CAPSTONE PROJECT PREPARATION-2

 Online agriculture product store

Q.1) Quarterly Audits are planned Q1 , Q2, Q3, Q4 for this Project What is your knowledge on how these Audits will happen for a BA ?

Ans.1) Quarterly audits is a method to ensure that whether the BA is performing efficiently and meeting the projects goals & requirements, and also identifies the areas of improvements. Committee will also review the BA timesheets, project documentations and whether the BA is meeting the project timelines and deliverables.

The audit may also include a review of the BA communication with stakeholders and their ability to manage & resolve stakeholders’ issues. Based on the audits the committee will decide whether to release the funds or not.

Q.2) 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 ) ?

Ans 2.) BA Approach strategy: -

1. **Elicitation technique**: - As BA, I would apply various elicitation technique such as interviews, surveys, workshops & observation to gather requirements from stakeholders to gather & analyse the requirements from stakeholders.
2. **Stakeholder analysis**: - Conduct a stakeholder analysis to identify & prioritize the stakeholder based on their level of interest, influence and involvement in the project.
3. **RACI/ILS**: - I would create a RCI/ILS matrix to clarify the roles & responsibility of stakeholders in the project. This matrix will ensure clear communication and accountability within the team.
4. **Documentation**: - I would create various documents such as requirement specification, functional & nonfunctional requirements, use case diagrams and process flows.
5. **Documents sign-off process**: - This will include review by the development team, stakeholders and project sponsors and getting sign-off on the documents.
6. **Client approvals**: - I would take approvals from the client at end of each stage of the project to ensure that the requirements are being met so to avoid any gaps.
7. **Communication channels**: - I would establish communication channels such as emails, instant messaging, and other project management tools to ensure that stakeholders are well informed about the progress of the project.
8. **Change request**: - I would create a change management plan to document & track change request, prioritize them and take approvals before implementation.
9. **Progress updates**: - I would provide regular progress updates to stakeholders through reports, presentations, or status meeting to keep them informed about the projects.
10. **UAT Signoff**: - I would create a UAT plan & test cases and ensures that the client tests the system and gives feedback and then take sign-off on the UAT before deployment.

Q.3) Explain and illustrate 3-tier architecture?

Ans.3) The 3-tier architecture is also known multi-layer architecture is a software architecture that divides an application into 3 logical layers.

1. **Application layer** - It is the topmost layer of the application and responsible for the user-interface and interaction with the users. This tier is responsible for displaying information to the user & getting user action. It communicates with the business logic layer to retrieve data for processing. In this case study, this layer includes mobile app screen, login page functionality.
2. **Business logic layer**: - It is responsible for business core logic and data processing, the tier handles components that handle business rules. Perform communication with other components. here, payment methods, company details are included.
3. **Data layer**: - It is responsible for data storage and retrieval, it manages the application data, files and perform data related tasks.Here, product details,customer details are included

Q.4) 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) ?

Ans.4) **Use 5W1H**: - It stands for (who, what, when, where, why & how).The BA should use this framework to ask questions that cover all aspects of the project and to get the complete understanding of stakeholders requirements.

Example of 5W1H:-

What:- Define the problem( eg:- Crack found in ‘x’ part)

When:- When did the problem occurred( eg:- Time & date and Shift)

Where:- Where did the problem occurred(eg:- On a particular m/c or line)

Who:- Who detected the problem(eg:- Production team)

Why:- Why the problem occurred(eg:- Due to overheating)

How:- How much is the defect(eg:- 50% part is found defective)

**SMART**: - It stands for specific, measurable, achievable, relevant & time bound.BA should ask question satisfying the SMART criteria will help in getting better and clear understanding to get the project success.

Specific:- The goals must be very specific like knowing exactly what you want and have clear goal( Never set a vague goal)

Measurable:- Goals that can be measured, Knowing how far or near you are from the goal.

Achievable:- Goals must be set that can be achieved.

Relevant:- Something which is relevant or important to the business perspective.

Time bound:- Every goal must have a timeline, One can focus on the goal with reference to their timeline.

**RACI**: - The BA should frame the questions that help to identify the stakeholder’s responsibility and accountability in the project.

**3-architecture**: - It is multi0layer architecture, helps to frame the question which are relevant & specific to the projects technical req.

**Use cases & Activity diagram**: - Develop use case diagrams & activity diagrams to capture the functional req & how the system will behave.

**Use case specs**: - BA should write the use case specification that provide detailed description of the system will behave in different scenarios.

**Model & Page designs**: - Develop system and page designs to help the stakeholders understand how the application will look & work.

Q.5) As a Business Analyst, What Elicitation Techniques you are aware of?

( BDRFOWJIPQU) ?

Ans.5) **Brainstorming**: - This technique involves generating idea through group discussions and collaboration.

 **Document analysis**: - This technique involves reviewing existing documents to collect information about the requirements.

**Reverse Engg**: - It is an elicitation technique in which information is extracted from already implemented data from the software codes. Basically, you need to work in the backward direction to analyse the data.

**Focus groups**: - This technique involves bringing together a group of people & users/stakeholders to discuss their req.

**Observations**: - This involves observing user & stakeholders in their working environment to gather information about their processes and behaviour.

**Workshops**: - It involves in conduction a workshop session and bringing the group of stakeholder & SME to discuss the req in a structured & facilitated environment.

**JAD**: - It involves discussion on problem solving & brainstorming. The BA will act as facilitator for JAD sessions. Objective is to achieve a shared understanding about the req, technical spec resulting in more detail & comprehensive set of req.

I**nterviews**: - It involves interviewing one on one with stakeholder to gather information.

**Prototyping**: - It involves in making a prototype or mock of a solution to gather feedback and work on refining the requirements.

**Questionnaires**: - This involves gathering information by asking the stakeholders some specified set of questions.

**Use cases**: - This involves identifying scenarios on how the system will behave in he working environment & understand the system req,

Q.6) Which Elicitation Techniques can be used in this Project and Justify your selection of Elicitation Techniques? Prototyping Use case Specs Document Analysis Brainstorming ?

Ans.6) When the BA is getting a chance to interact with the experienced stakeholders, Brainstorming techniques can be used to collect requirements.

**Brainstorming**: - It can be used gather requirements which can helpful in collecting large no of ideas in short time as group of individuals can work together to generate solution to the problem at hand.

**Prototyping**: - It is better for enhancing collaboration, minimizing risk, improving user experience and streamlining the development process

**Use case specs**: - It can be used to identify all the scenarios in which all the users can interact with the application, It can also help in defining the functional req of the application.

**Document analysis**: - It can be used to review any existing documentation that may be relevant to the project such as business req, technical spec, It can also help in identifying the potential areas of conflict.

Q.7) Make suitable Assumptions and identify at least 10 Business Requirements?

Ans.7) **Assumptions**: -

1. The farmers must be able to view the farming products such as seeds, fertilizers and pesticides details from the manufacturer.
2. They should be able to search the specified product
3. Farmers Should be able to add items to the Wishlist for future.
4. They should be able to make payments online.
5. Customers should be informed once the order is placed successfully.
6. Customers should know the whereabouts of the order.
7. Customer service must be there where farmers can address their issues.

**Business requirements**: -

|  |  |
| --- | --- |
|  **Req Id** |  **Business Requirement** |
| BR001 | The platform must have a product catalog that include all fertilizers, Seeds and pesticides from different manufacturer and vendors |
| BR002 | The platform should allow farmers search for products by name & category. |
| BR003 | The platform should have login features for farmers, manufacturer and other users |
| BR004 | The ‘platform should allow new users to create an account by entering their email id & creating a secure pw. |
| BR005 | The platform should have user friendly interfaces and easy navigation for better user experience. |
| BR006 | The platform must have payment gateway that should include COD/credit/debit card & UPI. |
| BR007 | The platform must send an email confirmation regarding order status. |
| BR008 | The platform must have delivery tracker to track the order. |
| BR009 | The platform must have customer service support option for farmers to address their issues. |
| BR010 | Customer should be able to share the products with other users |

Q.8) List your assumptions?

Ans.8) Assumption: -

1. The platform must have a product catalog which will allow user to search for seeds, fertilizers and pesticides
2. The platform must have a login feature which will allow new user to login with email and have a secure password.
3. The platform will have a feature of payment gateway that will help user to make the payments through COD/Credit/Debit/UPI.
4. The platform will send a email confirmation for order confirmation and have delivery tracker to track the order.
5. The platform will have a user friendly interfaces and easy navigation for better user experience.
6. The platform must have a secure infrastructure to protect user information and prevent data breach.

Q.9) Give Priority 1 to 10 numbers ( 1 being low priority – 10 being high priority) to these Requirements after discussions with the stakeholders ?

Ans.9)

|  |  |  |  |
| --- | --- | --- | --- |
| Req id | Req name | Req description | Priority |
| BR001 | Product catalog | Farmers must have product catalog that includes different products |  10 |
| BR002 | Product search | Platform must allow farmers to search item by name & category |  9 |
| BR003 | Login feature | Platform must have user login feature |  8 |
| BR004 | New user registration | Platform must have registration feature for new user |  7 |
| BR005 | User friendly interface | Platform should have user friendly interface and easy navigation for better experience |  6 |
| BR006 | Payment gateway | Platform should have a payment gateway, including credit/debit, COD |  1 |
| BR007 | Email confirmation | Platform should send email confirmation regarding order status |  4 |
| BR008 | Delivery tracker | Platform must have a delivery tracker to track the whereabouts |  2 |
| BR009 | Customer support | Platform must a customer support feature |  3 |
| BR010 | Product sharing | Platform must have a feature where farmers can share the products with other users |  5 |

Q.10) Draw use case diagram?

Ans.10)



**Q**.11.) Prepare use case specs for all use cases?

Ans.11) Use case:- Search product from catalog

 Use case description:- The farmers can browse the catalog of farming products.

 Actors:- Farmers

Preconditions:-The customer must successfully logged into online shop

 The customer has entered into view catalog page

Basic flow of events:-

1. System displays the list of available products to the customer.
2. Customer can filter the list of products by category, or specific product.

Alternate Flows:-

1. If there is no product available based on search the system will display there is no product to show.
2. If the customer is not logged into system, it will redirect to the login page.

Use case:- Add to cart

Use case description:- This use case allows customers to add their products into the cart.

Actors:- Farmers

Precondition:-

1. The customer has successfully logged into the system
2. The customer must select the qty while adding the item into the cart.

Basic flow of events:-

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

Alternate flows:-

1. If the customers is not logged into the system, it redirects to the login page
2. If the product is out of stock then system displays that the product is not available.

Use case:- Checkout

Use case description:- This use case allows the customers to complete the purchase and make the payment.

Actors:- Farmers,Server

Precondition:-

1. Customer has succesufully logged onto the system.
2. The customer has successfully added the item into the cart.

Basic flow of events:-

1. The customer clicks on the ‘check out’ button on shopping cart page.
2. The system displays the customer order details and ask for payment method.
3. The Customer eneters the payment information and .clicks on complete purchase button.
4. The system completes the payment process securely and displays order confirmation status.

Alternate flows:-

1. If the customer is not logged in, the system redirects to login page.
2. If the payment is declined then system displays an error message and prompts the customer to renter the payment details.

Use case:- Delivery tracking

Use case description:- The farmers can track their order status.

Actors:- Farmers,server

Preconditions:-

1. Farmers must have done the payment and received order confirmation.

Basic flow of events:-

1. The farmers can check their order status by clicking on ‘ My Orders’ button and then selecting delivery tracker.

Q.12) Activity diagrams ?

Ans.12)



ORDER CANCELLED

CLICK ON CANCEL

SELECT THE ORDERS

 GO TO ORDERS

 LOGIN