**Question 1 :- Audits**

An audit of business processes — like any audit — offers a detached view on the areas of underperformance and strategies to improve these and suggests proven best practices to deliver even more value.

The person in charge of the audit is usually a senior BA, who captures a 360° view of business analysis on a project and draws up a detailed plan for improvement. These are a few areas the BA would audit:

* How business analyst in the given team plans, conducts and tracks their tasks
* How business analyst defines solution requirements.
* How system requirements are documented and communicated to the stakeholders and project team.
* How the project knowledge base is maintained.
* Which tools and process are applied along with the business analysis processes?
* How change requests were handled.
* How the user acceptance test was carried out by BA.

The audit culminates in a report with a step-by-step improvement plan. Oftentimes, an audit uncovers global issues, such as lack of project vision, lack of clearly formulated goals, lack of future roadmap, etc., as well as bottlenecks and gaps in business analysis and software engineering processes.

it proves most effective for ongoing projects; with established processes the team follows along with SDLC. Audits of business analysis processes may be one-off or regular (e.g., quarterly, semi-annual). An audit of business analysis processes is usually helpful for a project that outgrew a Proof-of-Concept stage and became a strategic initiative

**Question 2 :- BA Approach Strategy**

**Stakeholder Analysis involves three steps**

1. Identify the stakeholders
2. Prioritize your stakeholders
3. Understand your key stakeholders

**(RACI Matrix** – Responsible, Accountable, Consulted, Informed)

**Requirement Gathering-**

There are various Elicitation Techniques –

1. Interview
2. Focus Group
3. JAD (Joint Application Process)
4. Process re-engineering
5. Survey/Questionnaire
6. Brainstorming
7. Observation
8. Workshop
9. Prototyping

**What Documents to Write**: BRD and FRD

**What process to follow to Sign off on the Documents:** the signoff document consists of project identification, duration details, project goals, project deliverables, comments, signature and date. If all the above points are completed then the stakeholders sign the documents.

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

1. Set reasonable expectations and milestones.
2. Understand what’s important to each stakeholder
3. Involve and educate your client
4. Feedback mechanism
5. Thoroughly explain why you did what you did
6. Streamlining the review and approval process makes all parties satisfied.

 **What Communication Channels to establish**

1. Face to Face communication
2. Video conferencing
3. Phone calls
4. Emails
5. Online messaging platform.
6. Text messages

 **How to Handle Change Requests**

* The BA will analyze the change request. Initially he performs Feasibility study to accept the change and then impact analyze to measure the change to project and finally effort estimation to implement the changes in the project.

**How to take signoff on the UAT- Client Project Acceptance Form)**

|  |  |
| --- | --- |
| Project Name | Online Agricultural store  |
| This Document is Issued by | Kaustubh Deshmukh |
| Date | 11/12/24 |

|  |
| --- |
| Additional Comments related to client Acceptance: Everything is working as planned |
| Key Metrics Achieved: Successful order confirmation, Successful addition of products in catalogue, Display of all the products, Successful registration of farmers and manufacturer, Successful login of farmers and manufacturer |
| Key Metrics to be Tracked: Payment modes, order placement, delivery  |
| Recorded Shortfalls (If any): No |

|  |  |  |  |
| --- | --- | --- | --- |
| Stakeholders name | Role of stakeholder | Date | Sign |
| Mr. Henry | Sponsor | 19/11/2024 |  |
| Mr. Vandana | Project Manager | 1/11/2024 |  |
|  |  |  |  |

**Question 3 :- 3-Tier Architecture**

* **Application layer** : Graphical User Interfaces like screens and pages, validations on pages and specific business logic will be on the application layer.
* **Business logic layer** : All reusable components, frequently changing components, governing body rules and regulations comes under business logic layer
* **Data base layer** : Data base components connecting to databases will be at the data layer.

**Question 4 :- BA Approach Strategy for Framing Questions**

While asking questions we should probe into 5W 1H of that concept (Why, What, Who, Where, When, and How) and also confirm the requirement is smart before confirm it for deployment.

1. Stakeholder analysis-RACI Matrix
2. Refer to tier three architecture-
	1. Application layer questions maybe-
3. How many user will use the system
4. How many users currently use the system
5. Home page features and functionality
6. What report will you require
7. Business rule
8. Business Requirement
9. Availability
10. Reliability
	1. Business layer Questions maybe-
11. Reusable components
12. Frequently changing component
13. Governing body rules and regulations
14. Third party plugins like payment gateways, Mail server, Printer.
	1. Database layer-
15. UML Diagrams-
16. Use case
17. Use case specs
18. Activity diagram
19. Models-
20. Domain Model
21. Conceptual model
22. Data Model
23. DFD
24. ER Diagram
25. Screens and pages are consequence of matured functional requirement. Once functional requirement is freeze, we can go ahead to design screen and pages.

**Question 5 : - Elicitation Techniques ( BDRFOWJIPQU)**

* **Brainstorming -** This technique is used to generate new ideas and find a solution for a specific issue. The members included for brainstorming can be domain experts, subject matter experts. This session is generally conducted around the table discussion. All participants should be given an equal amount of time to express their ideas.
* **Document Analysis -** This technique is used to gather business information by reviewing/examining the available materials that describe the business environment. Document analysis includes reviewing the business plans, technical documents, problem reports, existing requirement documents, etc. This is useful when the plan is to update an existing system. This technique is useful for migration projects.
* **Reverse engineering -** This elicitation technique is generally used in migration projects. If an existing system has outdated documentation, it can be reverse engineered to understand what the system does. This is an elicitation technique that can extract implemented requirements from the system.
There are two types of reverse engineering techniques.
Black box reverse engineering: The system is studied without examining its internal structure (function and composition of software).
White box reverse engineering: The inner workings of the system are studied (analyzing and understanding of software code).
* **Focus group -** By using a focus group, you can get information about a product, service from a group. The Focus group includes subject matter experts. The objective of this group is to discuss the topic and provide information. A moderator manages this session. The moderator should work with business analysts to analyze the results and provide findings to the stakeholders.
* **Observation –** The main objective of the observation session is to understand the activity, task, tools used, and events performed by others. During the session, the observer should record all the activities and the time taken to perform the work by others so that he/she can simulate the same. After the session, the BA will review the results and will follow up with the participants. Observation can be either active or passive.
* **Workshop –** A requirements workshop can be defined as a structured and facilitated event for getting carefully selected stakeholders together to discover, refine, prioritize, validate and discuss requirements. A skilled facilitator usually manages workshop sessions. It is designed to be collaborative and has its roots embedded in Joint Application Design (JAD).
* **JAD (Joint Application Development) -** This technique is more process-oriented and formal as compared to other techniques. These are structured meetings involving end-users, PMs, SMEs. This is used to define, clarify, and complete requirements.
* **Interview –** This is the most common technique used for requirement elicitation. Interview techniques should be used for building strong relationships between business analysts and stakeholders. In this technique, the interviewer directs the question to stakeholders to obtain information. One to one interview is the most commonly used technique.
* **Prototyping –** Prototyping is used to identify missing or unspecified requirements. In this technique, frequent demos are given to the client by creating the prototypes so that client can get an idea of how the product will look like. Prototypes can be used to create a mock-up of sites, and describe the process using diagrams.
* **Survey/Questionnaire –** For Survey/Questionnaire, a set of questions is given to stakeholders to quantify their thoughts. After collecting the responses from stakeholders, data is analyzed to identify the area of interest of stakeholders. Questions should be based on high priority risks. Questions should be direct and unambiguous. Once the survey is ready, notify the participants and remind them to participate.

**Question 6 :- This project Elicitation Techniques**

I would go with Interview and brainstorming, As we have farmers working with us we will take interviews of farmers and manufacturers to understand there requirement and then carry out brainstorming session to get innovative solutions to the requirement.

**Question 7:-Identify 10 Business Requirements**

1. BR001 – Farmers should be able to search for available products in fertilizers, seeds, pesticides
2. BR002 – Manufacturers should be able to upload and display their products in the application
3. BR003 – Manufacturers and Farmers should be able to login
4. BR004 – Farmer should be able to browse through product catalog.
5. BR005 – Farmers should be able to buy any product.
6. BR006 – Farmers should be able to add products to buy later list.
7. BR007 – Farmers should be able to Login through email id and password.
8. BR008 – Farmers should be able to choose any one from COD, credit/debit card and UPI at the payment gateway.
9. BR009 – User should get a confirmation email regarding their order status.
10. BR010 – Farmer should be able to track the delivery shipment.

**Question 8 :- Assumptions**

* Farmers may be able to login and browse the product catalogue or not.
* The farmer may be able to select and make the payment options available.
* Manufacturers may be able to upload the products.
* Farmer may create an email ID and secure password.
* The delivery tracker may show the correct tracking information.
* Farmer may use the buy later list.
* The internet may or may not support at all times.

**Question 9 – This project Requirements Priority**

|  |  |  |  |
| --- | --- | --- | --- |
| **Req ID** | **Req Name** | **Req description** | **Priority** |
| **BR001** | **Farmers search for products** | Farmers should be able to login and search for products | **9** |
| **BR002** | **Farmers to create account.** | Farmers should be able to create a new email account with a secured password. | **8** |
| **BR003** | **Manufacturers to load products.** | Manufacturers should be able to upload and display products in the application. | **9** |
| **BR004** | **Farmers to be able to make payment.** | Once product is finalised by farmers then he should be able to see the total bill and make a choice of payment from cash, card or UPI method. | **7** |
| **BR005** | **Farmers to have buy options.** | Add to cart and buy later options to be available for farmers to add products | **7** |
| **BR006** | **Payment mode to be secured.** | The payment options should be a secured mode and hence secured page to be created. | **8** |
| **BR007** | **Trigger to Manufacturer.** | Trigger should immediately go to the manufacturer as soon as the product quantity reaches a certain level or is used from the cart. | **7** |
| **BR008** | **Order placement information.** | Farmers should receive an email confirmation once order is placed. | **6** |
|  |
| **BR009** | **Farmers to track order placed.** | Farmer should be able to track the product once it is placed until it is delivered at the destination. | **7** |  |
| **BR010** | **Network availability.** | The network should be available at all times. Also it should be a secured network ad with a good speed. | **8** |  |

**Question 10 – Use Case Diagram**

Sheet has been attached -



 **Question 11 : Prepare use case specs for all use cases**

* **Use case Description**:- This use case describes how farmers and manufacturers will be able to use the online agriculture product store to buy and sell products respectively.
* **Actors**:- Farmers and manufacturers
* **Basic flow of events**:-
* Starts with manufacturer registering to the portal and updating product details including images and information availability.
* Farmer browses the product catalogue, he searches for seeds, fertilizers and pesticides available from various manufacturers.
* The system insists to login with email ID and secured password.
* Farmer is prompted to either buy the product or put them in buy later list ,if farmer buys the product then he is prompted to make a payment.
* He is prompted with 3 payment options like card, cash or UPI, if payment is successful the transaction is complete, farmer gets email notification, manufacturer is prompted to login and load the list, delivery tracker shows the status of the purchase done.
* **Alternate flow**:- If we miss any field then it gets highlighted and process stops and resumes when the condition is fulfilled. Like invalid email ID or password, wrong product selection, wrong amount entered, insufficient product availability, internet not working, delivery tracker not showing correct details, products not available in search option.
* **Exceptional flow**:- Internet working not working
* **Pre-conditions**:- There is an active internet connection, the catalogue has various product information
* **Post condition**:- Successful if the farmer is able to buy the product and manufacturer is able to upload the products. Unsuccessful if farmer unable to buy products and manufacturer unable to upload or sell his products.
* **Assumptions**:- Farmer may or may not be able to login and use the internet, manufacturer may or may not be able to sell his products etc.
* **Constraints**:-May be like farmers can use only one email ID, farmer can upload products only when the product list goes below a certain quantity, farmer can buy only when a certain quantity is selected.
* **Dependencies**:-To order the product the farmer has to login with email ID and password, to upload the products the manufacturer has to login.
* **Inputs and Outputs**:- Enter the product details and output is product bought by the farmer. Input is upload the products and output is product is sold.
* **Business rules**:- Password has to be secured, Login compulsory to buy or load a product.

**Question 12 : Activity diagrams**

