Q1) Question 1 – Functional Requirements - 15 Marks

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| --- | --- | --- |
| **Req ID** | **Req Name** | **Req Description** |
| FR001 | User Registration | Users should be able to register with the application |
| FR002 | Search for the products | Users should be able to search for the available products |
| FR003 | Adding products to the cart | Users should be able to add the products to the cart |
| FR004 | Adding products to the wishlist | Users should be able to add the products to the wishlist |
| FR005 | Payment with different modes | Users should be able to make a payment with different modes |
| FR006 | Support required on orders | users should be able to raise concerns and take customer support for resolution |
| FR007 | feedback on products | Users should be able to provide feedback on products purchased |
| FR008 | Cancel order | User should be able to cancel orders before dispatch |
| FR009 | Notifications | User should receive order and promotional notifications via email or sms |
| FR010 | Advanced search filters | user should be able to search using advanced search filters like price,rating etc. |
| FR011 | Return and refund | Users should be able to request a return or refund the product |
| FR012 | Language feature | Users should be able to select their comfortable language |
| FR013 | Secure login and OTP verification | Users should be able to log in securely using OTP |
| FR014 | Order History | Users should be able to view their order history |
| FR015 | Rating option | Users should be able to rate the product after buying |
| FR016 | Delivery date selection option | Users should be able to select their comfortable delivery date option |
| FR017 | Product comparison tool | Users should be able to compare product with different |
| FR018 | Cancel order | User should be able to cancel orders before dispatch |
| FR019 | Language feature | Users should be able to select their comfortable language |
| FR020 | Payment with different modes | Users should be able to make a payment with different modes |

Q3)Make a note of the Tools, which you are using for above concepts

Microsoft Visio

Microsoft Visio is a diagramming tool that helps users create a wide variety of visual representations, from simple flowcharts to complex network diagrams. It’s widely used in business, engineering, and IT for process modeling, project planning, and organizational mapping.

Key Features:

Templates – Pre-built templates for diagrams such as flowcharts, floor plans, and organizational charts.

Collaboration – Integrated with Microsoft 365, allowing teams to edit and share diagrams in real-time.

Data Linking – Diagrams can connect to Excel, SQL databases, and SharePoint, enabling dynamic data visualization.

Scalable – Suitable for both small businesses and large enterprises to manage complex workflows.

Example Use Case:

A project manager creates a Gantt chart in Visio to track project timelines and deliverables, linking tasks to Excel data for automatic updates. Similarly, an IT professional can design network architecture diagrams to visualize server and device connections across different departments.

Industries Using Visio:

IT (network diagrams, system architecture)

Business (organiztion charts, workflows)

Manufacturing (process diagrams, supply chain visualization)

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Balsamiq

Balsamiq is a wireframing tool designed for quick UI mockups and prototypes of user interfaces. Its sketch-style interface focuses on layout and structure without getting into design details, making it ideal for brainstorming and early-stage prototyping.

Key Features:

Drag-and-Drop Interface – Users can rapidly add components like buttons, text fields, and dropdowns.

Reusable Symbols – Design assets can be reused across projects for consistency.

Export & Collaboration – Wireframes can be exported as PDFs or images for easy sharing with clients and teams.

Example Use Case:

A UX designer sketches a landing page layout with sections for navigation, product images, and call-to-action buttons. The design is shared with stakeholders to gather feedback before moving to high-fidelity design tools.

Industries Using Balsamiq:

Startups (quick prototyping for MVPs)

Agencies (client proposals and mockups)

Software Development (UI/UX design for web and mobile apps)

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Axure RP

Axure RP (Rapid Prototyping) is a powerful wireframing and prototyping tool that allows users to create highly interactive and dynamic prototypes. It’s used for complex projects that require dynamic content, and adaptive designs.

Key Features:

Interactive Prototypes – Build clickable prototypes with conditional logic and dynamic elements.

Detailed Documentation – Automatically generate specifications for developers.

Team Collaboration – Supports multi-user workflows with version control and feedback loops.

Example Use Case:

A UX designer uses Axure to prototype a mobile banking app with features like account summaries, transfers, and bill payments. Users can click through the prototype to simulate real interactions, providing realistic feedback on usability before development begins.

Industries Using Axure:

Finance (banking platforms, trading apps)

Enterprise (complex SaaS applications)

Healthcare (patient portals, medical interfaces)

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Comparison:

Visio – Used to map out the workflow of an e-commerce checkout process.(Create a flowchart of how customers browse categories ,add items ,and complete purchase.This will help in structuring the sites back end process.

Balsamiq – Used to create low-fidelity wireframes for the e-commerce site layout.(Eg wireframe product detail page showing a image of seeds,pecticides ,dropdowns for quantity and buttons for purchasing or adding to a wishlist.This helps align on layout before moving to high fidelity design

Axure – Used to build a high-fidelity interactive prototype of the product filtering and checkout system.this provide a realistic experience for stake holders and developers

Start with Visio-Flowcharts of user journeys, architecture,workflows

Balsamiq-sketch initial wireframes of homepage, product listing pages etc

Axure-It is used for real user interactions

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|  | Question 4 – RTM - 6 Marks* It is document to track the requirements throughout the project lifecycle,ensuring that they are met and that no requirements are overlooked

Prepare RTM

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Prepare RTM |   |   |   |   |   |   |   |   |   |
| **Req Id**  | **Req Name** | **Req Description**  | **Design**  | **Code** | **Unit testing** | **Component Testing** | **System testing** | **SIT** | **UAT testing** |
| FR001 | Farmer Registration | Farmer should register themselves | Complete | Complete | Complete | Complete | Complete | Complete | incomplete |
| FR002 | Search Product | Farmer should be able to search product | Complete | Complete | Complete | Complete | incomplete | incomplete  | incomplete |
| FR003 | Farmer request for detailed products | Farmer should be able to request for details of the product | Complete | Complete | Complete | Complete | incomplete | incomplete  | incomplete |
| FR004 | Add product to cart | Farmer should be able to add products to cart | Complete | Complete | Complete | Complete | incomplete | incomplete  | incomplete |
| FR005 | buys the product | farmer should be able to able to but the product | Complete | Complete | Complete | Complete | incomplete | incomplete  | incomplete |
|   |   |   |   |   |   |   |   |   |   |
| **Req Id**  | **Req Name** | **Req Description**  | **Design**  | **Code** | **Unit testing** | **Component Testing** | **System testing** | **SIT** | **UAT testing** |
| NFR0101 | Page Loading Time | Each Page should load within 2 seconds time | Complete | Complete | Complete | Complete | Complete | Complete | incomplete |
| NFR0102 | WCAG 2.1. | The system must meet Web Content Accessibility Guidelines WCAG 2.1. | Complete | Complete | Complete | Complete | Complete | Complete | incomplete |
| NFR0103 | Website support | website must support 100 concurrent users | Complete | Complete | Complete | Complete | incomplete | incomplete  | incomplete |
| NFR0104 | password forgot | Farmers should recoer passwords with in 2 min | Complete | Complete | Complete | Complete | incomplete | incomplete  | incomplete |
| NFR0105 | Website Uptime | website uptime should be 99.99% | Complete | Complete | Complete | Complete | incomplete | incomplete  | incomplete |

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Question 5 – 10 Test Case Documents - 10 Marks

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

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| --- | --- | --- | --- | --- |
| Test Case ID |   |   | Test case name |   |
| Project ID |   |   | Project Name |   |
| PM ID |   |   | PM Name |   |
| Test startegy ID |   |   | Tester ID |   |
| Test Plan ID |   |   | Tester Name |   |
| Test schedule ID |   |   | Date of test |   |
| Scenario | Search for product |   |   |   |
| Link to that page: |   |   |   |   |
| Input data | Set 1: seeds | Set2 : Pesticides | Set 3: Farming materials |  |
| Expected Behaviour | 15 variety of seeds |   |   |  |
| Actual Behaviour |   |   |   |   |
| Comments |   |   |   |   |
| Result (P/F) |   |   |   |   |

Q6)Draw database schema and ER diagram

DB schema : Is blueprint that outlines the structure of database, including its tables fields,relationships,constraints and other characteristics.

ER –Entity relationship diagram (ERD) : is a visual representation of the relationships between entities in a database.

It represent the entities(such as tables),attributes(Properties or fields) and relationships between them.

1. Requirements :

Farmers can browse and purchase agricultural products (seeds, fertilizers, tools, etc.).

The store maintains supplier and inventory details.

Orders can be placed, tracked, and managed.

Users can provide reviews and ratings.

Payment and shipping details are recorded.

2. Entities and Attributes:

1. Users

UserID (Primary Key)

Name

Email

Phone

Address

Role (Admin/Customer)

Password

2. Products

ProductID (Primary Key)

ProductName

Category (Seeds, Fertilizers, Tools, etc.)

Description

Price

StockQuantity

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3. Relationships:

A user can place multiple orders.

An order contains multiple products.

A product is supplied by a supplier.

A payment is linked to a single order.

Each order has shipping details.

Users can write reviews for products they purchased.

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4. ER Diagram (High-Level Design):

Entities:

User

Product

Supplier

Order

OrderDetails

Payment

Shipping

Review

Relationships:

Users place orders (1:M).

Orders consist of multiple products (M:N via OrderDetails).

Products have suppliers (M:1).

Orders are paid through payments (1:1).

Orders are shipped (1:1).

Users write reviews for products (M:N).

6. Diagram Visualization (EE Diagram):

To visualize this ER diagram:

Users (1) → (M) Orders

Orders (M) → (M) Products via OrderDetails

Products (M) → (1) Suppliers

Orders (1) → (1) Payments

Orders (1) → (1) Shipping

Users (M) → (M) Reviews → (M) Products

Q7)Data Flow Diagram - 3 Marks

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

It help analysts and designers t understand the flow of the data with in a system, identify potential inefficiencies and communicate system requirements to stakeholders

 User search item Item

 Registration user

Question 8 – Change Request - 10 Marks

How do you handle change requests in a project?

A change request is a formal proposal to alter a system, product or project

1. Understand the scope of the change request and document the change request
2. DO the impact analysis-project scope,schedule,budget,resources and risks
3. Prioritize change requests based n its urgency, improtnce,impact on project
4. Seek approval from the project sponsor for the change request
5. Communicate the change request and it potential impacts to all relavat stakeholder including the project team

Question 9 – Change Request Vs an Enhancement - 5 Marks

Adding more Is enhancement

Alteration is change reuest

In this case, adding auction to the application would be considered an enhancement as it involves adding new features to the system

As a business analyst , we should document the requirements and work with the development team to determine the feasibility and impact of the new feature. We should also consider the potential benefits, risks , costs associated with the enhancement before making any recommendation to the clients.

Question 10 – Estimations - 6 Marks

Come up with estimations – How many Manhours required

Man hours are the required effort of the resources to complete a projects.

There are 3 types of projects

1. Small : Upto 500 hrs
2. Medium: Upto 1000 hrs
3. Large: Upto 1500hrs

Analysis

As per the case study, the duration of the project is 18 months and the current team size is around 15. This will come under medium project

As the trained resources are available, trainers are not required

As the structure of the project is available , new and enhanced infrastructure is not required

Question 11 – UAT – 6 Marks

Explain UAT Acceptance process

Planning: In this step, blue prints are made to implement UAT testing for every feature that needs to test and minimum standards for accepting the test

Designing: Here the test cases are designed to hide all the possibilities of software packages in a real world environment

UAT testers: A testing team consists of a end users that meet the critriea for implementing testing, the should know the test cases to rum and understand the functionalities

Bug fixing: Whatever bugs are found in the UAT testing the development tem should work on them and make it software error free

Sign off: After removing all the bugs, the testing tem indicate acceptance of the completion of the bugs, In this phase, all the stakeholders come to a conculsion that the software is ready to go live and sign it off.

Question 12 – Project Closure Document - 6 Marks

A Project closure document,also known as project closure report-is a formal document that summarizes the key outcomes,lessons learned and final details of completed project

It serves as a comprehensive record of the projects accomplishments,challenges, and overall performance,providing valuable insights for stakefolder and future projects

Points to be included in the project closure document are:

1. Project overview
2. Achievements
3. Lessons learned
4. Quality assurance
5. Resource utilization
6. Risk Management
7. Challenges

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Points to include** | **Details** | **Reference link** |
| 1 | Did the client signed off on the UAT Testing |   |   |
|   | Date of the signoff: | 11th April 2023 | Business scope document.docx |
| 2 | Objectives of the project |   |   |
|   | User friendliness | Achieved |   |
|   | Customer satisfaction | ROI in 6 months |   |
| 3 | Functionalities worked on |   |   |
|   | Secure payment processing | Achieved |   |
| 4 | Infrastructure |   |   |
|   | Softwares Installed | Achieved |   |
| 5 | Funding |   | Finance breakdown.docx |
|   | Amount approved | Rs.1 crore |   |
| 6 | Overall project Information |   |   |
|   | Escalations | 50 |   |
| 7 | Value to the company |   |   |
|   | Positive/Negative | Positive- 90%- Company has gained an edge over the competitors- Increased clients- Trained employees- New project in pipeline |   |