

Capstone project 1 part 3

Q 1. Functional Requirements

Functional requirements are the specific behaviors, functions or operations of a system. They describe what the system should do ,tasks, actions, or activities it must perform to achieve its objectives.

Req Id	Req Name	Req description
FR0001	Farmer registration	Farmers should be able to register with the application
FR0002	Farmer search for products	Farmers should be able to search for available products in fertilizers, seeds, pesticides
FR0003	Product details	Farmers can view product details (description, price, reviews)
FR0004	Product add to cart	Farmers can add products to a cart
FR0005	Product add to wishlist	Farmers can add products to wishlist
FR0006	Place order	Farmer can place order for the selected products
FR0007	Payment mode	Farmer can make payment through Cards, UPI, and COD
FR0008	Manufacture register	Manufacturer can register or login
FR0009	Manufactures add products	Manufactures can add new products with details
FR0010	Forgot login details	Farmer/manufacture can reset password or username if they forgot

Non Functional requirements

Non functional requirements will describe the qualities and attributes of a system, focusing on how the system performs rather than specific behaviors or functions.

Req Id	Req Name	Req description
NFR0001	Usability	The application should be user friendly
NFR0002	Performance	The page should load within 3 seconds
NFR0003	Security	The application should secure with authentication
NFR0004	Compatibility	The application should be compatible with major web browsers
NFR0005	Handling	Application should handle at least 10000 users at same time
NFR0006	Working	The system should work with slow internet in remote areas
NFR0007	New features	The application should be able to add new features in the future
NFR0008	Storing	User data should be stored safely
NFR0009	Support	The application should work on both mobile and desktops
NFR0010	Availability	The system shall be available 99% of the time.

Q 2. Wireframe and Prototypes

Wireframes are basic blueprints used in web design and app development to represent the layout and structure of a page or screen

Prototypes is a working model of a website or app that can clicked and tested. It shows how the user will interact with the app like moves from one screen to other.

online agriculture products

← → ↻

registration page

User ID	
Password	
Email	
Mobile no	

online agriculture products

← → ↻

Login page

User ID	
Password	

online agriculture products

← → ↻

Home page



pesticides



fertilizers



seeds

Login page

User ID

Password

Product list

Cotton seeds list

 Price 850 BUY	 Price 850 BUY	 Price 850 BUY	 Price 850 BUY
 Price 850 BUY	 Price 850 BUY	 Price 850 BUY	 Price 850 BUY

Q 3. Make a note of the Tools, which you are using for above concepts.

MS Visio

Microsoft Visio is a diagramming tool used to create professional flowcharts, UML diagrams, network diagrams, and organizational charts. It offers a wide range of templates and symbols for designing system architecture and processes. It's widely used in software projects for creating clear technical visual documentation and planning.

- Easy drag and drop shapes for professional diagrams
- Good for detailed technical designs
- Professional system designs

Balsamiq

Balsamiq studio is founded in March 2008 by Peldi Guilizzoni, a former Adobe software engineer. Creating simple and quick wireframes or mockups of web/mobile screens. It's ideal for brainstorming and communicating ideas during the early stages of UI/UX development.

- Very easy to use
- Great for brainstorming and showing ideas visually
- Quick sketch-style screen ideas

Axure

Axure is a powerful prototyping tool used to create detailed wireframes, user flows, and interactive prototypes. It supports dynamic content, conditions, and animations, allowing you to simulate real user interactions. It's great for demonstrating how a system or application will behave before actual development begins.

- Can simulate real app behavior
- Helpful to show how users will move through the system
- Showing how the system will work

Q 4. Prepare RTM

It is document to track the requirements throughout the project lifecycle, ensuring that they are met and that no requirements are overloaded.

[illegible]

[illegible]

Q 5. Test Case Documents

A test case document is a detailed outline used by testers to ensure that a software application or system is working as expected.

Test case Id	PQ987TS001	Test case Name	Registration
Project Id	PQ987	Project name	Online agriculture products
PM Id	1234	PM Name	Mr. Vandanam
Test strategy id	PQ987TS001	Tester id	9879
Test plan id	PQ987TP001	Tester name	Ms. Alekya
Test schedule id	PQ987TS001	Date of Test	02-07-2025
Scenario	Farmer registration		
Link to the page	agricultureproducts.com		
Input data	Go to registration page Enter valid details Click submit		
Expected behaviour	The system should create account		
Actual behaviour	Farmer account created successfully		
Comments	None		
Results (pass/fail)	Pass		

Test case Id	PQ987TS002	Test case Name	Login
Project Id	PQ987	Project name	Online agriculture products
PM Id	1234	PM Name	Mr. Vandanam
Test strategy id	PQ987TS002	Tester id	9879
Test plan id	PQ987TP002	Tester name	Ms. Alekya
Test schedule id	PQ987TS002	Date of Test	02-07-2025
Scenario	Farmer login		
Link to the page	agricultureproducts.com		
Input data	Enter valid mail id and password Click login		
Expected behaviour	System allows user to login		
Actual behaviour	Farmer login successfully		
Comments	None		
Results (pass/fail)	Pass		

Test case Id	PQ987TS003	Test case Name	Search
Project Id	PQ987	Project name	Online agriculture products
PM Id	1234	PM Name	Mr. Vandanam
Test strategy id	PQ987TS003	Tester id	9879
Test plan id	PQ987TP003	Tester name	Ms. Alekya

Test schedule id	PQ987TS003	Date of Test	02-07-2025
Scenario	Search for products		
Link to the page	agricultureproducts.com		
Input data	Login as farmer Search for seeds catalog		
Expected behaviour	The system should show the available products		
Actual behaviour	Products list is displayed		
Comments	None		
Results (pass/fail)	Pass		

Test case Id	PQ987TS004	Test case Name	Search
Project Id	PQ987	Project name	Online agriculture products
PM Id	1234	PM Name	Mr. Vandanam
Test strategy id	PQ987TS004	Tester id	9879
Test plan id	PQ987TP004	Tester name	Ms. Alekya
Test schedule id	PQ987TS004	Date of Test	02-07-2025
Scenario	Place order for a product		
Link to the page	agricultureproducts.com		
Input data	Login as farmer Select product Add to cart Make payment Place order		
Expected behaviour	The system should confirm the order		
Actual behaviour	Order was successfully placed		
Comments	None		
Results (pass/fail)	Pass		

Test case Id	PQ987TS005	Test case Name	Order history
Project Id	PQ987	Project name	Online agriculture products
PM Id	1234	PM Name	Mr. Vandanam
Test strategy id	PQ987TS005	Tester id	9879
Test plan id	PQ987TP005	Tester name	Ms. Alekya
Test schedule id	PQ987TS005	Date of Test	02-07-2025
Scenario	View order history		
Link to the page	agricultureproducts.com		
Input data	Login as farmer Click on order history		
Expected behaviour	The system should allow to view		
Actual behaviour	Order History displayed		

Comments	None
Results (pass/fail)	Pass

Test case Id	PQ987TS006	Test case Name	Review and rating
Project Id	PQ987	Project name	Online agriculture products
PM Id	1234	PM Name	Mr. Vandanam
Test strategy id	PQ987TS006	Tester id	9879
Test plan id	PQ987TP006	Tester name	Ms. Alekya
Test schedule id	PQ987TS006	Date of Test	02-07-2025
Scenario	Verify tht the farmer can leave a review and rating for a purchased products		
Link to the page	agricultureproducts.com		
Input data	Rating 5 star Review “ great product”		
Expected behaviour	The system allow to post the review		
Actual behaviour	The review was successfully posted		
Comments	None		
Results (pass/fail)	Pass		

Test case Id	PQ987TS007	Test case Name	Add products to catalog
Project Id	PQ987	Project name	Online agriculture products
PM Id	1234	PM Name	Mr. Vandanam
Test strategy id	PQ987TS007	Tester id	9879
Test plan id	PQ987TP007	Tester name	Ms. Alekya
Test schedule id	PQ987TS007	Date of Test	02-07-2025
Scenario	Manufactures add product to catalog		
Link to the page	agricultureproducts.com		
Input data	Login as manufacturer Add product Fill form and submit		
Expected behaviour	The system should allow to add products		
Actual behaviour	New products added to catalog successfully		
Comments	None		
Results (pass/fail)	Pass		

Test case Id	PQ987TS008	Test case Name	Tracking id of delivery
Project Id	PQ987	Project name	Online agriculture products
PM Id	1234	PM Name	Mr. Vandanam
Test strategy id	PQ987TS008	Tester id	9879
Test plan id	PQ987TP008	Tester name	Ms. Alekya
Test schedule id	PQ987TS008	Date of Test	02-07-2025

Scenario	Farmer need tracking id
Link to the page	agricultureproducts.com
Input data	Login as farmer Click my order Track order
Expected behaviour	The system should show tracking id
Actual behaviour	Farmer track the delivery location
Comments	None
Results (pass/fail)	Pass

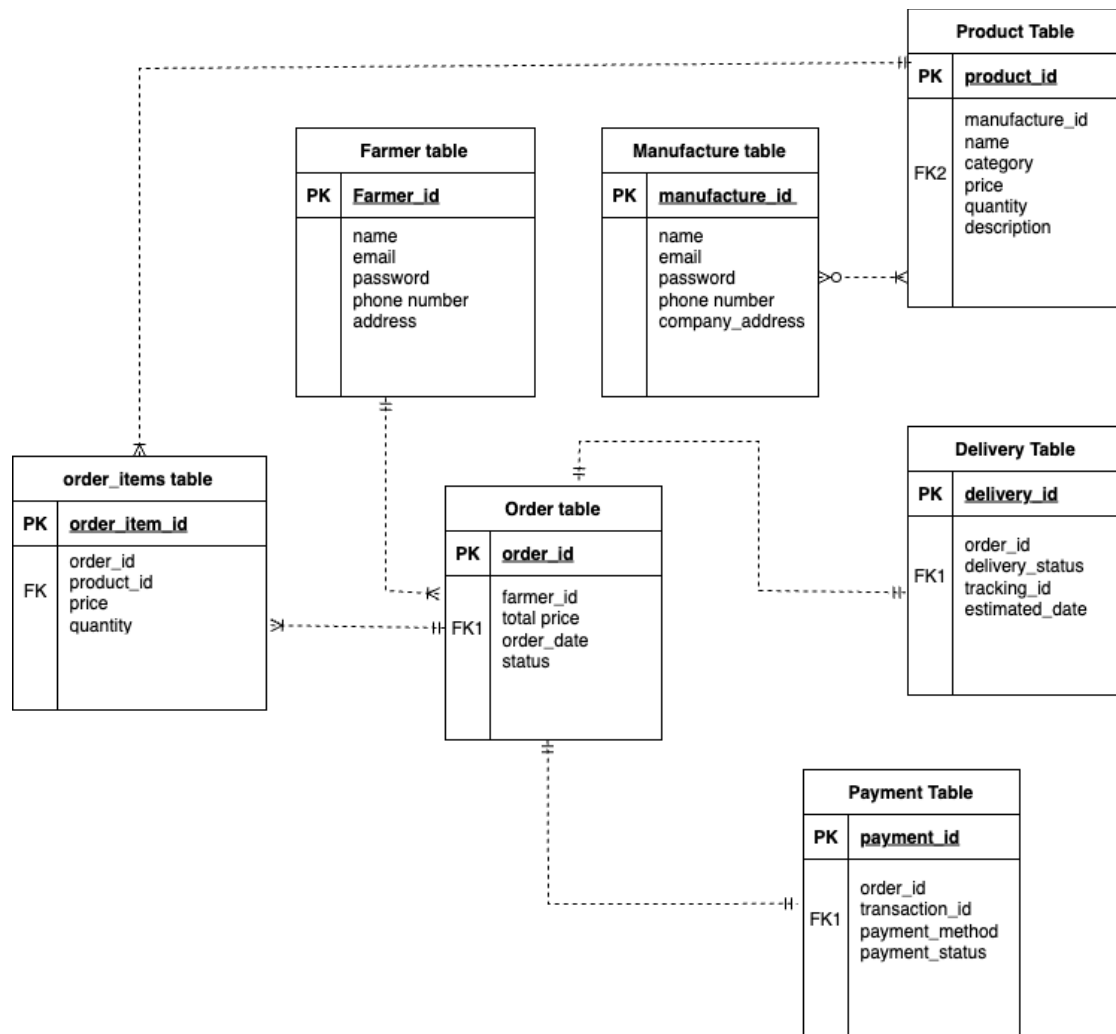
Test case Id	PQ987TS009	Test case Name	Return request
Project Id	PQ987	Project name	Online agriculture products
PM Id	1234	PM Name	Mr. Vandanam
Test strategy id	PQ987TS009	Tester id	9879
Test plan id	PQ987TP009	Tester name	Ms. Alekya
Test schedule id	PQ987TS009	Date of Test	02-07-2025
Scenario	Farmer want return the product		
Link to the page	agricultureproducts.com		
Input data	Login farmer My order Return/exchange		
Expected behaviour	The system should allow to raise return req		
Actual behaviour	Return req was successfully		
Comments	Damaged/expired		
Results (pass/fail)	Pass		

Test case Id	PQ987TS0010	Test case Name	Admin check
Project Id	PQ987	Project name	Online agriculture products
PM Id	1234	PM Name	Mr. Vandanam
Test strategy id	PQ987TS0010	Tester id	9879
Test plan id	PQ987TP0010	Tester name	Ms. Alekya
Test schedule id	PQ987TS0010	Date of Test	02-07-2025
Scenario	Admin login and manage users		
Link to the page	agricultureproducts.com		
Input data	Admin login Check users list Block or edit user		
Expected behaviour	The system should allow admin to verify		
Actual behaviour	Admin changed details updated successfully		
Comments	Blocked /edited user		
Results (pass/fail)	Pass		

Q 6. Draw database schema and ER diagram

DB Scheme is a blueprint that outlines the structure of a database, including tables, relationships and other characteristics

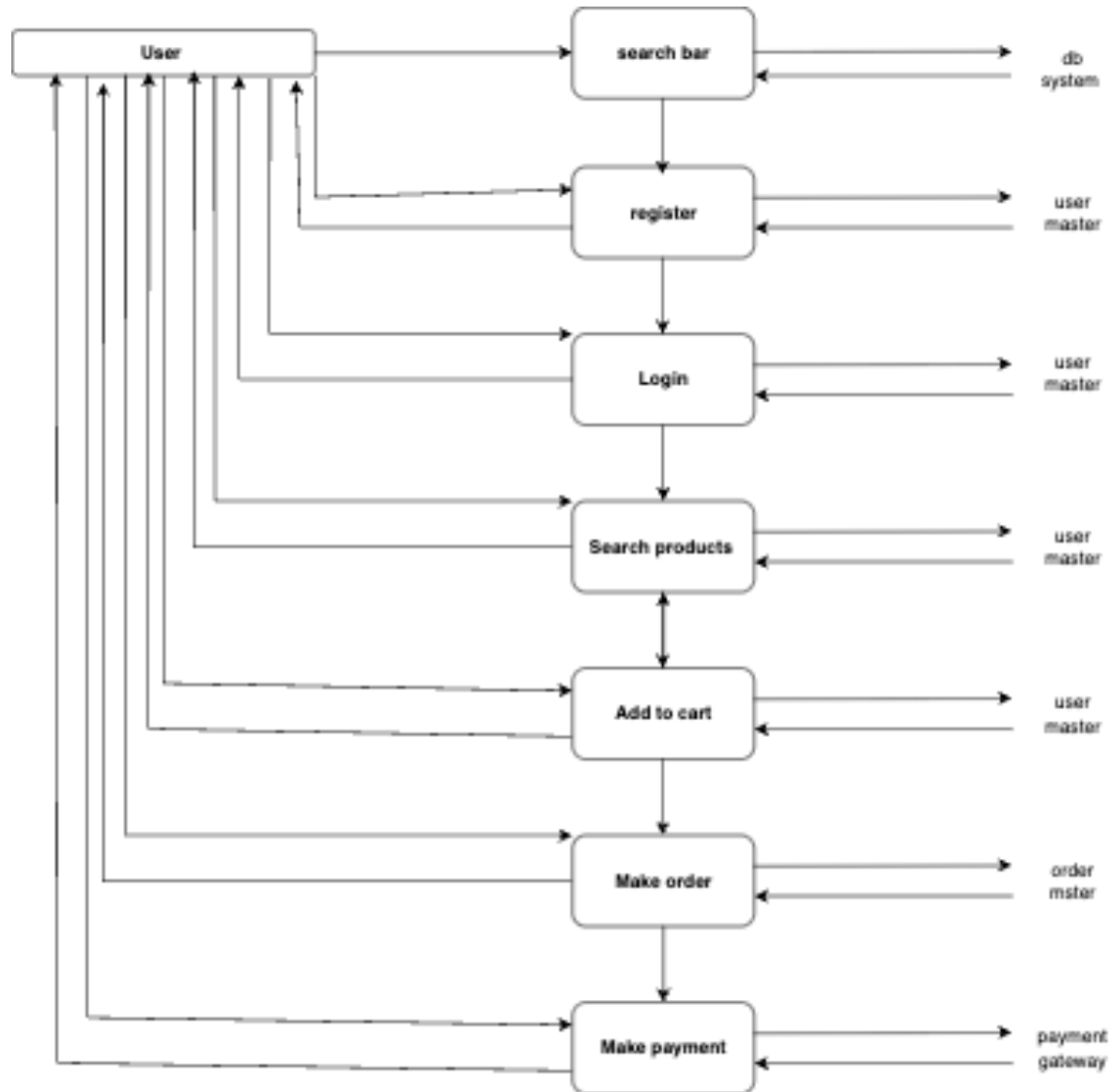
An Entity Relationship Diagram is a visual representation of the relationships between entities in a database.



Q 7. Data flow Diagram

A Data Flow Diagram is a graphical representation of the flow of data within a system. It visually shows how data moves from one process to another, how it is stored and where it ends up.

It helps designers understand the flow of the data within a system.



Q 8. How do you handle change requests in a project.?

A Change Request is when someone asks to make a change to the project after the work has already started.

1. Identify and log the request

who raised it.?

What is the change.? (New tax rates due to govt policy)

Where it is applied.? (product price, invoice)

2. Analyze the change

Gather the new tax rules

Understand where taxes are currently applied in the system

Product price, checkout, invoice, tax report.?

3. Evaluate Impact with Team

Developers – where tax is implemented in the code

Database admin – tax table need change

Tester – new test case

UI/UX – tax displayed to user

Finance team – to verify

4. Present to Change Control Board (CCB)

Explain what the change is

Show the impact analysis (time, cost, risk)

5. Get Approval

Once the CCB (Project Sponsor, PM, Client) approves it, move forward

6. Update Documentation

Business Requirement Document (BRD)

Use cases

Functional Specifications

7. Implement the Change

Development team update logics

DB team update tables

Testers performs

8. Communicate, track and close the req

Notify the internal user

After deployment and verification, update status to implemented or req closed

Record the change req.

Q 9. As the project is in process, Ben and Kevin have contacted you. The reason is to inform you that they want the Farmers to sell their crop yields through this application i.e. Farmers should be able to add their crop yields or products and display to general public and should be able to sell them. They also want to introduce Auction system for their Crop yields. As a BA, what will be your response?

Is this a change request or an enhancement.?

It's a Change request

As the original scope of the project was farmers to buy seeds, pesticides and fertilizers. Now Ben and Kevin are asking for new feature that allow farmers to sell their crop yields.

However this new request introduces entirely new functionality allowing farmers to sell their produce and conduct auctions, which were not part of the initial requirements. This change significantly impacts the scope, design, database, user flows, and possibly even the legal and financial structure of the platform. Therefore, I would formally log this as a change request, analyze its impact on cost, timeline, and resources, and present it to the Change Control Board for review and approval. Once approved, I would proceed to gather detailed requirements, update documentation, and coordinate with the development and testing teams to implement the new features effectively

Q 10. How many Manhours required.?

Man hours are the required efforts of the resources to complete a project. There are 3 types of projects

Small upto 500 hours

Medium upto 1000 hours

Large upto 1500 hours

Analysis

As per the case study the duration of the project is 18 Months and the current team size is 17.

This will come under medium project

Project phase	Estimated days	Man hours(8hr per day)
Requirements gathering and analysis	10 days	80hrs
UI/UX design	8 days	64hrs
Database design	8 days	64hrs
Backend development	75days	600hrs
Frontend development	60days	480hrs
Security setup	5days	40hrs
QA testing	20days	160hrs
UAT support and bug fixing	8days	64hrs
Deployment	5days	40hrs
Documentation	5days	40hrs
Project management & coordination	8days	64hrs
Handling change req	50days	400hrs

Q 11. Explain UAT Acceptance process.?

UAT (user acceptance testing) is the final stage of testing where real users test the system to make sure it works as expected.

UAT Process

1. Prepare UAT
Business analyst prepare UAT plan
2. Invite the users
Select the user from client side (ben peter kevin)
Explain what they need to test and how
3. Execute the tests
User performs real tasks
They check it is working as expected
4. Report issues and Reset
If anything is broken, missing user report it
The team fix and update the system
User test again
5. Final sign-off
Once users are happy they give UAT Sign-off

Q 12. Explain Project closure document.?

A project closure document is known as a project closure report.

A project closure document is a formal document created at end of the project.

Points included in the project closure document

Project overview or introduction

What was the project about

Who was involved

What was delivered

Achievements

List of feature or modules delivered

Lessons learned

what could have been done better

any change req handle

Quality assurance

Summary of all testing

Defects found and fixed

Any tools used to ensure quality

Resource utilized

Team members and their roles

Software/hardware

Any external tools

Risk management

What are risks

Actions taken to solve the risk

Final risk status

Challenges

Communication gaps

Technical issues

Scope change

Client delay

Final budget and time report

Initial budget and actual budget

Planned timeline vs completion time

Why reasons

UAT Sign-off

Proof that the client accepted the system after testing

Date of sign-off

Who signed

Approval comments

Signatures

Official sign-off to closure project

Name and role

Sign with date