**Q1 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:**

**Q1**

|  |  |
| --- | --- |
| Stage | Requirement gathering phase 8 weeks [WK 1 to WK8] |
| Completed | **6 Weeks [ Week 1 to Week 6]** |
| Checklist |  |
|  | **Elicitation results report** |
|  | **BRD template** |
|  | **Grouping of functionalities / features-client sign off** |
|  | **E-mail communication – To, CC, BC** |

**Q2**

|  |  |
| --- | --- |
| Stage | Requirement analysis phase – 16 weeks [ week 7- week 24] |
| Completed | **10 Weeks** |
| Checklist |  |
|  | **UML Diagrams** |
|  | **Client sign off documents** |
|  | **Business to Functional requirement mapping** |
|  | **RTM document version control** |
|  | **E-mail communication – TO, CC, BC** |

**Q3**

|  |  |
| --- | --- |
| Stage | Design phase-27 weeks [ week 23 – week 50] |
| Completed | **20 weeks** |
| Checklist |  |
|  | **Utilisation of tools** |
|  | **Collaborate with stakeholders** |
|  | **Check for technical feasibility** |
|  | **Documented evidence on client communication** |
|  | **Stakeholder MOM** |
|  | **Risk assessment** |
|  | **E-mail communication- TO, CC, BC** |

**Q4**

|  |  |
| --- | --- |
| Stage | Development phase-31 weeks [ week 43 – week 74] |
| Completed | **25 weeks** |
| Checklist |  |
|  | **Coding standards compliance** |
|  | **Functional Implementation** |
|  | **Code documentation** |
|  | **Security Consideration** |
|  | **Performance optimization** |
|  | **Document Code Changes and updates** |

**Q2**

**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 follow 3-tier architecture for this project.**

**Answer:**

**What Elicitation Techniques to apply- To ensure a thorough understanding of the requirements and deliver a user-friendly platform, the following elicitation techniques will be used:**

1. **Prototyping**
   * **Justification:**
     + **Farmers may not be familiar with online platforms, so visual prototypes (wireframes, mockups) will help them provide better feedback.**
     + **Manufacturers can validate product listing flows before development.**
     + **Ensures usability and design issues are identified early.**
2. **Use Case Specification**
   * **Justification:**
     + **Defines step-by-step interactions between farmers, manufacturers, and the system.**
     + **Helps developers understand business processes clearly.**
     + **Ensures completeness of functional requirements.**
3. **Document Analysis**
   * **Justification:**
     + **Reviews existing agriculture e-commerce platforms, regulatory guidelines, and industry standards.**
     + **Identifies best practices and compliance requirements.**
     + **Saves time by leveraging existing knowledge.**
4. **Brainstorming**
   * **Justification:**
     + **Engages stakeholders (Committee, farmers, manufacturers) in idea generation.**
     + **Helps identify innovative features and address pain points.**
     + **Encourages collaboration to define product functionalities.**

**Stakeholder Analysis RACI/ILS**

**Below is list of stakeholders**

**Project Stakeholders:**

**-Business Analyst – ME**

**-Delivery Head – Mr Karthik**

**-Project Manager – Mr Vanadanam**

**-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.**

**RACI Matrix (Roles & Responsibilities)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Stakeholder | Responsible | Accountable | Consulted | Informed |
| Mr. Henry |  | Accountable | Consulted | Informed |
| Mr. Pandu |  | Accountable | Consulted | Informed |
| Mr. Dooku |  | Accountable | Consulted | Informed |
| Farmers (Peter, Kevin, Ben) |  | Accountable | Consulted | Informed |
| APT IT SOLUTIONS (Project Team) | Responsible | Accountable | Consulted | Informed |
| Project Manager (Mr. Vandanam) | Responsible | Accountable | Consulted | Informed |
| Senior Java Developer (Ms. Juhi) | Responsible |  | Consulted |  |
| Java Developers (Mr. Teyson, Ms. Lucie, Mr. Tucker, Mr. Bravo) | Responsible |  |  |  |
| Network Admin (Mr. Mike) | Responsible |  |  |  |
| DB Admin (Mr. John) | Responsible |  |  |  |
| Testers (Mr. Jason, Ms. Alekya) | Responsible |  |  |  |

**ILS Analysis (Influence, Legitimacy, Support)**

|  |  |  |  |
| --- | --- | --- | --- |
| Stakeholder | Influence | Legitimacy | Support |
| Mr. Henry | High | High | High |
| Mr. Pandu | Medium | High | High |
| Mr. Dooku | Medium | High | High |
| Farmers (Peter, Kevin, Ben) | Medium | High | High |
| APT IT SOLUTIONS (Project Team) | High | High | High |
| Project Manager (Mr. Vandanam) | High | High | High |
| Senior Java Developer (Ms. Juhi) | Medium | High | Medium |
| Java Developers (Mr. Teyson, Ms. Lucie, Mr. Tucker, Mr. Bravo) | Medium | Medium | Medium |
| Network Admin (Mr. Mike) | Low | Medium | Low |
| DB Admin (Mr. John) | Low | Medium | Low |
| Testers (Mr. Jason, Ms. Alekya) | Low | Medium | Low |
| Committee Members | High | High | High |

**Business Stakeholders:**

* **Business Sponsor - Mr. Henry**
* **Influencers - Peter, Kevin and Ben.**
* **Finance team - Mr Pandu**
* **Project Team - Mr Dooku**

**What Documents to Write –**

* **Scope**
* **In-Scope Features/Services**
* **Out scope Features/Services**
* **Solution Architecture Diagram**
* **5. Technology Specifications**
* **FRD – Functional and Non-Functional**
* **BRD**
* **PROJECT TIMELINE**
* **RISKS AND MITIGATION PLAN**
* **CHANGE MANAGEMENT**
* **STANDARD TERMS AND CONDITIONS**

**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**

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

**• Whenever we seek approval from a manager or a client, we will have to draft a request for an**

**approval letter.**

**• Write email to addressing the relevant signing stakeholders and reviewers as per below format.**

**Dear Henery,**

**I am sending this request to seek your approval regarding the recent project proposal I mentioned**

**earlier at the meeting.**

**The team and I have put together a detailed plan that can be found attached to this email. After**

**receiving your approval, we will commence with the project immediately. You will find this plan**

**beneficial for several reasons for your Online Agriculture store.**

**The project will be embedded with the following milestones [list] with the main aim being towards**

**achieving. I anticipate this project to succeed and effectively bring our aims to reality. The whole**

**team looks forward to working together on this task.”**

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

**• Face-to-Face Communication/ In person meeting**

**• Video Conferencing.**

**• Phone Calls**

**• Emails**

**• Text Messages**

**• Online Messaging platforms. (Skype, teams etc.)**

**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 signoff 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 signoff, a final review session will be scheduled with key approvers and reviewers (A, C) to**

**review 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 signoff, the**

**product is good to go for production.**

**The Technical Team has finalized a 3-tier architecture for this project. This architecture will ensure:**

* **Separation of Concerns: The system will be divided into Presentation, Business Logic, and Database layers.**
* **Scalability: The application can handle growing user demands effectively.**
* **Security: Each layer will have controlled access, reducing vulnerabilities.**
* **Maintainability: Code modifications can be performed without affecting other layers.**

**Q3: Explain and illustrate 3-tier architecture?**

**Answer:**

**What is 3-Tier Architecture?**

**3-tier architecture is a client-server architecture that organizes an application into three distinct layers or tiers:**

1. **Application Tier: This is the topmost layer, the one user interact with directly. It's responsible for displaying information to the user and receiving user input. Think of it as the face of the application.**
2. **Business Logic: This middle layer processes the data and implements the business rules of the application. It acts as an intermediary between the presentation tier and the data tier. It handles calculations, validations, and other logic.**
3. **Database: This bottom layer stores and retrieves the data used by the application. It consists of databases, data warehouses, and other data storage mechanisms.**

**Illustrating with the Online Agriculture Product Store:**

**Here's how the 3-tier architecture would apply to this project:**

**| Presentation Layer (Frontend) |**

**| (Web & Mobile Application) |**

**|**

**V**

**| Business Logic Layer (Backend)|**

**| (API & Application Server) |**

**|**

**V**

**| Data Layer (Database) |**

**| (MySQL/PostgreSQL) |**

**In this illustration, the presentation layer interacts with the user and handles the user interface. It sends user requests and data to the business logic layer for processing. The business logic layer performs the required operations and communicates with the data storage layer to retrieve or store data. The data storage layer manages the persistence and retrieval of data from the underlying storage systems. This three-tier architecture promotes separation of concerns, flexibility, and scalability. Each layer can be developed and maintained independently, enabling changes or updates in one layer without affecting the others. It also allows for better distribution of responsibilities and supports modular development, making the application more maintainable and extensible.**

**Q4: 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, the BA Should Consider:**

1. **Stakeholder's Perspective:**

* **Understanding their role: What is their area of expertise? What decisions can they make? A question for a farmer will differ from one for a financial backer.**
* **Their level of technical understanding: Avoid jargon or technical terms the stakeholder might not understand. Use clear, concise language.**
* **Their priorities and concerns: What are they most interested in achieving? What are their potential roadblocks? Frame questions that address their key concerns.**
* **Their communication style: Some stakeholders prefer direct questions, while others prefer open-ended discussions. Adapt your approach accordingly.**

1. **Question Clarity and Purpose:**

* **Specific and Concise: Avoid vague or ambiguous questions. Be precise about what information you need. "What are your challenges?" is less effective than "What specific challenges do you face in procuring fertilizer during the planting season?"**
* **Open vs. Closed Questions: Use a mix of open (exploratory) and closed (specific answer) questions. Open questions ("How do you currently…?") encourage discussion, while closed questions ("Do you use X or Y?") provide focused answers.**
* **Single Focus: Ask one question at a time. Avoid combining multiple questions into one. This can confuse the stakeholder and make it difficult to get clear answers.**
* **Purposeful: Every question should have a clear objective. What information are you trying to gather? How will that information be used?**

1. **Relating Questions to Project Context:**

* **5W1 (Who, What, When, Where, Why, How): Use these as a framework to ensure you're covering all necessary aspects of the topic. For example, "Who is responsible for approving the order?" "What are the key features you need in the application?" "When do you typically purchase seeds?"**
* **SMART (Specific, Measurable, Achievable, Relevant, Time-bound): Ensure the information gathered is SMART. Can the information be quantified or measured? Is it relevant to the project goals? Can it be realistically obtained within the project timeframe?**
* **RACI (Responsible, Accountable, Consulted, Informed): When asking about processes or responsibilities, consider the RACI matrix. Who is *responsible* for performing the task? Who is *accountable* for its completion?**
* **3-Tier Architecture: Think about how the question relates to the different tiers. Is it about the user interface (presentation tier), the business logic (application tier), or the data (data tier)? For example, "How should the product search function work?" relates to the presentation and application tiers.**

1. **Use Cases, Use Case Specs, Activity Diagrams, Models, Page Designs:**

* **Use these artifacts as a basis for your questions. For example, "Does this use case accurately reflect your current process?" "Does this page design meet your needs?" Show wireframes or mockups and ask for specific feedback. "Is the placement of the 'Buy Now' button intuitive?"**
* **Business Process: Understand the current business processes and how the proposed solution will impact them. Ask questions about the steps involved, the people involved, and any pain points.**

**Question Phrasing:**

* **Neutral Tone: Avoid leading questions that suggest a particular answer. For example, "Don't you think this design is better?" is leading. Instead, ask "What are your thoughts on this design?"**
* **Positive Framing: Frame questions positively, focusing on solutions and improvements.**
* **Active Listening: Pay close attention to the stakeholder's responses. Ask follow-up questions to clarify any ambiguities.**

1. **Documentation:**

* **Record Answers: Document all answers carefully, noting the source and date of the information. This will be crucial for analysis and future reference.**

**Example:**

**Instead of: "Tell me about fertilizers." (Too broad)**

**Try: "We're looking to improve the fertilizer search functionality in the application. Could you describe the types of fertilizers you typically use, and what information is most important to you when choosing a fertilizer online (e.g., brand, type, nutrient content, price)?" (Specific, relates to the project, considers user needs).**

**By carefully considering these points before framing questions, the BA can gather more accurate and relevant information, leading to a more successful project outcome.**

**Q5: As a Business Analyst, What Elicitation Techniques you are aware of? (BDRFOWJIPQU)**

**Answer:**

**Common Elicitation Techniques (BDRFOWJIPQU):**

* **Brainstorming: A group activity where participants generate a large number of ideas in a short time. It's great for exploring possibilities and uncovering creative solutions.**
  + **How it works: A facilitator guides the session, encouraging participants to share any idea that comes to mind, no matter how "out there" it might seem. The goal is to generate a wide range of options, which can then be evaluated and refined later.**
  + **Best for: Early stages of a project, when exploring new concepts or trying to solve a complex problem.**
* **Document Analysis: Reviewing existing documents to understand the current state of affairs, identify requirements, and uncover potential issues.**
  + **How it works: The BA analyzes documents like business plans, process flows, reports, and user manuals to extract relevant information.**
  + **Best for: Understanding existing systems, processes, or regulations.**
* **Requirements Workshops: Structured meetings with key stakeholders to collaboratively gather and refine requirements.**
  + **How it works: A facilitator guides the workshop, using techniques like brainstorming, prototyping, and use case development to elicit requirements.**
  + **Best for: Complex projects with multiple stakeholders, where it's important to get everyone on the same page.**
* **Focus Groups: Gathering a small group of representative users to discuss their needs and expectations.**
  + **How it works: A moderator leads the discussion, encouraging participants to share their thoughts and opinions on the product or service.**
  + **Best for: Understanding user needs and preferences, especially in the early stages of a project.**
* **Observation (Job Shadowing): Observing users in their natural environment to understand how they work and identify their needs.**
  + **How it works: The BA observes users as they perform their tasks, taking notes and asking questions to clarify any ambiguities.**
  + **Best for: Understanding user workflows and identifying areas for improvement.**
* **Workshops (already covered under "R" for Requirements Workshops)**
* **Joint Application Development (JAD) Sessions: Similar to workshops, but with a stronger focus on collaborative design and development.**
  + **How it works: Stakeholders and developers work together in a series of workshops to design and develop the solution.**
  + **Best for: Projects where rapid development and user involvement are critical.**
* **Interviews: Conducting one-on-one conversations with stakeholders to gather detailed information about their needs and requirements.**
  + **How it works: The BA prepares a set of questions and conducts interviews with individual stakeholders.**
  + **Best for: Gathering in-depth information from key stakeholders.**
* **Prototyping: Creating a working model of the system to demonstrate functionality and gather feedback.**
  + **How it works: The BA creates a prototype (which can range from a simple wireframe to a fully functional application) and demonstrates it to stakeholders.**
  + **Best for: Visualizing the system and getting early feedback on the design.**
* **Questionnaires/Surveys: Distributing questionnaires to a large group of stakeholders to gather information about their needs and preferences.**
  + **How it works: The BA develops a questionnaire and distributes it to stakeholders, either electronically or in paper form.**
  + **Best for: Gathering information from a large number of stakeholders, especially when they are geographically dispersed.**
* **Use Case Development: Defining how users will interact with the system to achieve specific goals.**
  + **How it works: The BA works with stakeholders to identify the different ways users will interact with the system and documents these interactions in the form of use cases.**
  + **Best for: Understanding user needs and defining system functionality.**

**Q6: 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. Identify Business Requirements (which includes Stakeholder Requirements) BR001 – Farmers should be able to search for available products in fertilizers, seeds, pesticides BR002 – Manufacturers should be able to upload and display their products in the application**

**Answer:**

**Here's a breakdown of suitable elicitation techniques for this project, along with justifications, and the identified business requirements:**

**Elicitation Techniques and Justification:**

1. **Interviews (Justification: Crucial for initial understanding and detailed requirements):**
   * **With Mr. Henry (SOONY): Essential for understanding the overall project vision, business objectives (CSR focus), budget, and high-level requirements from the client's perspective. This has already been done, and the high-level requirements have been gathered (login, product catalog, search, payment, delivery tracking).**
   * **With Peter, Kevin, and Ben (Farmers): Absolutely vital. Farmers are the primary users, so understanding their specific needs, pain points, technical literacy, and preferences is paramount. The initial interviews have already yielded valuable information (product browsing, search, login/registration, payment options, order confirmation, delivery tracking). Further interviews may be necessary for deeper dives.**
   * **With Manufacturers (Potential): While not done initially, interviewing manufacturers will be important later to understand their needs for product listing, inventory management, pricing, order fulfillment, and potential integration with their existing systems.**
2. **Use Case Specifications (Justification: Essential for detailing user interactions):**
   * **Use cases will be critical for documenting how farmers and manufacturers will interact with the system. Examples: "Browse Products," "Search Products," "Place Order," "Manage Product Listing," "Track Delivery," "Manage Account." Use case specifications will detail the steps involved in each interaction, including alternative flows and exceptions.**
3. **Prototyping (Justification: Invaluable for user interface design and usability testing):**
   * **Low-fidelity prototypes (wireframes/mockups): Create basic wireframes or mockups of the user interface to visualize the layout and navigation of the application. This will help get early feedback from farmers on usability and identify any potential issues. For example, prototype the product search screen, the product details page, the shopping cart, and the checkout process.**
   * **High-fidelity prototypes (interactive mockups or clickable prototypes): As the design progresses, create more interactive prototypes that simulate the actual user experience. This will allow for more realistic usability testing.**
4. **Document Analysis (Justification: Useful for understanding existing processes or regulations):**
   * **While not explicitly mentioned, document analysis could be useful if SOONY or the manufacturers have any existing documentation related to their current processes for product distribution, sales, or inventory management. This could provide valuable insights.**
5. **Brainstorming (Justification: Helpful for generating ideas and exploring options):**
   * **Brainstorming sessions with the development team can be useful for generating ideas for features, solving technical challenges, or exploring different design options. It can also be used with stakeholders to explore potential solutions to specific problems they face.**

**Why *not* some techniques (at this stage):**

* **Focus Groups: While valuable, focus groups are generally used when you have a larger group of representative users and are exploring more general attitudes and opinions. For this project, the initial interviews with key farmers (Peter, Kevin, and Ben) provide a good starting point. Focus groups could be considered later if needed.**
* **Observation (Job Shadowing): While useful, job shadowing might be challenging in this context, as the application is not yet built. Observation could be more relevant later during user acceptance testing (UAT) to see how farmers interact with the actual application.**
* **Questionnaires/Surveys: Surveys are best for reaching a large, dispersed audience. At this stage, the focus is on gathering detailed requirements from key stakeholders, making interviews and workshops more appropriate.**

**Q7 Make suitable Assumptions and identify at least 10 Business Requirements.**

**Identify Business Requirements (which includes Stakeholder Requirements)**

**BR001 – Farmers should be able to search for available products in fertilizers, seeds, pesticides**

**BR002 – Manufacturers should be able to upload and display their products in the application**

**Answer:**

**1. System should show welcome page**

**2. System should allow user to login through mob no. or mail id**

**3. User should get the option of COD and Cr\Dr card for payment**

**4. Users should get product details once they clicked on it.**

**5.Customer should get email / message once order booked.**

**6. If any delays from companies to deliver product user should get message.**

**7. Users should be able to book products in advance or carry in their cart.**

**8. System should have option to exchange or return the product.**

**9. System should allow users to give feedback / rating for products and other users**

**can have view option.**

**10. Feedback and customer care tab should be on home page.**

* **Business Requirements (Including Stakeholder Requirements):**
* **BR001: Farmers should be able to search for available products (fertilizers, seeds, pesticides) using keywords, product categories, or filters (e.g., brand, type, nutrient content). *(Stakeholder Requirement - Kevin)***
* **BR002: Manufacturers should be able to upload and display their products in the application, including product details (descriptions, images, pricing, available quantities, certifications, etc.). *(High-Level Requirement - Mr. Henry)***
* **BR003: The application should provide user login functionality for farmers and manufacturers using email and password. *(High-Level Requirement - Mr. Henry & Stakeholder Requirement - Peter)***
* **BR004: The application should allow new users (farmers and manufacturers) to register an account by submitting their email ID and creating a secure password. *(Stakeholder Requirement - Peter)***
* **BR005: Farmers should be able to browse a product catalog of fertilizers, seeds, and pesticides, organized by category or other relevant criteria. *(Stakeholder Requirement - Kevin)***
* **BR006: The application should offer a robust search option for farmers to find specific products quickly and easily. *(Stakeholder Requirement - Kevin)***
* **BR007: The application should provide a secure payment gateway with options for Cash-on-Delivery (COD), Credit/Debit Card, and UPI. *(Stakeholder Requirement - Ben)***
* **BR008: Farmers should receive email and/or SMS confirmation regarding their order status, including order details, tracking information, and estimated delivery date. *(Stakeholder Requirement - Ben)***
* **BR009: Farmers should be able to track the delivery status of their orders in real-time through the application. *(Stakeholder Requirement - Ben)***
* **BR010: The application should allow farmers to add products to a "Buy Later" or "Wishlist" feature for future purchase. *(Implied Stakeholder Requirement - Convenience)***
* **BR011: The application should provide a mechanism for farmers to rate and review products they have purchased. *(Implied Stakeholder Requirement - Feedback and Trust)***
* **BR012: Manufacturers should be able to manage their product inventory (add, update, remove products, track stock levels). *(Implied Manufacturer Requirement)***
* **BR013: The application should generate reports on sales, orders, and inventory for both manufacturers and SOONY (for CSR tracking). *(Implied Requirement - Reporting)***
* **BR014: The system should ensure secure storage and handling of user data and payment information. *(Non-Functional Requirement - Security)***
* **BR015: The application should be accessible on a variety of devices (desktops, laptops, tablets, and smartphones) with varying screen sizes. *(Non-Functional Requirement - Accessibility)***

**These additional business requirements, along with the initial ones, provide a more comprehensive foundation for the project. They address both explicit stakeholder requests and implied needs based on the context of the project. Remember that requirements elicitation is an iterative process, and these requirements may evolve as the project progresses and more information becomes available.**

**Q8 List your assumptions**

**Answer:**

**Assumptions:**

**1. The online agriculture product store will primarily cater to farmers and companiesinvolved in the manufacturing of fertilizers, seeds, and pesticides.**

1. **The store will operate as a web and mobile application to provide accessibility tousers.**
2. **. The project will be developed by APT IT SOLUTIONS company, which has thenecessary talent pool.**
3. **4. The project duration is 18 months, and it is being carried out as part of aCorporate Social Responsibility (CSR) initiative.**
4. **5. Mr. Karthik is the Delivery Head overseeing the project, and Mr. Vandanam is theassigned Project Manager.**
5. **6. The development team includes Ms. Juhi as a Senior Java Developer, Mr.Teyson, Ms. Lucie, Mr. Tucker, and Mr. Bravo as Java Developers, Mr. Mike asthe Network Admin, and Mr. John as the DB Admin. Mr. Jason and Ms. Alekyaare the assigned testers.**

**7. Peter, Kevin, and Ben are considered key stakeholders in the project as theyshared their requirements and are part of the committee helping Mr. Henry.**

**8. The store will require a user login system for manufacturers and farmers toaccess different functionalities.**

**9. A product catalog will be available, featuring detailed information about fertilizers,seeds, and pesticides, including pricing and manufacturer details.**

**10.Users will have the ability to search for specific products within the catalog.**

**11.Farmers will need to create an account using their email ID and password tomake purchases or add products to a buy-later list. New users can create a newaccount by providing their email ID and creating a secure password.**

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* 2. They will get all resources asap.
* 3. Client start thinking of profit before launching products in market.
* 4. Is there significant customer base.
* 5. Clients thinks that business will get funded .
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**Q9: Give Priority 1 to 10 numbers (1 being low priority – 10 being high priority) to these Requirements after discussions with the stakeholders 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 | **User login system** | **Users (manufacturers and farmers) should be able to login to access different functionalities** | **9** |
| BR002 | **Product catalog** | **Users should get product details once**  **they clicked on it** | **10** |
| BR003 | **Product search** | **Farmers should be able to search for**  **available products in fertilizers, seeds,**  **pesticides** | **8** |
| BR004 | **User registration** | **System should allow user to login**  **through email Id or mob no** | **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** | **Farmers should be able to do the**  **payment through multiple payment**  **options (UPI, COD, Credit/debit card)** | **10** |
| BR007 | **Order confirmation Email** | **User should receive email confirmation regarding their order status** | **6** |
| BR008 | **Delivery Tracker** | **A delivery tracker should be available foe user to track the progress and location of their orders** | **9** |
| BR009 | **Web and mobile accessibility** | **The online store should operate as both a web and mobile application foe user accessibility** | **7** |
| BR010 | **CSR initiative duration** | **The project duration should be 18 months as part of the CSR initiative** | **5** |

**Q10 Draw use case diagram**

**Answer:**



**Q11 Prepare use case specs for all use cases**

**Answer:**

|  |  |
| --- | --- |
| Use Case ID | UC001 |
| Use Case Name | **Buying a product** |
| Actor | **Customer, Seller** |
| Description | **This use case describes how users can make purchase via App** |
| Pre-condition | **User should have been registered into the application** |
| Post-condition | **Successfully able to login the Account** |
| Basic flow | **Step 1: User create and account and login**  **Step 2: User search for a product from the search bar.**  **Step 3: same product and related product option from different manufacture will be appeared on the screen.**  **Step 4: User select one product, selects the size and quantity of the product and click on "buy now option".**  **Step 5: System will take to another page, where total price calculation will be displayed along with the products added to cart.**  **Step 6: User click on "Place order button".**  **Step 7: User need to choose the mode of the payment.**  **Step 8: User need to enter the banking details and make payment.**  **Step 9: User will receive order confirmation on email along with the tracking id.**  **Step 10: Basic flow end here.** |
| Alternative flow | **Step 1: User is not able to login and redirected to forgot "Username/Password" page.**  **Step 2: If you user is not able to get the right information, he can request for a call from customer care.**  **Step 3: once he get connected with the customer care he will explain the issue to the customer care representative**  **Step 4: Customer care will send a link to reset password to his email account.**  **Step 5: User will go to that link and system will take to new page, where user will be able to change new password**  **Step 6: User will be put a new password.**  **Step 7: System will ask to reconfirm the password. Step 8: User will be able to login the account now.** |
| Exception | **If internet connectivity lost while doing this use case, system displays " check with your internet connectivity "** |
| Frequency Of use | **High** |
| Assumption | **It is assumed that the customer is registered It is assumed that the customer has the computer knowledge It is assumed that the customer has a suitable device to use the APP.** |

|  |  |
| --- | --- |
| Use Case ID | UC002 |
| Use Case Name | **Exchange of Product** |
| Actor | **Customer, Seller** |
| Description | **This use case describes how users can exchange a purchased product.** |
| Pre-condition | **User should have purchased a product before in order to make a exchange** |
| Post-condition | **Successfully able to exchange the product** |
| Basic flow | **Step 1: User login to account via credentials. Step 2: User click on "Account".**  **Step 3: System takes to different page with other details.**  **Step 4: User select option "Exchange" among those options.**  **Step 5: System will take to another page, where recently ordered products will be displayed on the screen.**  **Step 6: User has to choose the product which he wants to exchange.**  **Step 7: User will get another option where he will be asked- "different size in same product" or "want to buy another product"**  **Step 8: User need to choose one of the option and take action according to choosen option. Step 9: Once the product is chosen, user will have to click on button "Exchange".**  **Step 10: User will get the confirmation on email.** |
| Alternative flow | **Step 1: User couldn't find the size which he wanted.**  **Step 2: User call customer care agent to get a solution**  **Step 3: Agent suggested to wait for the size to be restocked and gave a tentative date or go for similar products.**  **Step 4: Agent share the link of similar products to the registered email of the customer.**  **Step 5: User choose the product**  **Step 6: User will be put a new password.**  **Step 7: System will ask to reconfirm the password.**  **Step 8: User will be able to login the account now.** |
| Exception | **If internet connectivity lost while doing this use case, system displays " check with your internet connectivity "** |
| Frequency Of use | **High** |
| Assumption | **It is assumed that the customer is registered It is assumed that the customer has the computer knowledge It is assumed that the customer has a suitable device to use the APP** |

|  |  |
| --- | --- |
| Use Case ID | UC003 |
| Use Case Name | **Return of Product** |
| Actor | **Customer, Seller** |
| Description | **This use case describes how users can return a purchased product.** |
| Pre-condition | **User should have purchased a product before in order to make a return.** |
| Post-condition | **Successfully able to exchange the product** |
| Basic flow | **Step 1: User login to account via credentials. Step 2: User click on "Account".**  **Step 3: System takes to different page with other details.**  **Step 4: User select option "Return" among those options.**  **Step 5: System will take to another page, where recently ordered products will be displayed on the screen.**  **Step 6: User has to choose the product which he wants to return.**  **Step 7: User will get another option where he will be asked to provide the bank account number for amount of the returned product to be credited.**  **Step 8: User need to enter the account number and submit.**  **Step 9: User will get the confirmation on email** |
| Alternative flow | **Step 1: User didn't get the amount in his account within the TAT.**  **Step 2: User call customer care agent to ask payment status.**  **Step 3: Payment was stuck due to a technical glitch.**  **Step 4: User was shared complaint form to be filled.**  **Step 5: Once form submitted, user received another TAT on the email of amount to be credited.**  **Step 6: User get the payment id in registered email** |
| Exception | **User put the incorrect bank account** |
| Frequency Of use | **High** |
| Assumption | **It is assumed that the customer has a valid bank account number. It is assumed that the customer has good internet connectivity. It is assumed that the customer has computer knowledge.** |

|  |  |
| --- | --- |
| Use Case ID | UC004 |
| Use Case Name | **Update the delivery address** |
| Actor | **Customer, Seller** |
| Description | **This use case describes how users can update address.** |
| Pre-condition | **User should have a valid deliverable postal address.** |
| Post-condition | **Successfully able to update address.** |
| Basic flow | **Step 1: User login to account via credentials. Step 2: User click on "Account".**  **Step 3: System takes to different page with other details.**  **Step 4: User select option "Update" among those options.**  **Step 5: System will take to another page, where mandatory fields like; Apt number, landmark, pin code, city name will be displayed and has to be field.**  **Step 6: User need to click on "submit" button. Step 7: User can use the updated address for products delivery.** |
| Alternative flow | **Step 1: User is not able to update the address**. **Step 2: User will refresh the page.**  **Step 3: User gets error again while submitting details.**  **Step 4: User use live chat box**  **Step 5: User is asked to not leve blank any star marked field.**  **Step 6: after updating all mandatory field, address was successfully submitted.** |
| Exception | **User put the incorrect address details like; pin exceeds the maximum number of digits** |
| Frequency Of use | **High** |
| Assumption | **It is assumed that the customer has a valid postal address It is assumed that the customer has good internet connectivity. It is assumed that the customer has computer knowledge. It is assumed, customer understands, what details has to be put in every field.** |

|  |  |
| --- | --- |
| Use Case ID | UC005 |
| Use Case Name | **Update the new contact number** |
| Actor | **Customer, Seller** |
| Description | **This use case describes how users can update/ change new phone number** |
| Pre-condition | **User should have a new contact number.** |
| Post-condition | **Successfully able to change contact number.** |
| Basic flow | **Step 1: User login to account via credentials. Step 2: User click on "Account".**  **Step 3: System takes to different page with other details.**  **Step 4: User select option "Manage your Account" among those options.**  **Step 5: System will take to another page, where personal details will be displayed.**  **6: User has to click Mobile number**  **Step 7: User will get a red popup button "CHANGE".**  **Step 8: OTP will be sent to existing updated number**  **Step 9: once number is verified with the OTP user put. User can update new contact number. Step 10: New contact number is successfully updated.** |
| Alternative flow | **Step 1: User didn't get the OTP in registered existing number.**  **Step 2: User restarts the phone.**  **Step 3: User raised a ticket with the customer care**  **Step 4: User was shared issue ticket number in the registered email.**  **Step 5: Issue got fixed with the help of support team**  **Step 6: contact number is successfully changed.** |
| Exception | **User put the incorrect phone number.** |
| Frequency Of use | **Low** |
| Assumption | **It is assumed that the customer has a valid phone number. It is assumed that the customer has good phone network to receive OTP. It is assumed that the customer has checked the message inbox for OTP.** |

**Q12 Activity Diagram**

**Answer**

