

Online Agriculture Products Store

Ques 1. 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?

Ans 1. Audits are basically the inspection of the work going on a project. In audits systematic examination of work processes happens where auditors check their accuracy and whether work processes are as per company's guidelines or not.

Stages	Quarter 1 Audit report (Requirement gathering phase)
Completed	10 Weeks (Week 1 to Week 10)
Checklist	1. Stakeholder analysis (RACI matrix) 2. BRD document after communication with clients based upon elicitation techniques 3. Preparation of prototype to help client refine the requirements. 4. Sorting the gathered requirements (Removing duplicates, grouping of features) 5. Signoff
Email Communication	To – Mr. Dooku, Peter, Ben, Kevin CC – Mr. Henry, Mr. Pandu, Mr. Kartik, Mr. Vandanam

Stages	Quarter 2 Audit report (Requirement analysis phase)
Completed	7 Weeks (Week 12 to Week 19)
Checklist	1. UML Diagrams 2. Prepare functional requirement specification from business requirement document 3. Tech team prepares supplementary support documents 4. Software requirement specification created from FRS and SSD 5. Sign off on SRS 6. Preparation of RTM
Email Communication	To – Mr. Dooku CC – Mr. Henry, Mr. Pandu, Mr. Kartik, Mr. Vandanam, Tech Team

Stages	Quarter 3 Audit report (Design phase)
Completed	7 Weeks (Week 22 to Week 29)
Checklist	1. Preparation of Test cases from Use case diagrams 2. Preparation and submission of application design document and solution document to the client.

	3. Design of all possible screens 4. Update RTM 5. MOM of regular status with tech team 6. Sign off
Email Communication	To – Mr. Dooku CC – Mr. Henry, Mr. Pandu, Mr. Kartik, Mr. Vandanam, Tech Team

Stages	Quarter 4 Audit report (Development phase)
Completed	20 Weeks (Week 31 to Week 51)
Checklist	1. JAD Sessions 2. Preparation of Component design document 3. End user manual document 4. Update RTM 5. MOM of regular status with developers 6. Sign off
Email Communication	To – Mr. Dooku CC – Mr. Henry, Mr. Pandu, Mr. Kartik, Mr. Vandanam, Developers

Ques 2. Before project is going to kickstart, the committee asked Mr. Kartik to submit BA approach strategy.

Write BA approach strategy (As a business analyst, what are the steps that you need to follow to complete a project – What elicitation techniques to apply, how to do stakeholders analysis RACI/ILS, what documents to write, what process to follow to sign off the document, how to take approvals from the client, what communication channel to establish and 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 is a process or flow that we need to follow in every project. Flow will be as follows: -

1. Stakeholder Analysis It involves identifying the internal and external stakeholders which are getting impacted by the project. In stakeholder analysis we follow the following steps after SOW is awarded to IT company. It is done using ILS approach and RACI Matrix. <u>ILS approach</u> – In ILS approach, Clients POC will provide some potential resources to the BA whom BA can reach out to gather requirements which will form stakeholder listing document (L). As this
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number will be large BA will request POC to nominate few resources from the list which we will call stakeholder summary (S) and this whole process of identifying stakeholder from start to end is called stakeholder identification (I)

- Stakeholder identification (I)
- Stakeholder listing document(L)
- Stakeholder summary(S)

- **RACI Matrix** - To understand the roles and responsibilities of every stakeholder involved in the project.
Responsible(R) – Person responsible to do and complete the work
Accountable (A) – Person who is answerable for the correctness and completeness of the task. This person approves of the work and should clear up doubts about work.
Consulted(C) – Person is consulted for inputs before the work.
Informed(I) – They are updated on progress and completion of the task.

Stakeholders	Responsible	Accountable	Consulted	Informed
Mr. Henry		Yes	Yes	Yes
Soony Committee		Yes	Yes	Yes
Farmers			Yes	Yes
Developers	Yes			Yes
Testers	Yes			
BA	Yes		Yes	Yes
NW, DB Admin	Yes			Yes

2. **Elicitation techniques** - Elicitation technique is basically a meeting with clients which have a specific objective. As a part of requirement gathering, BA will apply various elicitation techniques to extract business requirements requirements from the client.

Elicitation techniques such as brainstorming, document analysis, reverse engineering, focus groups, interview, prototyping, questionnaire, observations, workshop, JAD sessions, use case specs.

3. **Documentation** – After gathering business requirements using elicitation techniques from the client, BA will validate the requirements.

BA will prepare following documents

- After validating the requirements BA will prepare **Business requirement document (BRD)**.
- From BRD document, BA prepares **functional requirements document (FRD/FRS)** and combines it with **Supplementary support**

document (SSD) prepared by technical team to form **software requirement specification (SRS)**.

- BA prepares **use case diagrams, use case specs and test case documents**.

4. Sign offs, Approval

BA takes signoff and approval on the SRS as this is the primary and important document. It can be one via email.

5. Communication Channels – For signoffs, approval BA establishes communication channel with the client in the form off regular meeting, weekly status meetings, bi-weekly sprint reviews and monthly stakeholder updates.

Communication channel is established to create an ease for signoff, approvals and updates.

6. Change Request – BA handles change request incoming in between the projects.

- Initially BA checks the change request whether it is a defect from previous installation or not. If it is a defect, then it is assigned to the technical team as a bug, and they take care of it.
- If it is a genuine change request, then BA does the following task
 - Impact Analysis – Number of documents and programs are being impacted.
 - Feasibility study - To check whether the change can be made or not because of whether IT company owns the program; Change is possible or not and availability of technical skillset.
 - Efforts estimation – Number of manhours required to make the change.
 - PM approval and log change request into change tracker

Change Control Board – In the start of the project few people from the client and It company will form a team which is called change control Board. All the changes requested will be first submitted to CCB and from there onwards BA will handle change requests.

7. Providing regular updates of the project – Providing regular status to stakeholders including project manager, technical team and client. This can be done through status reports, dashboards and to enhance better communication we can keep monthly review meetings.

8. Sign-off on UAT – UAT happens before project goes live. BA plays a significant role in UAT

- Communicate with stakeholders and arrange for the meeting
- Conduct UAT and understand issues shared by client.
- Developers Fix issues faced during UAT
- Schedule next UAT if required

- Obtain sign-off on the UAT results and the client project acceptance form to ensure project meets client expectations.

Ques 3. Explain and illustrate 3-tier architecture?

Ans 3. It is a software design pattern that divides an application into three interconnected layers: presentation layer, business logic layer and data layer.

1. Presentation layer – Topmost layer of the architecture also known as client layer. It is responsible for accepting inputs or requests from the user and it displays data to the user in a user-friendly manner. It accepts their input and sends their inputs to the business logic layer. Ex. Website
2. Business Logic layer – It is a Middle layer of the architecture also called brain of the 3-tier architecture. It acts as a liaison between the presentation layer and database layer. It holds business logic or rules to perform, and it will validate and retrieve data from the database layer. Ex. Printer or payment gateways
3. Database Layer – It is bottom most layer of the architecture which is responsible for storing and retrieving data. Ex. My SQL

It is a front end part where customer will interact with system. Examples such as screen, pages.

Presentation Layer

Business logic layer is brain of the three tier architecture where it holds the business logics or rules to perform and it will validate and retrieve the data from the data layer.

Business logic layer

Data layer is where backend server will hold the data of the customer.

Data Layer

Actions in 3 tier architecture

Actions performed live by user on to the screen or pages (presentation layer), will travel as a code/technology (Business logic layer) and it will reach the data base (Database layer). This database will have data which is demanded by users for record or retrieval

purposes. Functionality of an IT application is achieved by business logic i.e. code/technology and with the data in the database.

Ques 4. Business analysts should keep what points in his/her mind before he frames a question to ask the stakeholders.

(5W1H – SMART- RACI- 3 Tier Architecture – Use case, Use case specs, Activity diagram, Models, Page designs)

Ans 4. BA is a master of gathering requirements, as BA we are equipped with tools such as 5W1H and at the same time we have to validate and qualify the requirements so the system meets business needs.

1. **5W 1H:** A problem-solving method that uses a set of questions to help understand a situation, identify problems, and develop solutions. The acronym 5W1H stands for "what", "who", "where", "when", "why", and "how".
Who: Identify the individuals or groups involved.
What: Define the specific issue or event.
Where: Determine the location or context where the problem occurs.
When: Specify the timeframe or frequency of the problem.
Why: Understand the underlying causes or reasons behind the issue.
How: Explore potential solutions or actions to address the problem.
2. **SMART:** SMART is an acronym that stands for Specific, Measurable, Achievable, Relevant, and Time-bound. It is a widely used tool to create effective and meaningful objectives for any project, task, or activity.
3. **RACI:** A RACI matrix is a tool that defines roles and responsibilities for a project or process. RACI stands for Responsible, Accountable, Consulted, and Informed.
Responsible: The person or team that does the work
Accountable: The person or team that is ultimately responsible for the outcome
Consulted: The person or team that provides input and advice
Informed: The person or team that is kept up to date on the progress
4. **3 tier architecture:** Three-tier architecture is a software development model that organizes an application into three logical tiers: the presentation tier, the business logic tier, and the database tier. It's a popular implementation of multi-tier architecture.
5. **Use cases:** A use case is a description of how a user interacts with a product, service, or system to achieve a goal. Use cases are used in software and systems engineering and are a methodology for identifying and organizing system requirements.
6. **Use case specs:** A use case specification is a document that describes a use case in detail. It's a key step in creating a use case diagram. Use case

specifications are often created during the analysis and design phase of a project.

7. **Activity Diagrams:** An activity diagram is an extension of the workflow diagram, visually depicting the flow of system operations as a sequence of actions.
8. **Models:** Visual representations or frameworks used to understand and analyze complex business processes, systems, and situations.
9. **Page designs:** The process of visually structuring and presenting information gathered during analysis, typically using diagrams, charts, tables, and other graphical elements.

Ques 5. As a business analyst, what elicitation techniques are you aware of?

Ans 5. To gather requirements from the client a BA uses different elicitation techniques. Elicitation is basically a meeting with a client with a specific objective. These are the following elicitation techniques used by a BA.

1. Brainstorming

It is a group elicitation technique which aims to create functional requirements from the business requirements provided by the client. Sometimes BA may find difficulty in identifying functional requirements from the business requirements, at that point brainstorming session can be conducted. Brainstorming session participants are mostly domain experts or SMEs. **Brainstorming session aims to solve a particular problem but there is no guarantee that the problem will be solved. It is just a step taken to solve a problem.**

Process to follow for a Brainstorming session: -

- Identify the problem and get the approval from PM for the brainstorming session.
- Identify the participants for the brainstorming session, majorly domain experts or SMEs.
- Block the calendar and the meeting room for the session and send invites to the participants few days before the scheduled session. Along with invite, problem area will also be addressed to the participants so that they can prepare for the brainstorming session.
- In the brainstorming session, these participants will present their ideas, BA will segregate these ideas as per 5W1H tool, rate these ideas and prepare MOM.

Challenges

- Participants find difficulty in presenting ideas during brainstorming sessions.
- Difficulty in understanding ideas by a BA due to lack of experience and domain knowledge.
- Ego clashes between the participants.

- Last minute dropouts of the participants due to unavailability of participants because of busy schedule.

2. Document Analysis

When understanding the process, project or the product is created through reading documents, then it is known as document analysis.

When a BA joins a project, concerning stakeholders will share the documents (process documents or functionality documents or the requirements documents), BA reads those documents and understands about the project, then this approach is called as a document analysis. **It is the most important and compulsory elicitation technique used by a BA.**

Challenges with document analysis

- Existing documents may be old and out of date.
- Documents may not reflect what you need for a new system.

3. Reverse Engineering

In situations where the existing system has limited or outdated documentation and it is necessary to understand what the existing system does, in that case reverse engineering is used. In it requirements are extracted from the software code. **It is basically used for migration projects.**

Reverse engineering is two types

- White box reverse engineering – If there is an understanding about the internal system then it is called white box reverse engineering
- Black box reverse engineering – If there is no understanding about the internal system it is called black box reverse engineering.

In case of black box reverse engineering

- I will consult developers and programmers
- Ask them to identify the functions

4. Focus groups

It is a technique to gather requirements from participants in a group environment. It involves gathering feedback from relevant stakeholders to refine processes, ideas or solutions that emerged as an outcome of other elicitation techniques.

There are two types of focus groups: -

- Heterogeneous focus groups – People from different backgrounds and teams
- Homogeneous focus groups – People from same domain, and teams.

5. Observation

Technique where BA watches how the stakeholder performs their task and record what actions they are doing either in a natural environment or in a simulated environment.

Observations is useful for understanding the current process, workflows, pain points and opportunities for improvement.

Observations are of two types: -

- Active observation – BA actively participates in work along with other stakeholders and ask questions.
- Passive observation – Here BA does not interfere with the stakeholder's work and just observe the task they are doing.

Mostly as BA we do passive observations as we avoid disturbing stakeholders during their work.

6. Workshop

One of the most powerful elicitation techniques. **It is more practical in nature and aims to completion.** In it business analysts gather requirements from the stakeholders in a workshop setting. It can span for days.

Towards conducting a requirement workshop, these are the steps taken by a BA.

- Prepare workshop – BA defines the agenda of the workshop, finalizing the venue, taking availability of responsible stakeholders and invite responsible stakeholders to the workshop.
- Execute workshop – Ensure objective and scope is clear, discuss the agenda, elicited the requirements and document them.
- Wrap up workshop – Create MOM, draft BRD or their feature documents, any follow up actions, schedule next workshop.

7. JAD sessions (Joint Application Development)

As a BA, we may require working on a technical project (NW project, DB project) and we don't have deep understanding about the technology or the project, in such a case we take help of a technical resource while gathering requirements from the client, in such a case that approach is known as JAD sessions. If there is any challenge in between the middle of the project in those cases also we conduct JAD sessions.

JAD sessions also aim to solve the problem.

8. Interview

Any interaction with the stakeholder which has a defined objecting is an interview. Here BA uses interviews as an elicitation technique to gather requirements from the client.

Generally, BA conducts interviews while sorting the requirements we got from clients as it may have certain contradictions. In that case BA will reach out to the responsible stakeholder to clarify the requirements.

Two approaches for an interview

- Structured approach – Where all the questions are predefined or written.
- Unstructured approach – Where the questions are built upon the response on the previous question.

To avoid wastage of time we should conduct an interview in a structured approach.

BA may ask in two ways

- Open ended questions – Here answers will be explanation.
- Closed ended question – answers will be yes or no.

9. Prototyping

Showing the sample of a working model as a reference to the client and you take feedback on it, then it is called prototyping.

For prototyping we can create mockup screens, flow charts, activity diagrams.

10. Questionnaire (Survey)

Questionnaire (survey) forms are used when there is a need for interaction with larger number stakeholders in a single go. It is a popular tool to gather data from the participants regarding their experience or opinion.

11. Use Case Specs

When parallelly BA starts preparing use case diagrams and use case specs while the client is providing the requirements and takes feedback or do elicitation based upon the created use case diagram and use case spec, then this approach is known as use case specs approach. They are used to capture the functional requirements of a system and to communicate them to the developers, testers, and stakeholders.

Use case specs contain the following

- Description
- Actors
- Preconditions
- Basic flow
- Alternate flow
- Post conditions
- Exceptional flow
- Assumptions

Ques 6. Which elicitation techniques can be used in this project and justify your selection of elicitation techniques?

Prototyping

Use case specs

Document analysis

Brainstorming

Identify business requirements (which include stakeholder requirements)

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

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

Ans 6. To gather requirements from the client a BA uses different elicitation techniques. Elicitation is basically a meeting with a client with a specific objective. These are the following elicitation techniques used by a BA for this project.

By using these elicitation techniques, BA can gather a range of requirements, validate them through feedback and discussions and ensure that the application meets farmer's need and solves business goals and objectives.

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Challenges

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- Difficulty in understanding ideas by a BA due to lack of experience and domain knowledge.
- Ego clashes between the participants.
- Last minute dropouts of the participants due to unavailability of participants due to busy schedule.

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

Above business requirement contains the stakeholder requirements.

Reason

Reason I have chosen BR001 as my answer as per my interaction with Peter, Ben and Kevin, they have clearly stated above requirement as a stakeholder requirement during our conversation.

As per my understanding, stakeholder requirement is detailed information of the business requirement, and it should fall under the umbrella of the business requirement.

Ques 7. Make suitable assumptions and identify at least 10 business requirements.

Ans 7. Business requirements are high level requirements which define the need or problem statement of the business. They describe the reason why the project has been initiated, and the objective that the project will achieve. As a BA our main responsibility is to achieve these business requirements.

BR001	All new users (farmers & manufacturers) register/sign up easily by entering email id and password.
BR002	All users (farmers & manufacturers) log in by using their registered email id and password.
BR003	Farmers can search for desired products (Seeds, fertilizers and pesticides).
BR005	Manufacturers can upload and display their products (can also add specs related to the product which can help manufacturers to have good sales of their product and enhance user experience).
BR006	Farmers can browse through the product catalogue.
BR007	Farmers can add the product into cart if they wish to buy it later by clicking on add to Wishlist.
BR008	Farmers can buy the product by clicking buy now option.
BR009	Farmers should have easy to use secure payment gateways which include COD, Credit/Debit card and UPI option so that user experience is better.
BR009	Option to add and change address so that delivery can happen at the correct place.
BR010	Farmer gets an email confirmation regarding their order status.
BR011	Farmers can track the whereabouts of their order, once order is placed
BR012	Farmers can return their order and can request a refund if they are not happy with the product.

Ques 8. List your assumptions

Ans 8. These are the assumptions made for this project: -

Assumption 1	Farmers prefer shopping from online stores rather than their traditional way of buying products.
Assumption 2	Internet connectivity is there in remote areas, which is our target segment.
Assumption 3	Manufacturers are willing to list their agricultural products on online application.
Assumption 4	Effective delivery service of agricultural products in remote area.
Assumption 5	Farmers have an online banking system to make payment through credit cards/debit cards and upi
Assumption 6	All users have active email account already so that they can register into online application.
Assumption 7	Online stores have different functionalities for farmers and manufacturers.
Assumption 8	Product catalog displays detailed information and specs of each product to enhance user experience.
Assumption 9	Customer queries are addressed to improve customer service.
Assumption 10	In case of order return, online system for refund service is there to enhance customer experience.

Ques 9. Give priority 1 to 10 numbers (1 being low priority – 10 being high priority) to these requirements after the discussion with the stakeholders.

Ans 9. All the requirements listed below will be given priority points from 1 to 10 (1 being low priority and 10 being high priority).

BA needs to gather requirements from the client, while gathering requirements BA validates and qualifies the requirements using FURPS & SMART. Once it is done BA along with business stakeholders and technical team will prioritize the requirements. Business stakeholders will provide business value to each requirements using 100-dollar test. Technical team will provide their support to business stakeholders in helping them assess their business values whether it is correct or incorrect based upon their analysis. Then priority points will be decided on the following factors:

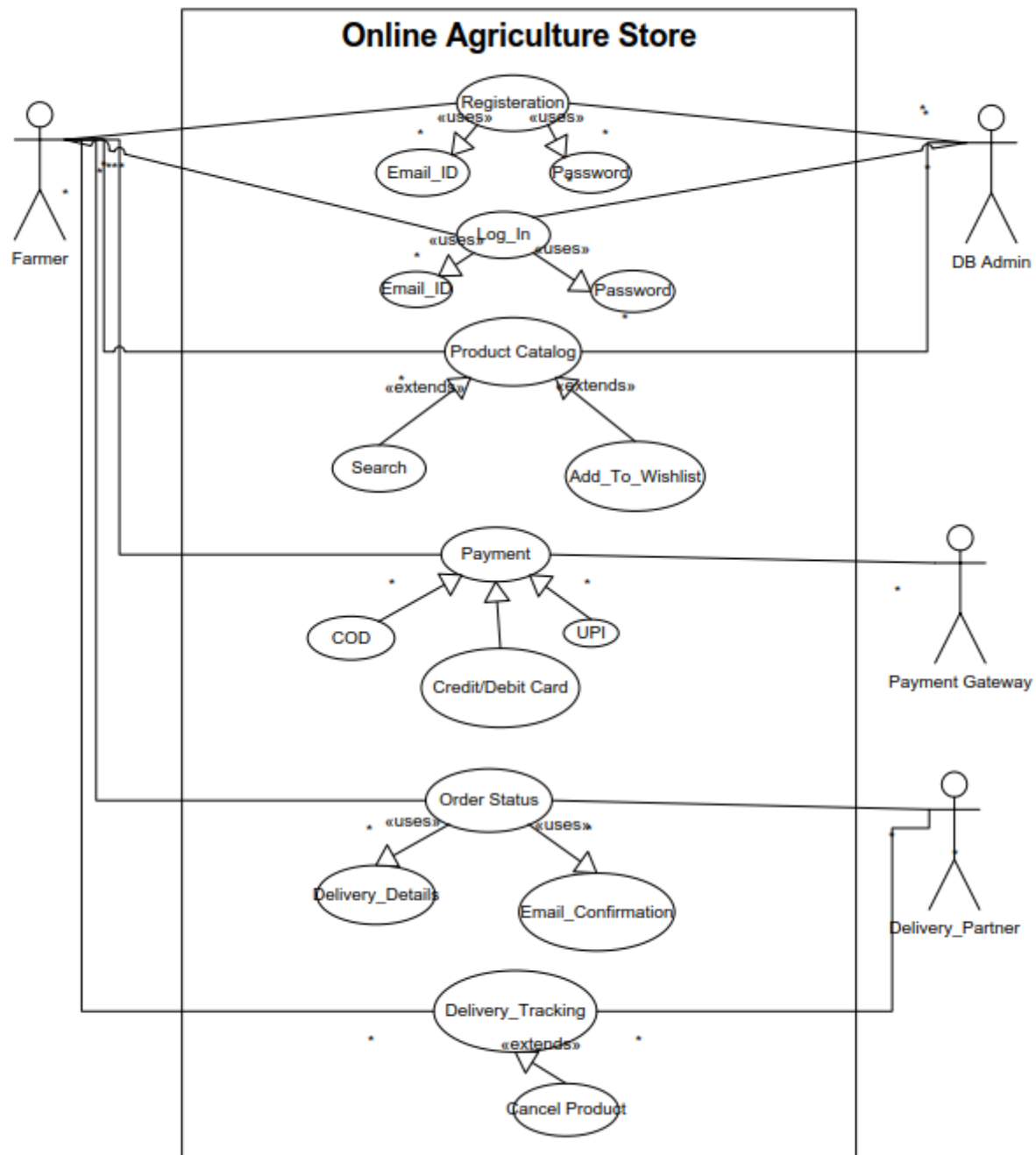
- Business Value (Business stakeholders)
- Dependency, complexity or efforts (Tech team)

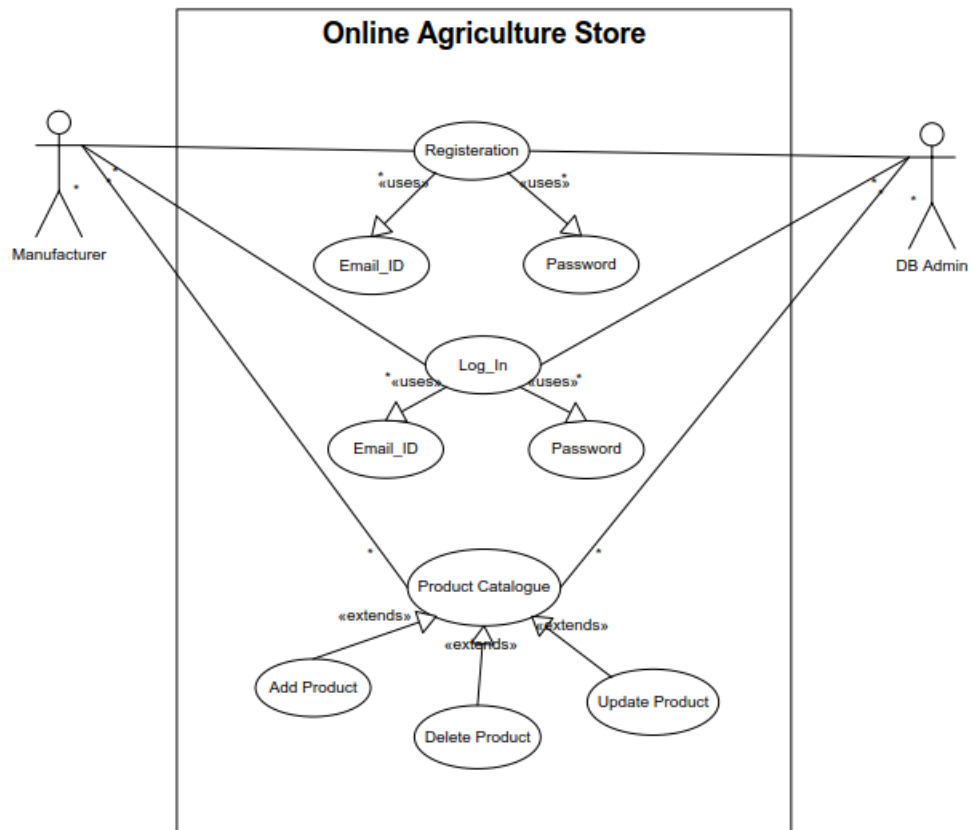
Req ID	Req Name	Req Description	Priority
BR001	New User Registration	All new users (farmers & manufacturers) register/sign up easily by entering email id and secure password.	10
BR002	User Login	All users (farmers & manufacturers) log in by using their registered email id and password	9
BR003	Farmer search for products	Farmers can search for desired products (Seeds, fertilizers and pesticides).	5
BR004	Manufacturers list their products	Manufacturers can upload and display their products (can also add specs related to the product which can help manufacturers to have good sales of their product and enhance user experience).	8
BR005	Browse from product catalog	Farmers can browse through the product catalogue.	8
BR006	Add to Wishlist	Farmers can add the product into cart if they wish to buy it later by clicking on add to cart button.	4
BR007	Buy Product option	Farmers can buy the product by clicking buy now option.	7
BR008	Payment method	Farmers should have easy to use secure payment gateways which include COD, Credit/Debit card and UPI option so that user experience is better.	7
BR009	Shipping address details	Option to add and change address so that delivery can happen at the correct place.	6
BR010	Email confirmation	Farmer gets an email confirmation regarding their order status.	6
BR011	Order tracking	Farmers can track the whereabouts of their order, once order is placed	5
BR012	Order return and refund	Farmers can return their order and can request a refund if they are not happy with the product.	4

After providing priority points to every business requirement, Moscow analysis is done to categorize these business requirements.

Ques 10. Draw use case diagram

Ans 10. Use case diagram describes how an end user interacts with the system. It is a high-level diagram. It is mainly actor specific and does not focus on the functionality of the system.





Ques 11. Prepare use case specs for all use cases

Ans 11. Use case diagrams are supported by use case specs document. By referring to the use case spec, software developer will build the application. Use case spec consists of Use case name, description, actor, preconditions, post conditions, basic flow, alternate flow, exceptional flow, assumptions, constraints, dependencies, input, output business rules and mis information.

Use case spec is so relevant as it contains alternate flow (Negative flow) and exceptional flow of the system, which is not there in use case diagram.

Here are few use case specs: -

Use Case ID	UC001		
Use Case Name	New User Registration		
Date Created	11/12/2025	Last updated by	11/12/2025
Created By	Lakshay Jindal	Last Revision date	11/12/2025
Actor	Farmer, DB_Admin, Manufacturer		
Description	This Use case describes how a new user can register into the online agriculture store		

Pre-Condition	User must be a new user, must have an active email id.
Post conditions	Users can login into application using registered credentials
Normal flow	Step 1: User open website and click on register. Step 2: User enter valid email ID and secure password. Step 3: User Successfully register into the online application.
Alternate flow	1. Email Id invalid - Incase user register from existing email Id into the system or use invalid email ID. 2. Server Issue - Due to issue with the server, application may not load.
Exceptional flow	1. Email Id invalid - On entering invalid Email ID, System will show an error "Email ID Invalid" and redirect the application to registration page. 2. Server Issue - Due to issue with the server, system will show error "server busy".
Assumptions	User has basic computer knowledge
Constraints	Valid email ID
Dependencies	Must not be an existing user
Inputs	Valid email Id and password
Outputs	Successful Registration
Business rules	Username -Valid email ID Password - minimum 8 characters
Mis Info	User friendly application

Use Case ID	UC002		
Use Case Name	User Login		
Date Created	11/12/2025	Last updated by	11/12/2025
Created By	Lakshay Jindal	Last Revision date	11/12/2025
Actor	Farmer, DB_Admin, Manufacturer		
Description	This Use case describes how a user can login into the system		
Pre-Condition	Users need to register		
Post conditions	Successful login, user can access online application portal		

Normal flow	Step 1: Users enter registered email id. Step 2: user enter registered password. Step 3: Press login after completing step 1 and step 2.
Alternate flow	1. Email Id invalid - Entered Email ID does not correct. 2. Password - Entered password does not correct. 3. Server Issue - Due to issue with the server, application may not load.
Exceptional flow	1. Email id invalid - On entering invalid Email ID, System will show an error "Email ID Invalid" and redirect the application to login page. 2. Incorrect Password - System will direct the user to forget password page where user can create new password. 3. Server Issue - Due to issue with the server, system will show error "server busy".
Assumptions	User has basic computer knowledge User should be an existing user
Constraints	Login via registered email id and password
Dependencies	Already registered into system
Inputs	Registered email Id and password
Outputs	Successful Login
Business rules	Registered email Id and password
Mis Info	User friendly application

Use Case ID	UC003		
Use Case Name	Product Catalogue for Farmers		
Date Created	11/12/2025	Last updated by	11/12/2025
Created By	Lakshay Jindal	Last Revision date	11/12/2025
Actor	Farmer, DB_Admin		
Description	This Use case describe, how farmers can search, browse, save to Wishlist and buy products from product catalogue		
Pre-Condition	Users need to login		
Post conditions	Farmer bought the product successfully		

Normal flow	Step 1: User login into the application using valid credentials. Step 2: User will direct product catalogue upon successful login. Step 3: User can browse the products visible on product catalogue and provided option for search products and add to Wishlist
Alternate flow	1. Product Not found/Out of Stock - upon search product not available in product catalogue. 2. Buy it Later - User do not want to buy product now.
Exceptional flow	1. Product Not found/Out of Stock - Upon searching if product not found or out of stock, system will show message "Product out of stock" and user directed to product catalogue. 2. Buy it Later - User want to buy later, user can choose "buy it later" option in add to Wishlist option and save product for later, User will be directed to product catalogue after it.
Assumptions	User has basic computer knowledge, Successful login
Constraints	Product out of stock, Product not found
Dependencies	Login into system
Inputs	Search or browse the desired product
Outputs	Successful purchase of product
Business rules	Can only search agriculture products such as pesticides, seeds and fertilizers
Mis Info	Easy to navigate product catalogue, user friendly application

Use Case ID	UC004		
Use Case Name	Product Catalogue for Manufacturers		
Date Created	11/12/2025	Last updated by	11/12/2025
Created By	Lakshay Jindal	Last Revision date	11/12/2025
Actor	DB_Admin, Manufacturer		
Description	Describes how Manufacturer can upload, update and delete product into product catalogue		
Pre-Condition	Users need to login		
Post conditions	Manufacturer listed the product on catalogue successfully		

Normal flow	Step 1: User login into the application using valid credentials. Step 2: User will be directed to product catalogue page. Step 3: User can add, delete and update the product in the product catalogue.
Alternate flow	1. Addition Failure - Product not uploaded into the system. 2. Updation Failure - Updated info about the product not getting reflected into the system. 3. Deletion Failure - User not able to delete the product.
Exceptional flow	1. Addition Failure - System will direct user to product catalogue page and will show error "Not able to add product, Try again Or Call customer Care" 2. Updation Failure - System will direct user to product catalogue page and will show error "Not able to update product, Try again Or Call customer Care" 3. Deletion Failure - System will direct user to product catalogue page and will show error "Not able to delete product, Try again Or Call customer Care"
Assumptions	User has basic computer knowledge, Successful login
Constraints	Can list only agricultural products such as pesticides, seeds and fertilizers
Dependencies	Login into system
Inputs	Products and Products info
Outputs	Successful addition, updation or removal of products
Business rules	Can list only agricultural products such as pesticides, seeds and fertilizers
Mis Info	Proper info about each product, user friendly application

Use Case ID	UC005		
Use Case Name	Payment by user		
Date Created	11/12/2025	Last updated by	11/12/2025
Created By	Lakshay Jindal	Last Revision date	11/12/2025
Actor	Farmer, Payment gateway		
Description	Describes how use makes payment		

Pre-Condition	User has selected the desired product and opted for payment
Post conditions	Successful completion of payment process and product set for delivery
Normal flow	Step 1: User selects buy now option. Step 2: Gets directed to payment option. Step 3: User can choose either offline payment mode (COD), or an online payment option (Debit/Credit card/UPI). Step 4: After successful payment completion user will be directed to order status page.
Alternate flow	1. Payment Gateway Issue - Problem with the linked payment gateway, User not able to access payment gateway. 2. Wrong Credentials - User entered incorrect Debit/Credit card/UPI credentials. 3. Balance Unavailable - User does not have appropriate Bank Balance.
Exceptional flow	1. Payment Gateway Issue - In case of payment gateway issue, system will show error " Server Busy" and user is directed to product catalogue. 2. Wrong Credentials - User enters wrong online credentials, system will show error "Wrong credentials", and user is directed to payment option page. 3. Balance Unavailable - No availability of Balance in user account, system will show error "Balance unavailable", user is directed to payment option page.
Assumptions	Comfortable with available payment options, have bought the desired product
Constraints	User may not have available payment option
Dependencies	Clicked on buy option after selecting the product
Inputs	Payment details
Outputs	Successful completion of payment process
Business rules	Use available payment options such as credit/debit card, COD or UPI.
Mis Info	Easy payment options

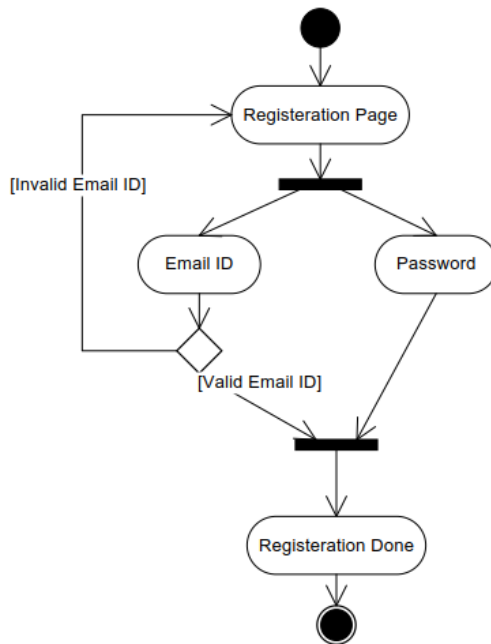
Use Case ID	UC006		
Use Case Name	Order status		
Date Created	11/12/2025	Last updated by	11/12/2025
Created By	Lakshay Jindal	Last Revision date	11/12/2025

Actor	Farmer, Delivery partner
Description	Describes how user will have order status confirmation
Pre-Condition	Payment process should be successful
Post conditions	Order will be sent for delivery
Normal flow	Step 1: User completes the payment process. Step 2: User directed to order status page. Step 3: User updates delivery details. Step 4: User Receive email confirmation. Step 5: Delivery partner set out for delivery.
Alternate flow	1. No Email Confirmation - User didn't receive any email confirmation.
Exceptional flow	1. No Email Confirmation - User can opt for sending email option again in case you doesn't receive an email within 2 minutes.
Assumptions	Order has successfully completed the payment process
Constraints	Delivery service not available at user address
Dependencies	Order has successfully completed the payment
Inputs	Delivery details
Outputs	Email confirmation
Business rules	User receive email confirmation within 2 minutes.
Mis Info	Customer satisfaction

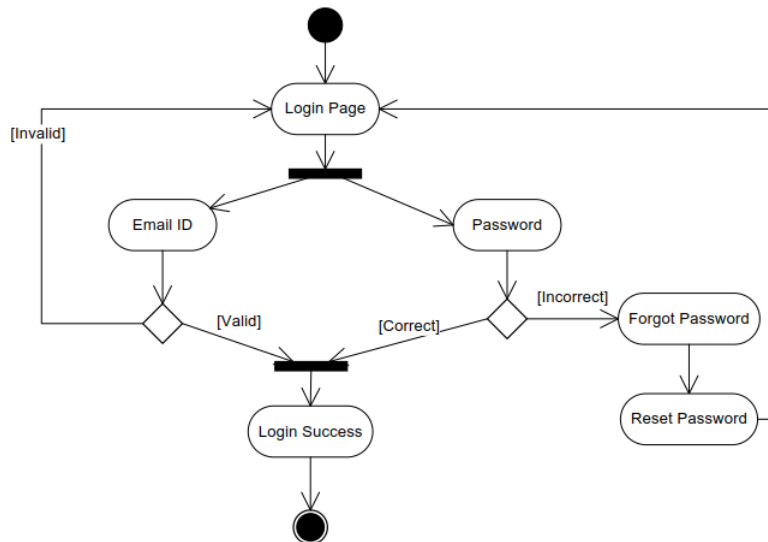
Ques 12. Activity diagram

Ans 12. Activity diagrams explain how the functionality is achieved from the system perspective. It is drawn where the system is involved.

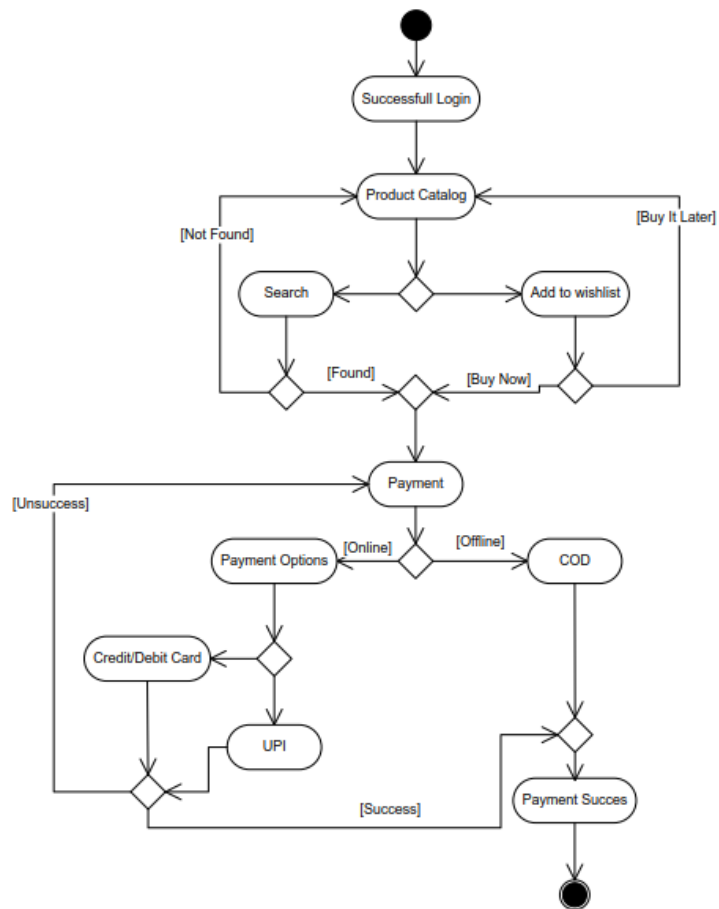
1. Registration



2. Login



3. Product Catalogue & Payment



4. Order status

