**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** -

|  |  |
| --- | --- |
| Stages | Quarter 1 Audit Report - Requirement gathering Phase |
| Completed | 10 Week (week 1 to week 10) |
| Check List | BRDGrouping of functionalities/features- client sign offEmail Communication – To,CC,BCC |
|  | Duplicate requirement report |
|  | Elicitation result |
|  | Grouping of functionalities/features- client sign off |
|  | Email Communication – To, CC, BCC |

|  |  |
| --- | --- |
| Stages | Quarter 2 Audit Report - Requirement Analysis Phase |
| Completed | 7 Week (week 16 to week 23) |
| Chick List | UML Diagram |
|  | Business to functional requirement mapping |
|  | Client Signoff- Documents |
|  | FS/FRS, SSD, SRS RTM document version control |
|  | Email Communication – To, CC, BCC |

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| --- | --- |
| Stages | Quarter 3 Audit Report - Design Phase |
| Completed | 7 Week (week 30 to week 37) |
| Chick List | Tools Utilization |
|  | Documented evidence on client communication |
|  | Stakeholder MOM |
|  | Email Communication – To,CC,BCC |

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| --- | --- |
| Stages | Quarter 4 Audit Report - Development |
| Completed | 20 Week (week 40 to week 60) |
| Chick List | JAD Session Report |
|  | End user manual preparation document |
|  | BA and Developer MOM |
|  | Email Communication – To,CC,BCC |
|  |  |

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| --- | --- |
| Stages | Quarter 5 Audit Report - Testing |
| Completed | 20 Week (week 58 to week 78) |
| Chick List | Test Case Summary |
|  | Training report to end users |
|  | Lesson learnt document |
|  | 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 signoff on the UAT- Client Project Acceptance Form )

Your Team- Project Manager - Mr Vandanam
Senior Java Developer - Ms. Juhi
Java Developers - Mr Teyson, Ms Lucie, Mr Tucker, Mr Bravo
Network Admin - Mr Mike
DB Admin - Mr John. Testers - Mr Jason and Ms Alekya
BA – You. Technical Team have assembled to discuss on the Project approach and have finalised to follow3-tier architecture for this project.

**Answer -**

1. What Elicitation Techniques to apply?

We use a variety of elicitation techniques to collect requirements.

such as document analysis, Reverse Engineering, focus groups, observations, Workshops, reverse engineering, JAD, Interviews, Prototyping, Survey/ Questionnaire, brainstorming, Usecase Specs etc.

1. How to do Stakeholder Analysis RACI/ILS?

RACI matrix-based stakeholder analysis mostly involves identifying stakeholders and defining their roles and responsibilities within the project. To create the RACI, the stakeholders are identified, specified, and assigned RACI roles. ILS also conducts stakeholder analysis. Determine, enumerate, and summarize the stakeholders in this.

1. What Documents to Write?

FRD, BRD, Use Case Documentation, and Test Case Documents, etc.

1. What process to follow to Sign off on the Documents?

The primary and crucial documents are the ones that need to be signed off on SRS. Sign-off can be obtained by using the client's email confirmation.

1. How to take Approvals from the Client?

Call a formal meeting with the clients to update them on developments and ask for regular feedback.

1. What Communication Channels to establish n implement?
Regular meetings include monthly stakeholder updates, biweekly sprint reviews, and weekly status meetings.
2. How to Handle Change Requests?
Change request form, Do Impact Analysis, Approval process, and Documentation.
3. How to update the progress of the project to the Stakeholders?
Regular Weekly status reports and monthly review meetings.
4. How to take signoff on the UAT- Client Project Acceptance Form?
UAT preparation, conduct UAT, fix issues, Acceptance Form, Final review meetings, Obtain Sign-off

**Question 3** – 3-Tier Architecture - 5 Marks Explain and illustrate 3-tier architecture?

**Answer** –

 3-tier Architecture

Client Computers

Client Tier

Business Logic Tier

Application Server

Database Server

Database Tier

The 3-tier Architecture divides the application into 3 logical layers

1. Application Layer- the topmost layer of the architecture. It is also known as the “Presentation layer.” It handles user interface (UI) components such as screens, pages.
2. Business Logic Layer- middle layer of the architecture. It acts as an intermediary between the presentation layer and the data Storage layer. This layer contains the core logic of the application. For Ex, Printers, Payment gateways.
3. Data Layer- Bottom-most layer of the architecture. It is responsible for storing and retrieving data. For Ex. 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 –**

I) 5W 1H- The 5W1H framework is a useful tool for gathering information and understanding the situation by answering questions about Who, What, When, Where, Why, and How.

II) SMART- The SMART technique can help create questions-

Specific, Measurable, Attainable, Relevant, and Time Bound.

III) RACI- The RACI charts help to define and clarify roles and responsibilities within the team by outlining who is responsible, accountable, consulted, and informed for each task.

IV) 3 Tier Architecture - Three-tier architecture is a software development model that separates an application into three layers – Application Layer, Business logic layer and data layer.

V) UML or Unified Modeling Language is a standardized way of diagramming and modelling software system to aid in design, development and communication between team members.

VI) Activity Diagram – Activity Diagram is a type of diagram in unified modeling Language that visually represents the flow of activities within the system.

VII) Model- Domain Model, Conceptual model, Data model, DFD, and ER Diagram all comes under the Model.

VIII) Page Designs- Screens/ Pages are consequence of matured functional requirements. Please do not design screens and pages beforehand. Once the functional requirements are freezed, then we can go ahead to design screen and pages

Question 5 – Elicitation Techniques - 6 Marks

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

Answer –

A smart way for remembering the essential elicitation methods that a business analyst (BA) needs to know is BDRFOWJIPQU.

1. Brainstorming
2. Document Analysis
3. Reverse engineering
4. Focus Group
5. Observations
6. Workshop
7. JAD
8. Interview
9. Prototype
10. Questionnaire
11. Use case space

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

Fertilizers, seeds, pesticides details from the manufacturers and should be able to display them to the Farmers.

To gather the business requirements from the client, you went to SOONY and met Mr. Henry. When Mr. Henry was asked about the project and what are they expecting from the project, Mr. Henry stated that he is expecting to have a login for all its users (fertilizers, seeds, pesticides manufacturers and Farmers) , a product catalog of fertilizers, seeds, pesticides, a search option to search for products, payment process, and delivery

tracking.

After doing the stakeholder analysis, you have found out that Peter, Kevin, Ben are the key stakeholders and you have scheduled an appointment to meet them. After meeting with them and trying to gather the stakeholder requirements, Kevin said that, a Farmer should be able to browse through the products catalog once they visit the website and need to have a search option so that they can search for any product they need. Peter said that, if a farmer wants to buy any product or add them to buy-later list, they need to login

first using their email id and password. If it is a new user, then they can create a new account by submitting their email ID and creating a secure password. Ben added saying that, Farmers needs to have an easy-to-use payment gateway which should include cash-on-delivery (COD), Credit/Debit card and UPI options so that the user’s experience should be better. Kevin mentioned that, a user gets an email confirmation regarding their order status. A delivery tracker to track the whereabouts of their order.

**Answer -**
Utilizing the following elicitation techniques for this project

1. Brainstorming - One of the most crucial elicitation techniques that I use to help come up with new project ideas is brainstorming. Brainstorming can be done individually or in a group. This method supports the review, analysis, and involvement of relevant suggestions in the system requirements. Therefore, we can brainstorm on this project with Peter, Mr. Kevin, and Mr. Henry.
2. Document Analysis - Document Analysis is an important gathering technique, Evaluating the documentation of a present system can assist when making AS-IS Process documents and also when driving the gap analysis for scoping of the migration project
3. Prototyping - When used appropriately, this screen mockup can aid in the requirements gathering process; however, if used too soon, it may cause issues. Mockups are useful because they enable clients or business representatives to see how the system will work. Analysts and stakeholders may find this to be a significant benefit in detecting issues early on.
4. Use case Specs - Use cases Specs is also known as use case description Document and Every use case has its own description in the document. This document explains how each use case unfolds and how the user interacts with the system to accomplish a specific objective. Using the following point in the use case Specifications such as Use case name, Use case description, actor, basic flow, alternative flow, pre- condition, Post condition, assumption input-output, dependencies, Business rules, Miscellaneous information

This all techniques are helpful in this project. We can generate new ideas, analyzed this idea and further documents and we can make some screen mockups

Question 7 – 10 Business Requirements- 10 Marks

Make suitable Assumptions and identify at least 10 Business Requirements.

**Answer -**

1. BR001- User should be able to browse through the product catalog
2. BR002- User should be able to search seeds, fertilizers, pesticides and other product
3. BR003- Users need to create login Id and Password, if user is new
4. BR004- For every order, users should get an email confirmation
5. BR005- Manufacturers should be able to upload and display their products in the application
6. BR006- User can add or delete their products from the cart.
7. BR007- User can pay by and select all payment methods as per their convenience
8. BR008- User can review their placed order status
9. BR009- User can give feedback on delivered products and the quality of the product
10. BR0010- User can see all Information about all products.

**Question 8** –Assumptions- 5 Marks

1. List your assumptions

**Answer –**

1. Assumption 1- The Customer has online accounts for secured payment
2. Assumption 2- Customer has basic knowledge about farming
3. Assumption 3- User can log in using a Google account or Facebook account
4. Assumption 4- lack of time and unavailability of the product in a shop. So farmers can prefer buying products online.
5. Assumption 5- Farmer can see and buy all required products on 1 platform.
6. Assumption 6- It may increase awareness about online platforms and shopping among farmers

**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

|  |  |  |  |
| --- | --- | --- | --- |
| Req ID | Req Name | Req Description | Priority |
| BR001 | Farmer Searchfor Products | Farmers should be able to search for availableproducts in fertilizers, seeds, pesticides | 8 |
| BR002 | Manufacturersupload theirProducts  | Manufacturers should be able to upload and displaytheir products in the application | 8 |
|  |  |  |  |

Once the requirements are finalized, as a business analyst, one of the major roles is to act as a liaison between the client and the project team. To gather the requirements correctly from the client side and then to deliver those requirements to the project team in a way they understand.

To make the project team understand the requirements, you need to convert those requirements into UML diagrams and screen mock-ups.

**Answer –**

|  |  |  |  |
| --- | --- | --- | --- |
| Req ID | Req Name | Req Description | Priority |
| BR001 | browse through product | User should be able to browse through the product catalog | 2 |
| BR002 | Farmer Search for Products | User should be able to search seeds, fertilizers, pesticides and other product | 3 |
| BR003 | create a login | Users need to create login Id and Password, if user is new | 10 |
| BR004 | Email confirmation | For every order, users should get an email confirmation | 4 |
| BR005 | Manufacturers upload their Products | Manufacturers should be able to upload and display their products in the application | 8 |
| BR006 | Add or remove to cart Option | User can add or delete their products from the cart. | 8 |
| BR007 | Payment gatway | User can pay by and select all payment methods as per their convenience (Credit card/ COD/ Debit card/ UPI) | 5 |
| BR008 | Product tracking | User can check their placed order status | 9 |
| BR009 | Feedback on order | User can give feedback on the delivered products and the quality of product | 10 |
| BR009 | Product Information | User can give feedback on delivered products and the quality of the product | 6 |

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

Draw use case diagram

**Answer –**



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

Prepare use case specs for all use cases

**Answer –**

|  |  |
| --- | --- |
| Use Case ID | UC001 |
| Use Case Name | Book appointment with Developer |
| Created by | Shital Kadam | Last Updated by | 17th April 2025 |
| Date Created | 15th May 2024 | Last revision Date | 17th April 2025 |
| Actor | Customer, Developer |
| Description | These use cases explain how users can sign up for an online agricultural website or app. |
| Pre-Condition | The user should have a valid email address or mobile |
| Post condition | the account is successfully created |
| Normal flow of events | 1. Farmer visits the website and clicks on "Register2. The system displays a registration form3. Farmer enters details (e.g., name, contact, address, and password) and submits the form4. The system validates the information5. The system creates a farmer account and sends a confirmation email/SMS |
| Alternative flow | If validation fails, the system highlights errors and requests corrections |
| Expectations | The user can successfully register himself or herself into the app. |
| Frequency of Use | High |
| Assumptions | The farmer has access to the internet and a valid email address or mobile phone numberThe registration form is simple and user-friendly, with mandatory fields markedThe system is accessible via both desktop and mobile devices. |

|  |  |
| --- | --- |
| Use Case ID | UC002 |
| Use Case Name | Book appointment with Developer |
| Created by | Shital Kadam | Last Updated by | 17th April 2025 |
| Date Created | 15th May 2024 | Last revision Date | 17th April 2025 |
| Actor | Customer, Developer |
| Description | These use case describe how user can log in app and allow user to login into app. |
| Pre-Condition | User should have registered account |
| Post condition | Successfully logged in to the app |
| Normal flow of events | 1. The system describes a login or Registered option2. The user can log in to the app by using the user id and password3. The system validates the user Id and password4. System verified user id and password5. The system displays the user’s homepage6. The use case end |
| Alternative flow | 1. Missing user id and password2. Maximum 3 attempt exceeded3. Invalid user id password |
| Expectations | User can login successfully into app. While login into app user should enter valid email id and password |
| Frequency of Use | High |
| Assumptions | It is assumed that the customer is registeredIt I assumed that the customer has basic knowledge about use of or handling of mobile and computers |

|  |  |
| --- | --- |
| Use Case ID | UC003 |
| Use Case Name | Book appointment with Developer |
| Created by |  | Last updated by | 17th April 2025 |
| Date Created | 15th May 2024 | Last revision Date | 17th April 2025 |
| Actor | Customer, Developer |
| Description | These use cases describe if the user forgot their password then how to reset the Password |
| Pre-Condition | User should have a registered account |
| Post condition | Password is successfully updated |
| Normal flow of events | 1. User navigates to the "Forgot Password" page2. The system prompts for the registered email or phone number3. User submits the information (OTP)4. The system sends a password reset link or code5. User resets the password using the link or code |
| Alternative flow | 1. Invalid Email/Phone Number: The user enters an email address or phone number that is not associated with any account. User can re-enter the correct email/phone number or contact support2. Expired or Invalid Reset Link: User clicks on the reset link in the email, but it has expired or is invalid. The user can request another password reset |
| Expectations | User can login successfully into app after resetting password Successfully |
| Frequency of Use | Medium |
| Assumptions | It is assumed that the customer is registeredThe email or phone number used during the password recovery process must match the one provided during registration |

|  |  |
| --- | --- |
| Use Case ID | UC004 |
| Use Case Name | Book appointment with Designer |
| Created by | Shital Kadam | Last updated by | 17th April 2025 |
| Date Created | 15th May 2024 | Last revision Date | 17th April 2025 |
| Actor | Customer, Developer |
| Description | These use case describe how user can Browse the product in app |
| Pre-Condition | User must be logged in |
| Post condition | User is informed about the available products |
| Normal flow of events | 1. User selects a product category (e.g., fertilizers, seeds, pesticides).2. The system displays products in the selected category.3. User filters and sorts products based on criteria (e.g., price, brand).4. User views product details. |
| Alternative flow | 1. No Products Available in Selected Category2. View Limited Product Details (Guest User)3. The Farmer uses the search bar to find a specific product |
| Expectations | User can Browse and view product easily on app |
| Frequency of Use | High |
| Assumptions | Farmers are familiar with basic browsing and filtering operations.The system has a robust database to handle product listings and queries efficiently |

|  |  |
| --- | --- |
| Use Case ID | UC005 |
| Use Case Name | Book appointment with Developer, Pay Pal |
| Created by | Shital Kadam | Last updated by | 17th April 2025 |
| Date Created | 15th May 2024 | Last revision Date | 17th April 2025 |
| Actor | Customer, Developer, Paypal |
| Description | These use case describe how user can Place Order |
| Pre-Condition | User must be logged in and have selected products to purchase |
| Post condition | User can Placed order successfully |
| Normal flow of events | 1. User adds desired products to the cart2. User proceeds to checkout3. The system displays an order summary4. User selects payment method and provides shipping details5. The system processes the order and generates a confirmation |
| Alternative flow | If payment fails, the system prompts the user to retry or choose another payment method |
| Expectations | User can place their order successfully with number of items |
| Frequency of Use | High |
| Assumptions | The user must be a registered member of the platform to place an order.User can first browse product properly and then placed order |

|  |  |
| --- | --- |
| Use Case ID | UC006 |
| Use Case Name |  |
| Created by | Shital Kadam | Last updated by | 17th April 2025 |
| Date Created | 15th May 2024 | Last revision Date | 17th April 2025 |
| Actor | Customer, Developer, Paypal |
| Description | These use case describe how user can Track Order |
| Pre-Condition | User must have placed an order |
| Post condition | User is informed about the order’s status |
| Normal flow of events | 1. User navigates to the order history section2. User selects an order to view details3. The system displays the order status and tracking information |
| Alternative flow | 1. Order Delivered: The user tracks an order that has already been delivered. Displays the delivery confirmation message: "Your order was delivered on [date and time]." The user can view delivery proof, such as a signature or photo, if available, or report an issue if delivery was not received2. User Cancels Tracking Request: The user decides to cancel the tracking process midway (e.g., closes the browser or app), No action is taken, and the process terminates without displaying order details, the user can reinitiate the tracking process later if needed.3. Order Cancelled or Returned: The user tracks an order that has been cancelled or returned, display a message like "This order has been cancelled/returned. No further tracking details are available.” The user can contact support for further clarification or to resolve any concerns. |
| Expectations | User can track their order |
| Frequency of Use | High |
| Assumptions | The user must be placed order and do payment for further order delivery.User should enter correct delivery address during placing order procedure. |

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

Activity diagrams

**Answer -**

1. **Login –**



1. **Search product –**



1. **Browse Product –**



1. **Make a payment –**



1. **Delivery Notification –**

