**Capstone Prep-1 Part-2**

* **Quarterly Audits :-**
* During a quarterly audit the committee may review the BA performance and progression of the project, as well as the quality of their deliverables. The audit may involve review of the BA timesheets, project documents and communication logs to ensure that the BA is meeting project timelines and deliverables.
* The committee may also assess the BA adherence to the projects SDLC process, including their participation in project meetings, their documentations of requirements and specifications and their collaborations with other members of the development team. The audit may also include a review of the BA communication with stakeholders and their ability to manage and resolves stakeholder issues.
* Based on the results of the audit the committee may provide feedback and recommendations for improvement to the BA. The committee may also use the audit results to make decisions about the release of funds for the projects, such as approving or denying additional funding requests.
* Overall the quarterly audit is a mechanism to ensure that the BA is performing efficiently and meeting the project goals and requirements, and to identify any area for improvement.
* **BA Approach Strategy :-**
* Elicitation technique: I would use various elicitation techniques such as interviews, workshops, surveys, observation and prototyping to gather and analyse requirements from stakeholders.
* Stakeholder analysis: I would use stakeholder analysis to identify and prioritize stakeholder based on their level of interest, involvement, and influence in the project.
* RACI/ILS: I would create a RACI/ILS to clearly define the roles and responsibility of stakeholders, track issues, and ensure timely resolution.
* Documents to write: I would create various documents such as requirements, specifications, functional and non-functional requirements, use cases, process flows, wire frames, and the test plan to capture and communicate the requirements to the development team.
* Process to sign off on documents: I would establish a formal process for reviewing and signing off on document. This would include a review by development team, stakeholders, and project sponsors.
* Approval from the clients: I would seek approvals from the client at each stage of the projects to ensure that their requirements are being met and to avoid any surprises at the end.
* Communication channels: I would establish communication channel such as email, instant messaging or project management tools to ensure that stakeholders are informed about the progress of the project and changes.
* Change request: I would create a change management plan to document and track change request, prioritize them and obtain approvals before implementing them.
* Progress updates: I would provide regular progress updates to stakeholders through reports, presentations or status meeting to keep them informed about the projects status, risks and issues.
* Sign off on UAT: I would create a UAT plan and test cases, and ensure that the client sign off on the UAT client project acceptance form before deploying the solution.
* **3-tier architecture :-**
* The 3tier architecture is also known as the n-tier architecture. It is a software architecture pattern that divides an application into three logical layers or tiers.
* Presentation tier: It is the top most layers of the application and responsible for the user interface and interaction with the users. This tier contains components that handle user inputs, display output and perform other user related tasks. Implemented using web technologies such as HTML, CSS and java script.
* Application tier: Also known as business logic tier, responsible for the applications core logic and processing. This tier contains components that handle business rules, perform computations and communication with other components in the same tier and data storage tier. Implemented using programming language such as java, python.
* Data storage tier: Also known as data access tier. It is responsible for data storage and retrieval. This tier contains components that manage the applications data, file system and perform data related tasks. Implement using data base such as SQL.
* **BA Approach Strategy For Framing :-**
* Purpose of the project: Understand the purpose the of the project its goals and objectives.
* Stakeholder analysis: Identify all the stakeholder involved in the project, their roles and responsibilities and their expectations.
* Scope of the project: Determine the scope of the project and what is in and out of the scope.
* Project constraints: Understand any constraints on the project such as budget, time, resources and technology.
* Use 5W 1H: It stands for who, what, when, where, why and how. The business analyst should use this framework to ask questions that covers all aspects of the project and to get a complete understanding of the stakeholders’ requirements.
* Use SMART criteria: It stands for specific, measureable, achievable, relevant and time bound. The business analyst should use these criteria to frame questions that are satisfying SMART criteria. This will help the stakeholders to provide clear and concise answers that will help in the project success.
* Understand RACI: The RACI model stands for responsible, accountable, consulted and informed. The business analyst should understand the RACI model and frame questions that help to identify the stakeholder responsibilities and accountability in the project.
* Understand 3-tier architecture: The business analyst should have a clear understanding of 3-tier architecture and how it applies to the project. Thus will help the business analyst to frame questions that are relevant and specific to the projects technical requirements.
* Use case and activity diagram: Develop use case and activity diagrams to capture functional requirements and how the system will behave.
* Use case specification: Write use case specifications that provide detailed description of how the system should behave in different scenarios.
* Models and page designs: Develop visual models and page designs to help the stakeholders understand how the system will look and work.
* **Elicitation Techniques :- [ BDRFOWJIPQU ]**
* Brainstorming: This technique involves generating ideas and solutions through group discussions and collaboration.
* Document analysis: Thus technique involves reviewing existing documentation to gather information about the requirements.
* Requirement workshops: This technique involves bringing together stakeholders to discuss and define requirements in a structured and facilitate session.
* Focus group: Thus technique involves bringing together a group of users or stakeholders to discuss their needs and preferences.
* Observation: This technique involves observing users or stakeholders in their work environment to gather information about their process and behaviours.
* Interviews: Thus technique involves conducting one on one interview with stakeholders to gather information about their needs and preferences.
* Prototyping: This technique involves creating a mock-up or prototype of a solution to gather feedback and refine the requirements.
* Questionnaires: This technique involves gathering information from stakeholders through standardised set of questions.
* Use cases: Thus technique involves identifying scenarios or use cases to understand the system requirements.
* Workshops: Workshops involves bringing together a group of stakeholders typically SME or users to collaborate and discuss requirements in a structured and facilitated environment.
* JAD: During a JAD session the BA act as a facilitator to guide the group through a structured process of discussion brainstorming, and problem solving. The objective is to achieve a shared understanding of the requirements, business process, technical specification resulting a more detail and comprehensive set of requirements.
* **Selection of Elicitation Techniques:-**
* Brainstorming: technique will be the right choice, when the BA is getting a chance to connect with the stakeholders, who are experienced and can share their knowledge. By using brainstorming techniques we can generate a large number of ideas in a short amount of time.
* Brainstorming is a group 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.
* Prototyping: Prototyping is better for enhancing collaboration, minimizing risks, improving user experience, and streamlining the development process. It's an essential step in creating successful products.
* Use case Specs: well-defined use case specifications is quite helpful for enhancing collaboration, reducing ambiguity, and contributing to successful software development projects.
* Document Analysis: document analysis enhances clarity, reduces risks, supports decision-making, and contributes to successful project outcomes.
* **Business Requirements and Assumption :-**
* **BUSINESS REQUIREMENTS :-**

BR001- The platform should have a product catalogue that includes all fertilizers, seeds and pesticides from different manufacturer and vendors.

 BR002- The platform should allow farmers to search for products by name, category and brand.

BR003- The platform should have a login feature for all users including farmers, manufacturers and vendors.

BR004- the platform should allow new users to create an account by submitting their E- mail id and creating a secure PW.

BR005- The platform should have a user friendly interfaces and easy navigation for a better user experience.

BR006- The platform should have a payment gateway that includes COD, credit/debit cards and UPI options.

BR007- The platform should send E-mail confirmation regarding order status to users.

BR008- The platform should have a delivery tracker to track the whereabouts of the order.

BR009- The platform should have scale able to accommodate future growth and expansion.

BR010- The platform should have a secure infrastructure to protect user data and prevent data breaches.

* **ASSUMPTIONS :-**
* The project for an e-commerce platform for fertilizers, seeds and pesticides targeted towards farmers.
* The platform will have a product catalogue and will allow users to search fertilizers, seeds and pesticides.
* This platform will have login feature for farmers, Manufacturers and vendors and allow new users to create account by submitting their E-mail id and creating a secure password.
* The platform will have a payment gateway that includes COD, credit/debit card and UPI options.
* The platform will send E-mail confirmations regarding order status and delivery tracker to track product.
* The platform will have user friendly interfaces and easy navigation for a better user experience.
* **Project Requirement Priorities :-**

|  |  |  |  |
| --- | --- | --- | --- |
| Req ID | Req name | Req description | priority |
| BR 001 | Product catalogue | The platform should have a product catalogue that includes all fertilizers, seeds and pesticides from different manufacturer and vendors. | 9 |
| BR 002 | Search product | The platform should allow farmers to search for products name, category and brand. | 9 |
| BR 003 | Log-in feature | This platform will have login feature for Manufacturers, farmers and vendors and allow new users to create account by submitting their E-mail id and creating a secure password. | 8 |
| BR 004 | New user registration | The platform should allow new users to create an account by submitting their E-mail id and creating a secure PW | 7 |
| BR 005 | User friendly interface | The platform should have a user friendly interfaces and easy navigation for a better user experience | 10 |
| BR 006 | Payment gateway | The platform should have a payment gateway that includes COD, credit/debit cards and UPI options. | 6 |
| BR 007 | E-mail confirmation | The platform should send E-mail confirmation regarding order status to users. | 5 |
| BR 008 | Delivery tracker | The platform should have a delivery tracker to track the whereabouts of the order | 4 |
| BR 009 |  Future growth | The platform should have scale able to accommodate future growth and expansion. | 2 |
| BR 010 | Data protection | The platform should have a secure infrastructure to protect user data and prevent data breaches | 3 |

* **Use case Diagram :-**



* **Use Case Specs:-**
* Use case name: View products
* Actors: Customers
* Description: This use case allows the customer to view a list of available products in the online shop.

 **Preconditions:**

* The customer has successfully logged in to the online shop.
* The customer has navigated to the "view products" page.
* Basic flow of events:
* The system displays a list of available products to the customer.
* The customer can filter the list of products by category or search of specific product.
* The system updates the product list based on the customers filter or search query.

**Alternative flows:**

* If there are no products available the system displays a message indicating that there are no products to show?
* If the customer is not logged in the system redirects the customer to login the page.
* Use case name: Add to cart
* Actors: Customer
* Description: This use case allows the customer to add a product to their shopping cart.

**Preconditions**:

* The customer has successfully logged in to online shop.
* The customer has navigated to the product detail page of the product they want to add to their cart.

**Basic flow of events:**

* The customer clicks on the add to cart button on the product details page.
* The system adds selected product to the customers shopping cart.
* The system displays the confirmation message to the customer.

**Alternative flows:**

* If the customer is not logged in, the system redirects the customer to login page.
* If the product is out of stock, the system displays a message indicating that the product is not available.
* Use case name: Checkout
* Actors: Customer, Payment
* Description:
* This use case allows the customer to complete their purchase and make a payment. Preconditions:
* The customer has successfully logged into the online shop.
* The customer has added the product to their shopping cart.

 **Basic flow of events:**

* The customer click on the checkout button on the shopping cart page.
* The system displays the checkout page with the customer’s order details and a form for entering payment information.
* The customer enters their payment information and clicks on the "complete purchase" button.
* The system processes the payment and update customer order status by displaying a conformation message.

**Alternative flows:**

* If the customer is not logged in, the system redirects the customer to the login page.
* If the customer’s payment is declined the system displays an error message and prompts the customer to enter their payment information again.
* **Activity Diagrams :-**



