business Requirements- 10 Marks**

Make suitable Assumptions and identify at least 10 Business Requirements

|  |  |  |  |
| --- | --- | --- | --- |
| **S NO** | **REQUIREMENT ID** | **REQUIREMENT CATEGIORY** | **DESCRIPTION** |
| 1 | BR001 | Search | Customers should be able to search for  available products in different  Categories. |
| 2 | BR002 | Upload & Display | Dealers should be able to upload and  display their products in the  application. |
| 3 | BR003 | Browse | Customers should be able to browse  through the Product Catalogue |
| 4 | BR004 | Chat | Dealers should be able to  communicate with customers |
| 5 | BR005 | Login | Login option should be available for all  Users. |
| 6 | BR006 | Track Delivery | Customers should be able to track  Deliveries. |
| 7 | BR007 | Add to cart | Customers should be able to add items  to add to cart . |
| 8 | BR008 | Registraton | New user can create a new a/c by using  email and mobile no verification. |
| 9 | BR009 | Payment Processing | Customers should be able to do  payment from payment gateway which  should include COD, Card and Net  banking options |
| 10 | BR010 | Order Confirmation | Customers should get order  confirmation once order is successfully placed |

**Question 8 –Assumptions- 5 Marks**

List your assumptions

**Answer**

1. A user can login using Facebook or google account
2. Online shopping trend is increasing.The customers prefer online shopping.
3. The designers have designs to display in the application.The need for the application is ever growing.
4. The customers have online accounts for secured payment processing.
5. The farmer should be able to see the fertilizers and pesticides details from the manufacturer.
6. They should be able to search specific required product .Farmers should be able to buy or wish-list.
7. They should be able to make payments online.Customers should be informed once the order is placed successfully
8. Customers should know the whereabouts of the order.
9. Customers should be able to check their keep-aside products if they want to buy the latter.
10. Customer queries should be addressed for better customer service

11.Customer should be able to share the products with other people too 12.Customers should be able to know the experience of other users with the product they buy from the manufacturer.

**Question 9 – This project Requirements Priority - 8 Marks**

Give Priority 1 to 10 numbers ( 1 being low priority – 10 being high priority) to these Requirements after discussions with the stakeholders.

|  |  |  |  |
| --- | --- | --- | --- |
| **REQUIREMENT ID** | **REQUIREMENT CATEGORY** | **REQUIREMENT DESCRIPTION** | **PRIORITY** |
| BR001 | User login system | Users(manufacturers and farmers)should be able to login to access different functionalities | 9 |
| BR002 | Product catalog | A catalog of fertilizers,seeds and pesticides should be available with detailed information,including pricing and manufacturer details. | 10 |
| BR003 | Product search | Users should be able to search for specific products within the catalog | 8 |
| BR004 | User registration | Farmers should be able to create an account using their mail id and password.New users can create a new account with email id and password. | 7 |
| BR005 | Purchase and add to buy-later list | Farmers should be able to buy products or add them to buy-later list after logging-in. | 8 |
| BR006 | Payment gateway | The payment gateway should support multiple options,including COD,credit/debit card and UPI. | 10 |
| BR007 | Order confirmation email | Users should receive email confirmations regarding their order status | 6 |
| BR008 | Delivery tracker | A delivery tracker should be available for users to track the progress and location of their orders. | 9 |
| BROO9 | Web and mobile accessibility | The online store should operate as both a web and mobile application for user accessibility. | 7 |
| BR010 | CSR initiative duration | The project duration should be 18 months as part of CSR initiative. | 5 |

**Question 10 – Use Case Diagram - 10 Marks**

**Question 11 – (minimum 5) Use Case Specs - 15 Marks**

Prepare use case specs for all use cases

|  |  |
| --- | --- |
| **Usecase ID** | **UC001** |
| Usecase name | This use case shows How the user can buy Agriculture product from this application. |
| Created by | Jaishree T |
| Data created | 15.01.2025 |
| Last Updated By | 30.01.2025 |
| Actor | Customers/Farmers |
| Description | Describing how page should respond if there is no internet |
| Pre-condition | Farmers is having an active internet connection |
| Post-condition | success -Farmers can place the order successfully.  Failure -Farmers unable to Login/ logs are updates accordingly |
| Normal Flow of events/  Basic Flow/ Happy Path | The use case starts when Farmers do the registration with valid email ID and then Login with ID and password.  • Use case validate the user is performed.  • Then farmers can view products; add to card and place  the order. |
| Alternate flow | Invalid User; Wrong account ID; Wrong password; No successful authentication Via mobile number or email Id. |
| Exceptions | If internet connection lost during activity, then display"Check your internet connection" |
| Frequency of Use | High |
| Assumptions | It is assumed that customer is registered and has computer Knowledge |

|  |  |
| --- | --- |
| **Usecase ID** | **UC002** |
| Usecase name | This use case shows how farmers can register on the app. |
| Created by | Jaishree T |
| Data created | 1.01.2025 |
| Last Updated By | 30.01.2025 |
| Actor | Customers/Farmers |
| Description | Describing how page should respond if they do not put OTP for registration |
| Pre-condition | Farmers is having an active internet connection |
| Post-condition | success -Farmers can register successfully.  Failure -Farmers unable to register are updated accordingly. |
| Normal Flow of events/  Basic Flow/ Happy Path | * The use case starts when Farmers do the registration with valid email ID and then Login with ID and password.   • Then farmers can register using OTP. |
| Alternate flow | Incorrect OTP, No successful authentication Via mobile number or email Id. |
| Exceptions | If internet connection lost during activity, then display"Check your internet connection" |
| Frequency of Use | High |
| Assumptions | It is assumed that customer has an email ID and mobile phone for authentication |

|  |  |
| --- | --- |
| **Usecase ID** | **UC003** |
| Usecase name | This use case shows how sellers can upload new products on the app |
| Created by | Jaishree T |
| Data created | 30.01.2025 |
| Last Updated By | 15.02.2025 |
| Actor | Sellers/Dealers |
| Description | Describing how to upload new product details |
| Pre-condition | Sellers have basic technical knowledge & internet connection |
| Post-condition | Success -Sellers can upload product description successfully.  Failure - Sellers unable to upload products accordingly |
| Normal Flow of events/  Basic Flow/ Happy Path | The use case starts when seller’s login with valid email ID and then Login with ID and password.  Then sellers can login using OTP.  Sellers then upload the products. |
| Alternate flow | Sellers can login using OTP  Sellers can upload products using history details |
| Exceptions | If internet connection lost during activity, then display "Checkyour internet connection” |
| Frequency of Use | High |
| Assumptions | It is assumed that sellers have details about their products. |

|  |  |
| --- | --- |
| **Usecase ID** | **UC004** |
| Usecase name | This use case shows how farmers can add products to cart |
| Created by | Jaishree T |
| Data created | 15.01.2025 |
| Last Updated By | 30.01.2025 |
| Actor | Farmers/Customers |
| Description | Describing how to purchase products. |
| Pre-condition | Farmers have basic technical knowledge & internet  connection |
| Post-condition | Success -Farmers can add products to cart successfully.  Failure - Farmers unable to add products to cart |
| Normal Flow of events/  Basic Flow/ Happy Path | Farmers search for desired products and browse the  catalogue.  Farmers then select desired quantity and no of items.  Farmers add product to cart. |
| Alternate flow | Farmers can Wish-list the product and then add it to cart.  Farmers can directly add products from their past purchase and make similar purchase |
| Exceptions | If internet connection lost during activity, then display  "Check your internet connection” |
| Frequency of Use | High |
| Assumptions | It is assumed that Farmers have basic browsing knowledge of products |

|  |  |
| --- | --- |
| **Usecase ID** | **UC005** |
| Usecase name | This use case shows how farmers can initiate return and  refund. |
| Created by | Jaishree T |
| Data created | 1.01.2025 |
| Last Updated By | 15.01.2025 |
| Actor | Farmers/Customers |
| Description | Describing how to initiate refund and return |
| Pre-condition | Farmers have basic technical knowledge & internet  connection |
| Post-condition | success -Farmers can initiate return & refund.  Failure - Farmers unable initiate refund and return |
| Normal Flow of events/  Basic Flow/ Happy Path | Farmers go to purchase history and initiate return.  Farmers then select reason for return and agree to T&C for  the same.  Farmers select mode and medium of refund |
| Alternate flow | Farmers can get refund added to their account wallet |
| Exceptions | If internet connection lost during activity, then display  "Check your internet connection” |
| Frequency of Use | High |
| Assumptions | It is assumed that Farmers have basic browsing knowledge  of products. |

**Question 12 – (minimum 5) Activity Diagrams - 15 Marks**

Activity diagrams

**Activity diagrams**

An Activity Diagram is a type of UML (Unified Modeling Language) diagram used to represent the flow of activities or actions within a system or process. It visually describes the sequence of operations, the flow of control, and how different activities or decisions are connected.

**Key Features of Activity Diagrams:**

* **Flow of Activities**: It shows the sequence of actions or tasks performed by users or systems.
* **Decisions and Branching**: Decision points in the process, represented by diamonds, allow different paths based on conditions (e.g., Yes/No or True/False).
* **Actors and Objects**: It can show interactions between users (actors) and the system or objects.
* **Start and End Points**: Every diagram has a clear start and end, marking the beginning and conclusion of the activity.
* **Parallel Activities**: It can represent concurrent processes using forks and joins

**Symbols:**

* **Start (Initial Node):** Marks the starting point of the process.
* **End (Final Node):** Indicates where the process ends.
* **Action (Activity State):** Represents a specific action or task in the process.
* **Decision (Diamond):** Shows a point where a choice between different paths is made (Yes/No, True/False).
* **Arrow (Control Flow):** Indicates the flow or direction from one action to the next.
* **Fork/Join (Bar Line):** Represents parallel tasks starting (fork) or merging (join).
* **Swim-lane:** Divides the diagram to show different actors or departments handling various tasks.

**Example:**

In a User Registration activity diagram, you might show steps like "User enters details," "System validates input," and a decision point like "Are details valid?" Each step is connected with arrows showing the flow of control.

Activity diagrams are helpful in both software development and business process management to ensure a clear understanding of how tasks are executed

**Activity diagram:**

**1.New User Registration:**



**2.Login:**



**3.Add a Product (Branch & Merge Condition):**



**4. Payment Gateway (Branch & Merge):**



**5. Delivery Tracking (Fork & Join):**

