**Capstone Prep-1 Part-2**

* **Audits** :-
* **What is an Audit**:

Audit is the inspection of various books of different departments by an auditor followed by physical checking of inventory, financial statement and several other documents to make sure that all departments are following documented system of recording transactions.

* **What is a Project Audit**:

 A project management audit is a formal review that seeks to evaluate a given project based on specific criteria. Examples of these can include project quality, performance, and adherence to the statement of work.

While doing the Audit of a BA, the auditor needs to check the following details

* **In Q1 Auditor will check the following details:**

1. Understanding of company goals does the BA has.

2. Work is Planned and Tracked.

3. Understood the Current as is process.

4. BA understands of Business Requirements.

5. BA conducted the Stakeholder Analysis.

6. Requirement gathering and analysis was done correctly.

7. What Elicitation techniques has been used to gather requirements.

* **In Q2 Auditor will check the following details:**

1. Documents have been prepared by the BA.

2. Has the BA prepared all the required documents like RTM, BPM to understand the requirement correctly.

3. How is BA prepared the Use case and Activity diagram.

4. Was all these documents signed and agreed by the Stakeholders, before the start of the development stage.

* **In Q3 Auditor will check the following details:**

1. Requirements were correctly explained to the development team.

2. BA tracking the status of the project.

3. JAD session organized by the BA.

4. Timesheets sent to the reporting manager.

5. BA keeping the Stakeholders updated on the status of the project.

* **In Q4 Auditor will check the following details:**

1. BA tracking the Testing of the product.

2. BA assisting the Testing team for Testing the product.

3. BA sending the Test data to the client.

4. BA preparing the End user manual.

5. BA preparing the client for UAT.

* **In Q5 Auditor will check the following details:**

1. BA assisting the Delivery manager to implement the product.

2. BA helping the client to do the UAT.

3. BA organizing the training sessions for the users.

4. BA taking signoff document from the client.

5. BA sending the complete timesheet to the reporting manager.

* **BA Approach Strategy** :-

The Business Analysis Approach is the plan that the senior or lead business analyst on a project would create describing the way that all the Business Analysis activities will be executed. This could include:

1. Business Analysis resources and their Roles & Responsibilities,

2. Requirements Gathering Approach for the project (techniques to be used, high level planning),

3. Stakeholder Engagement,

4. Requirements Review Process and Approval Cycles,

5. Change Management approach to requirements and agreed deliverables.

6. Other elements such as team structure, assumptions and constraints could also be included.

* 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 of the project its goals and objectives.
* Stakeholder analysis: Identify the entire 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 :-**

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| --- | --- | --- | --- |
| 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:-**

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| Use Case ID | UC001 |
| Use Case Name | Buying a product |
| Actors | 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 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 |
| Alternate Flows | 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 |
| Exceptions | If internet connectivity lost while doing this use case, system displays " check with your internet connectivity " |
| Frequency of use | High |
| Assumptions | 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. |

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| --- | --- |
| Use Case ID | UC002 |
| Use Case Name | Exchange of Product |
| Actors | 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. tep 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 choose 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. |
| Alternate Flows | 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. |
|  Exceptions | If internet connectivity lost while doing this use case, system displays " check with your internet connectivity " |
| Frequency of use | High |
| Assumptions | 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. |

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| --- | --- |
| Use Case ID | UC003 |
| Use Case Name | Return of Product |
| Actors | 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. |
| Alternate Flows | 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 |
| Exceptions | User put the incorrect bank account. |
| Frequency of use | High |
| Assumptions | 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. |

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| Use Case ID | UC004 |
| Use Case Name | Update the delivery address |
| Actors | 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" . tep 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. |
| Alternate Flows | 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. |
| Exceptions | User put the incorrect address details like; pin exceeds the maximum number of digits |
| Frequency of use | High |
| Assumptions | 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. |

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| Use Case ID | UC005 |
| Use Case Name | Update the new contact number |
| Actors | 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. |
| Alternate Flows | 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. |
| Exceptions | User put the incorrect phone number. |
| Frequency of use | Low |
| Assumptions | 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. |

* **Activity Diagrams :-**
* **Login Page : -**



* **Registration page:**



* **Buying Fertilizer:-**



* **Order Cancellation:-**



* **Adding or Updating Product:-**

