Online Agriculture Products Store

Question 1 – BPM - 5 Marks: Identify Business Process Model for Online Agriculture Store – (Goal, Inputs, Resources, Outputs, Activities, Value created to the end Customer)

Goals:

- To build online agriculture product store (APS) so that farmers can buy seeds, pesticides and fertilizers.
- Online APS facilitates remote area farmers to buy agriculture products on online web/mobile app via Internet connectivity.
- A new app should include accept product details from manufacturer and display to farmers, farmers should browse products need to raise request to buy agriculture products and deliver them to farmers locations.
- Bridge the gap between farmers and manufactures.

Inputs:

- Seeds, Fertilizers and pesticides.

Resources:

- Seeds, Fertilizers, pesticides and manufacturing companies.
- Internet Connectivity.
- Mobile App, Payment Gateway.
- Delivery channel and partners

Outputs:

- online APS so farmers can buy agriculture products from anywhere using web or mobile application.

Activities:

- App should be user friendly for new users.
- Login feature for farmers and manufacturers.
- Farmer can browse and see details of agriculture products.
- Farmers can request them to buy and delivered on their location.
- Farmers can opt for payment method to makes payments.

Value to end customer:

- Farmers can buy agriculture products online web or by mobile app.
- Farmers can compare agriculture products.
- Farmers can browse agriculture products.

Online Agriculture Products Store

Question 2 – SWOT - 5 Marks

Mr Karthik is doing SWOT analysis before he accepts this project. What Aspects he Should consider as Strengths, as Weaknesses, as Opportunity and as Threats.

Strengths	Weakness
➢ Wide Presence ➢ Strong team & talent Pool ➢ Experienced workforce/Team ➢ On time delivery of projects	➢ Farmers existing Relations with offline manufactures ➢ Unawareness of online platforms ➢ Not so tech savvy ➢ Resistance to adapt change
Opportunities	**Threats**
➢ Entry in agriculture industry projects ➢ Help in marketing agricultures products	➢ Tough Competition ➢ Existing others bidders in the market

Question 3 – Feasibility study - 5 Marks

Mr. Karthik is trying to do feasibility study on doing this project in Technology (Java), Please help him with points (HW SW Trained Resources Budget Time frame) to consider in feasibility Study.

Hardware- servers, clients, peers, transmission media and connecting devices (routers, bridges, hubs, gateways and switches)

Software- networking operating system Protocol suite- OSI model TCP/IP model

Trained Resources- Project Manager - Mr Vandanam Java Developer- Ms. Juhi is Senior Java Developer Mr. Teyson, Ms Lucie, Mr Tucker, Mr Bravo are Java Developers. Total number of 5 resources for java developer Network Admin - Mr Mike DB Admin – John Tester - Mr Jason and Ms Alekya are the Tester there is two testers with us. Business analyst – self

Budget- 2 corer INR

Time frame- 18Months

Online Agriculture Products Store

Question 4 – Gap Analysis - 5 Marks

Mr. Karthik must submit Gap Analysis to Mr Henry to convince to initiate this project. What points (compare AS-IS existing process with TO-BE future Process) to showcase in the GAP Analysis

As-Is process

Farmers find difficulties to purchase fertilizers and buying seeds also there are lack of availability of pesticides in market.

TO-BE future Process

The online APS solves farmers difficulties by providing online or mob app solution it will help farmers to browse, buy and deliver various agricultural products. It will make products easily available and will show products details too.

GAP Analysis

To reach future state we will create or established vertical integration supply chain for smooth delivery of products among suppliers, delivery partners, chemical companies and customers / farmers.

Question 5 – Risk Analysis - 10 Marks

List down different risk factors that may be involved (BA Risks And process/Project Risks)

BA RISK:

- Improper requirement gathering,
- lack of user involvement,
- unavailability of finance head and project coordinator,
- Improper planning

Project Risk:

- Unrealistic Expectations
- Delay in project delivery
- Features not working well
- Incremental test case failure results
- Cost risk
- Technology risk: Not supporting for IOS
- Scope creep risk
- Market price fluctuations
- Sudden changes in government rules and policies
- Schedule risk if project will not complete within 18 months
- Non-cooperation of manufacturers

Online Agriculture Products Store

Question 6 – Stakeholder Analysis (RACI Matrix) - 8 Marks

Perform stakeholder analysis (RACI Matrix) to find out the key stakeholders who can take Decisions and Who are the influencers

(For Business Case)

Name	Position	RACI
Mr Henry	Project Sponsor	CONSULTED
Mr Pandu	Financial Head	ACCOUNTABLE
Mr Dooku	Project Coordinator	RESPOSIBLE
Peter	user	INFORMED
Kevin	user	
Ben	user	

TASK	Project Manager	BA	Senior Java Developer	Java Developers				Network Admin	DB Admin	Tester	
	Mr Vandanam		Ms. Juhi	Mr Teyson,	Ms Lucie,	Mr Tucker,	Mr Bravo	Mr Mike	Mr.John	Mr Jason	Ms Alekya
Business case	A	R	C	I	I	I	I	I	I	I	I
Planning, Estimation and assessment	R	A	C	I	I	I	I	I	I	I	I
Requirement Gathering	A	R	C	I	I	I	I	I	I	I	I
Requirement Analysis	A	R	C	I	I	I	I	I	I	I	I
Design (Creating DB)	C	C	C	I	I	I	I	A	R	I	I
maintain and management sever	C	C	I	I	I	I	I	R	A	I	I
Coding	C	C	A	R	R	R	R	I	I	I	I
Testing	C	C	I	I	I	I	I	I	I	A	R
Deployment and Implementation	A	R	I	I	I	I	I	I	I	I	I

Online Agriculture Products Store

Question 7 – Business Case Document - 8 Marks

Help Mr Karthik to prepare a business case document

Project Name	Online Agriculture Products Store
Submitted by	Mr Vandanam
Designation	Project Manager
Date	

Aim	The Project is initiated to meet demand of agriculture products and sell those products on online platforms such as web and mobile applications. Accept product details from manufacturers and display to farmers. Deliver agriculture products to farmers location.
Problem	a. Difficulties in procuring fertilizers b. facing the same problem in-case of buying seeds c. lack of pesticides
Solution	Online APS will solve above a, b, and c problems. Facilitate remote area farmers to buy agriculture products online. Make synergy, Effective and direct communication between Famers and manufactures.
Resources	➢ Seeds, Fertilizers, pesticides and manufacturing companies. ➢ Internet Connectivity. ➢ Mobile App, Payment Gateway. ➢ Delivery channel and partners
Stakeholder Identification & Analysis	Mr Henry (Project Sponsor), Mr Pandu (Financial Head), Mr Dooku (Project Coordinator), Peter, Kevin and Ben are users
Estimated Time	18 months
budget	2 crore INR

Question 8 – Four SDLC Methodologies - 8 Marks

the Committee of Mr. Henry, Mr Pandu, and Mr Dooku and Mr Karthik are having a discussion on Project Development Approach.

Mr Karthik explained to Mr. Henry about SDLC. And four methodologies like Sequential Iterative Evolutionary and Agile. Please share your thoughts and clarity on Methodologies

1. **Sequential / waterfall:** When requirements are simple and clear we used waterfall model. every phase need to complete first before moving to next and in each end, we take review on progress also to track project. No change requirements are accepted. Requirements are document by using use cases Feedback is minimal until testing phase.
2. **Agile:** Agile is model where scrum framework is mostly used besides Kanban and lean, it will be based on 4 values and 12 principles, where change requirement is welcome. . Requirements are document by using use stories.
3. **Iterative/RUP:** RUP developed by IBM consisting 4 phases which is Inception, Elaboration, construction and transition.
4. **Evolutionary/Spiral:** Spiral model has 4 phases planning, risk analysis engineering and evolution. Good only for large and defense projects doesn't work for smaller projects and cost is high

Online Agriculture Products Store

Question 9 – Waterfall RUP Spiral and Scrum Models – 8 Marks

They discussed models in SDLC like waterfall RUP Spiral and Scrum. You put forth you're understanding on these models When the APT IT SOLUTIONS company got the project to make this online agriculture product store, there is a difference of opinion between a couple of SMEs and the project team regarding which methodology would be more suitable for this project. SMEs are stressing on using the V model and the project team is leaning more onto the side of waterfall model. As a business analyst, which methodology do you think would be better for this project?

1. Waterfall model is suitable for due to these reasons when requirements are simple and clear we used waterfall model. every phase need to complete first before moving to next and in each end, we take review on progress also to track project. No change requirements are accepted. Requirements are document by using use cases Feedback is minimal until testing phase.
2. On other hand in V model, high amount of risk and uncertainty, poor model for complex and OOP, long and ongoing projects

Question 10 – Waterfall Vs V-Model - 5 Marks

Write down the differences between waterfall model and V model.

Aspect	Waterfall Model	V Model
Development Flow	Sequential, linear	Sequential, but with testing phases corresponding to development phases
Phases	Requirements, Design, Implementation, Testing, Deployment, Maintenance	Requirements and Design, Coding, Unit Testing, Integration Testing, System Testing, Acceptance Testing
Testing	Testing occurs after development phase is complete	Testing phases are parallel to development phases
Feedback	Feedback is minimal until testing phase	Feedback is integrated throughout the process, with validation at each stage
Flexibility	Less flexible, difficult to accommodate changes	More flexible, easier to accommodate changes
Documentation	Extensive documentation produced at each phase	Documentation produced is tightly linked to each phase, less extensive
Risk Management	Risks are identified and addressed at each phase	Risks are addressed during corresponding testing phases

Question 11 – Justify your choice - 3 Marks

As a BA, state your reason for choosing one model for this project

Waterfall model is suitable because requirements are clear and simple and there are no changing requirements.

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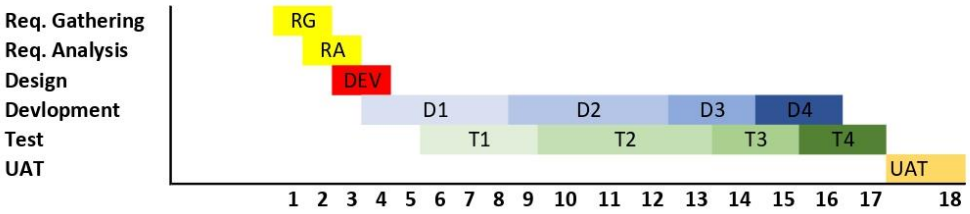
Question 12 – Gantt Chart - 5 Marks

The Committee of Mr. Henry, Mr Pandu, and Mr Dooku discussed with Mr Karthik and finalised on the V Model approach (RG, RA, Design, D1, T1, D2, T2, D3, T3, D4, T4 and UAT) Mr Vandanam is mapped as a PM to this project. He studies this Project and Prepares a Gantt chart with V Model (RG, RA, Design, D1, T1, D2, T2, D3, T3, D4, T4 and UAT) as development process and the Resources are PM, BA, Java Developers, testers, DB Admin, NW Admin.

PROJECT NAME	Online APS store
PROJECT START	5/14/2024
CURRENT DATE	5/17/2024



Question 13 – Fixed Bid Vs Billing - 5 Marks

Explain the difference between Fixed Bid and Billing projects

Aspect	Fixed Bid Projects	Billing Projects
Pricing	A predetermined fixed price for the entire project, regardless of actual time and resources spent	Billing based on actual time and resources consumed, typically charged at an hourly or daily rate
Risk	Higher risk for the service provider, as any overages in time or resources are absorbed by them	Shared risk between the service provider and the client, as costs are based on actual work done
Scope Management	Scope tends to be more rigidly defined and managed to avoid cost overruns	Scope can be more flexible, allowing for changes and iterations without significant cost implications
Client Control	Clients have less control over the project once the fixed bid is agreed upon	Clients have more control and flexibility to adjust project scope and direction
Incentives	Service provider is incentivized to complete the project within budget to maximize profit	Incentives for both parties to work efficiently, as service provider bills for actual work and client pays for deliverables
Predictability	Provides clients with cost predictability upfront, but less flexibility during the project	Cost may be less predictable initially but allows for more adaptability during project execution

Online Agriculture Products Store

Question 14 – Preparer Timesheets of a BA in various stages of SDLC - 20 marks

➢ Design Timesheet of a BA

APT IT solution — Warje, Pune 411038

Weekly time sheet

Employee:	Himanshu	**Employee phone:**	
Employee e-mail:	Himanshu@APTIT.com	**Pay period start date:**	5/17/2024
Manager:	Mr Vandanam	**Pay period end date:**	

DESIGN PHASE					
Sr. No	**DATE**	**TASKS**	**START TIME**	**END TIME**	**DURATION IN HRS**
1	5/17/2024	created use diagrams	10:00	13:00	2
2	5/17/2024	assist for preparing test cases	14:30	15:30	1
3	5/17/2024	update status to client	16:00	18:00	2
4	5/18/2024	updated RTM	18:00	19:00	1
5	5/19/2024	create UML diagrams	19:30	20:30	1
6	5/20/2024	review	21:00	22:00	1

➢ Development Timesheet of a BA

APT IT solution — Warje, Pune 411038

Weekly time sheet

Employee:	Himanshu	**Employee phone:**	
Employee e-mail:	Himanshu@APTIT.com	**Pay period start date:**	5/25/2024
Manager:	Mr Vandanam	**Pay period end date:**	

DEVELOPMENT PHASE					
Sr. No	**DATE**	**TASKS**	**START TIME**	**END TIME**	**DURATION IN HRS**
1	5/25/2024	Organise JAD sessions	10:00	13:00	2
2	5/26/2024	clarifies queries	14:30	15:30	1
3	5/26/2024	update end user manual	16:00	18:00	2
4	5/27/2024	updated RTM	18:00	19:00	1
5	5/28/2024	review	19:30	20:30	1
6	5/29/2024	update end user manual	21:00	22:00	1
7	5/29/2024	conduct meetings	22:00	23:00	1

➢ Testing Timesheet of a BA

APT IT solution — Warje, Pune 411038

Weekly time sheet

Employee:	Himanshu	**Employee phone:**	
Employee e-mail:	Himanshu@APTIT.com	**Pay period start date:**	6/1/2024
Manager:	Mr Vandanam	**Pay period end date:**	

TESTING PHASE					
Sr. No	**DATE**	**TASKS**	**START TIME**	**END TIME**	**DURATION IN HRS**
1	6/8/2024	Prepares test case	10:00	13:00	2
2	6/2/2024	performs high level testing	14:30	15:30	1
3	6/3/2024	prepares clients for UAT	16:00	18:00	2
4	6/4/2024	test date from client	18:00	19:00	1
5	6/5/2024	took sign offs	19:30	20:30	1

Online Agriculture Products Store

➢ **UAT Timesheet of a BA**

APT IT solution — Warje, Pune 411038

Weekly time sheet

Employee:	Himanshu	**Employee phone:**	
Employee e-mail:	Himanshu@APTIT.com	**Pay period start date:**	6/8/2024
Manager:	Mr Vandanam	**Pay period end date:**	

UAT PHASE					
Sr. No	**DATE**	**TASKS**	**START TIME**	**END TIME**	**DURATION IN HRS**
1	6/8/2024	conduct UAT	10:00	14:00	6
2	6/8/2024	conduct UAT	14:30	15:30	1

➢ **Deployment n Implementation Timesheet of a BA**

APT IT solution — Warje, Pune 411038

Weekly time sheet

Employee:	Himanshu	**Employee phone:**	
Employee e-mail:	Himanshu@APTIT.com	**Pay period start date:**	6/10/2024
Manager:	Mr Vandanam	**Pay period end date:**	

DEPLOYMENT AND IMPLEMENTATION PHASE					
Sr. No	**DATE**	**TASKS**	**START TIME**	**END TIME**	**DURATION IN HRS**
1	6/10/2024	FORWARDS RTM	10:00	13:00	2
2	6/11/2024	share user manual	14:30	15:30	1
3	6/12/2024	planning for training sessi	16:00	18:00	2

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Question 1 – Audits - 5 Marks 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?

Q1

Requirement Gathering phase 15 weeks (1 wk- 15 wk)	
Completed	**10 weeks**
Check List	Elicitation technique result report
	BRD templates
	Duplicate requirement reports
	Email communications
	Grouping into similar functionality

Q2

Requirement Analysis phase 14 weeks (16 wk- 29 wk)	
Completed	**8 weeks**
Check List	UML diagrams
	Client signoffs documents
	RTM documents Version controls
	Email communications
	Business to functional requirement mapping
	SRS templates

Q3

Design phase 11 weeks (30 wk- 40 wk)	
Completed	**7 weeks**
Check List	Stakeholders MOM
	Tools utilizations
	Email communications

Development phase (40 wk- 70 wk)	
Completed	**20 weeks**
Check List	JAD session reports
	BA MOM
	Developer MOM
	Email communications
	End user manual preparation document

Q4

Testing phase (58 wk- 78 wk)	
Completed	**20 weeks**
Check List	Test case summary
	Training report to end users
	Lesson learn documents
	Email communications

Online Agriculture Products Store

Question 2 – BA Approach Strategy - 6 Marks

For conducting elicitation technique, I am going to use brainstorming, Prototyping, Interviews and document analysis. I will do SH analysis by creating RACI matrix. Documents Include BRD, FRD, SRS, use cases, UCDD, RTM and activity diagrams. Emails are considered as signoffs from clients. Face to face interaction and emails are considered as approvals from clients. Change requests are identified on basis of change occurs i.e., complex change or just a minor one then we will do impact analysis, feasibility study and efforts analysis after consulting with PM and team also document and communicate the impact and implications of each change request, and get their sign-off on the revised scope, criteria, and plan. RTM is created to track the project progress. Invite all the relevant SH distribute signoff forms and get conformation based on product quality, functionality and usability.

Question 3 – 3-Tier Architecture - 5 Marks
Explain and illustrate 3-tier architecture?
3-tier architecture compromises of three layers client layer, business logic layer and data layer.
For instance, A farmer want to purchase pesticides of some specific brand and will go and raise request want a pesticide of specific brand then this information will go to business logic layer where it finds the pesticide brand is available or not available within company or we will get from 3rd party, this information is move further to data layer and comes with response to the farmer in client layer.

Question 4 – BA Approach Strategy for Framing Questions – 10 Marks
Business Analyst should keep What points in his/her mind before he frames a Question to ask to the Stakeholder (5W 1H – SMART – RACI – 3 Tier Architecture – Use Cases, Use case Specs, Activity Diagrams, Models, Page designs)

By using 5W1H
5W-1H (Who, what, Where, When, why, How) is a method often used to gather comprehensive information about a situation, defect or problem.

Who
1. Who are the key stakeholders involved in this project?
2. Who will be impacted by the outcomes of this project?
3. Who has the authority to make decisions on this project?
4. Who will be responsible for the implementation of the project?

What
1. What is the main objective of this project?
2. What are the key deliverables and milestones?
3. What are the expected benefits of this project?
4. What resources (time, budget, personnel) are required?
5. What are the potential risks and challenges?

Where
1. Where will the project be implemented or have an impact?
2. Where will team meetings and collaborations take place?
3. Where are the stakeholders located

Online Agriculture Products Store

When
1. When is the project expected to start and end?
2. When are the key milestones and deadlines?

Why
1. Why is this project important to the organization
2. Why are the stakeholders interested in this project?

How
1. How will the project be executed?
2. How will risks be managed and mitigated?

RACI (Responsible, Accountable, Consulted, Informed)
Roles and Responsibilities: Understand and clarify the roles of stakeholders.
Decision-Making: Identify who makes decisions and who provides input.
Communication: Determine who needs to be kept informed and consulted.

Question 5 – Elicitation Techniques - 6 Marks
As a Business Analyst, What Elicitation Techniques you are aware of? (BDRFOWJIPQU)

1. Brainstorming
2. Document Analysis
3. Reverse engineering
4. Focus groups
5. Observations
6. Workshops
7. JAD
8. Interview
9. Prototyping
10. Questionnaire and surveys
11. Use cases

Question 6 – This project Elicitation Techniques - 5 Marks
Which Elicitation Techniques can be used in this Project and Justify your selection of Elicitation Techniques?

Prototyping: A dummy screen displays products details from manufacturers to farmers.

Brainstorming: to gather the business requirement from Mr. Henry and gets ideas from him what he is expecting as per his experience includes relevant system requirements such as for all login its users, search option to search for products, payment process, and delivery tracking etc.

Use Case specs: After Identifying primary actors their user perspective requirements and Functionality of systems I use case specification.

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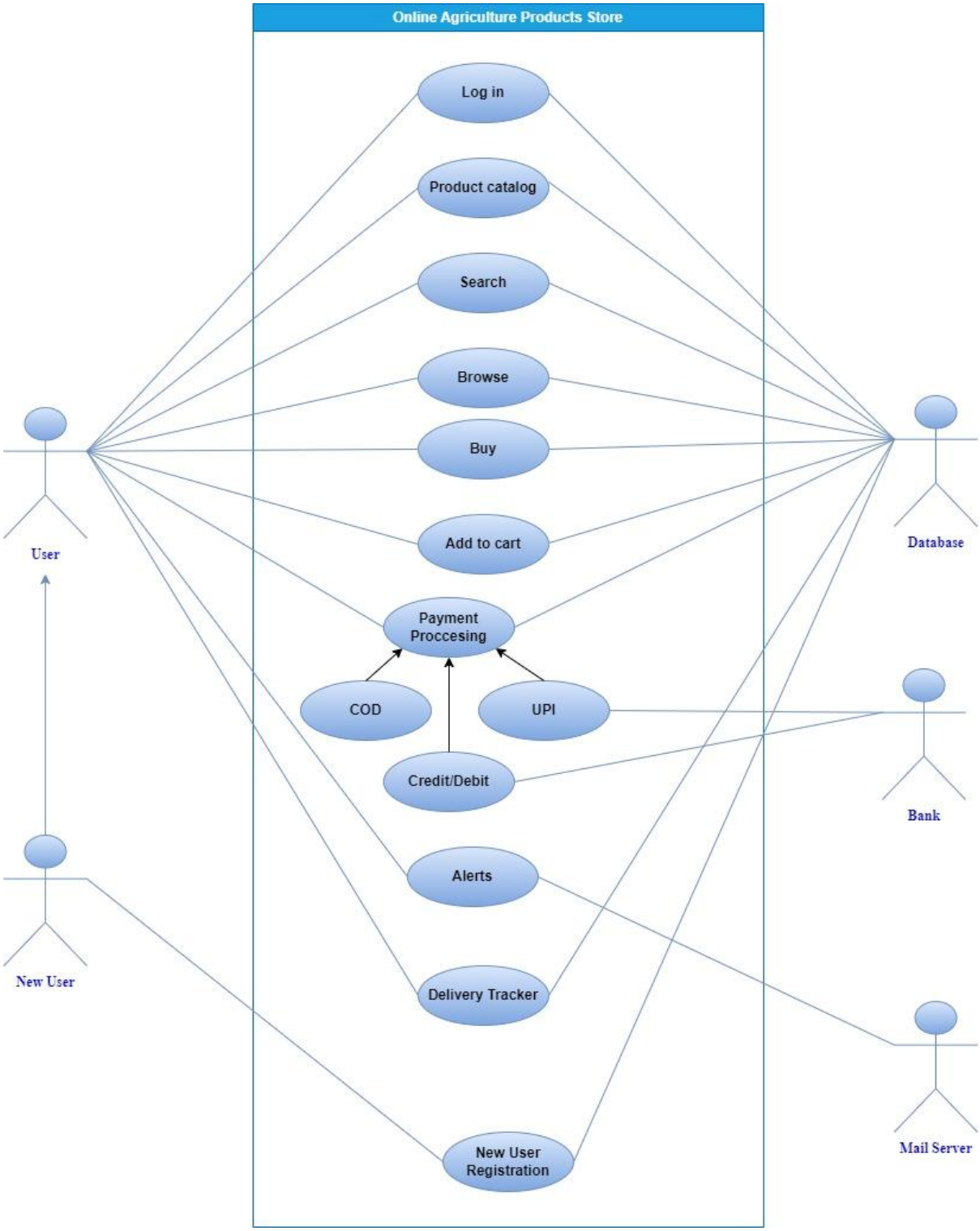
Question 7 – 10 Business Requirements- 10 Marks

Assumptions 1: User should login by using registered mobile number or Gmail account.
Assumptions 2: User have bank account linked with app for secured payments.
Assumptions 3: User have valid credit/debit card and online payment apps to scan QR.
Assumptions 4: User have knowledge about agriculture products.
Assumptions 5: User should prefer online shopping.

Req ID	Req Name	Req description	Priority
BR001	login	login for all its users (fertilizers, seeds, pesticides manufacturers and Farmers) using their email id and password	9
BR002	Product catalog	a product catalog of fertilizers, seeds, pesticides	5
BR003	Search	a search option to search for products, search for any product they need	4
BR004	Browse	Farmer should be able to browse through the products catalog once they visit the website	3
BR005	Buy	farmer wants to buy any product	8
BR006	Add to cart	add products to buy-later list,	7
BR007	New user registration	new user, then they can create a new account by submitting their email ID and creating a secure password.	9
BR008	Payment Processing	Farmers needs to have an easy-to-use payment gateway which should include cash-on-delivery (COD), Credit/Debit card and UPI options	9
BR009	Alerts	a user gets an email confirmation regarding their order status	7
BR010	Delivery tracker	A delivery tracker to track the whereabouts of their order.	8

Online Agriculture Products Store

Question 10 – Use Case Diagram - 10 Marks
Draw use case diagram



Online Agriculture Products Store

Use Case ID	UC001
Use Case Name	Login in APS application
Created By	BA (Self)
Date Created	05/20/2024
Brief Description	This use case describes how user will login into online APS
Actors	User, Database/ System
Precondition	1. User is already registered 2. User have valid login credentials 3. Internet connection is available 4. The system must be operational and connected to the authentication server.
Basic Flow of Events	1. The user opens the platform's registration page in their web browser or app 2. On Website/ app user enters ID and password and click on “Submit button” 3. The database validates login credentials and accept the details. 4. Database sever gives access user redirect to online APS store home page. 5. Use case successfully ends.
Alternative Flow	**1. <u>Wrong ID</u>** If in step 3 of basic flow login use case: user enters wrong ID then use case ends with failure condition and display message of “wrong Id or Password”. **2. <u>Wrong Password</u>** If in step 3 of basic flow login use case: user enters wrong Password then use case ends with failure condition and display message of “wrong Id or Password”. **3. <u>Forgotten Password:</u>** The user clicks the "Forgot Password" link. The system prompts the user to enter their registered email address. The system sends a password reset link to the user's email. The user follows the instructions in the email to reset their password. **4. <u>Two-Factor Authentication (2FA):</u>** If 2FA is enabled, after entering correct credentials, the user is prompted to enter a verification code sent to their registered device. The user enters the verification code. The system verifies the code and grants access if the code is correct.
Key Scenarios	No response from database
Post Conditions	Upon successful login, the user is granted access to their account and redirected to the user dashboard.

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	If login fails, the user is presented with an error message and given the option to retry.
Assumptions	1. The user has a stable internet connection. 2. The authentication server is available and responsive. 3. The user's account is in good standing (not suspended or deleted).

Use Case ID	UC002
Use Case Name	New user registration in APS application
Created By	BA (Self)
Date Created	05/20/2024
Brief Description	This use case describes the process through which a new user creates an account on the platform. The user provides necessary information, submits it for validation, and receives confirmation of successful registration
Actors	User, Database
Precondition	1. The user has access to the internet and the platform's registration page. 2. The user has the necessary information ready (e.g., email, username, password).
Basic Flow of Events	1. The user opens the platform's registration page in their web browser or app. 2. The user fills in the required fields (e.g., email, username, password, confirm password). 3. The user clicks the "Register" or "Sign Up" button to submit their information. 4. The system checks the validity of the provided information (e.g., email format, password strength). 5. The system ensures the username and email are not already in use. 6. Upon successful validation, the system creates a new user account in the database. 7. The system sends a confirmation email to the provided email address with a verification link. 8. The user clicks the verification link in the email to confirm their email address. 9. The system marks the email as verified and completes the registration process. 10. The user is redirected to a welcome page or login page
Alternative Flow	**1. <u>User enters invalid information:</u>**

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	If the user provides invalid information (e.g., weak password, invalid email format), the system displays appropriate error messages and prompts the user to correct the errors. **2. <u>Email already in use:</u>** If the email provided by the user is already associated with an existing account, the system prompts the user to use a different email or offers options to recover the existing account. **3. <u>System fails to send confirmation email:</u>** If the system encounters an issue sending the confirmation email, it informs the user and attempts to resend the email. The user can also request the system to resend the email.
Key Scenarios	System error during registration
Post Conditions	1. **Success Postcondition:** The user account is created, and the user receives a confirmation email. 2. **Failure Postcondition:** The user is informed of any errors, and the registration process can be retried.
Assumptions	1. The user has a valid and accessible email address. 2. The platform's registration page is accessible and functional.

Use Case ID	UC003
Use Case Name	Online payment processing in APS application
Created By	BA (Self)
Date Created	05/20/2024
Brief Description	This use case describes the process payment process through online APS store.
Actors	User, Bank
Precondition	1. Customer has selected products/services and proceeds to checkout. 2. Customer has a valid payment method (credit card, debit card, COD and UPI payment).
Basic Flow of Events	1. Customer reviews their shopping cart and clicks the “Checkout” button. 2. Customer enters payment details (credit card information or selects an alternative payment method like PayPal). 3. Customer provides billing information if not previously saved. 4. The online APS system validates the entered information for correctness (e.g., correct card number format, expiration date).

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	5. The system sends a transaction request to the payment gateway with the payment details. 6. Payment gateway authenticates the transaction with the customer's bank. 7. The bank performs fraud checks and verifies the customer's account balance or credit limit. 8. If approved, the payment gateway sends a confirmation to the online APS system. 9. If declined, an error message is returned with the reason for the decline (insufficient funds, incorrect details, etc.). 10. The online APS system platform displays a confirmation message to the customer and sends a confirmation email. 11. The order is logged in the merchant's system for processing and fulfillment.
Alternative Flow	1. **Invalid Payment Information (Step 3):** If the entered payment information is invalid, the system prompts the customer to correct the information and reattempt the payment. 2. **Payment Declined by Bank (Step 6):** If the transaction is declined, the system notifies the customer with the decline reason and allows them to try a different payment method. 3. **Session Timeout (Between Steps 1 and 7):** If the session times out due to inactivity, the customer is prompted to log in again and reattempt the checkout process. 4. **Payment Gateway Error (Step 4-6):** If there is an error with the payment gateway, the system displays a message to the customer and suggests reattempting the payment after some time.
Special Requirements	1. **Security**: All payment information must be transmitted securely using SSL encryption. 2. **Compliance**: The payment process must comply with PCI-DSS standards for handling payment information. 3. **Reliability**: The system should handle high transaction volumes without downtime. 4. **User Experience**: The checkout and payment process should be user-friendly and minimize the steps required for successful payment.
Post Conditions	1. Payment is successfully processed, and the customer receives a confirmation. 2. The merchant is notified of the successful payment and can proceed with order fulfillment.

Online Agriculture Products Store

	3. Funds are transferred from the customer's account to the merchant's account, minus any transaction fees.
Assumptions	1. The customer has an internet connection. 2. The payment gateway service is operational.

Use Case ID	UC004
Use Case Name	Alerts in APS application
Created By	BA (Self)
Date Created	05/20/2024
Brief Description	This use case describes the process through which a customer receives notifications regarding the status of their order and delivery. These alerts help keep the customer informed about critical stages of their order processing and delivery, enhancing transparency and customer satisfaction.
Actors	User, Email server
Precondition	1. The customer must have an active account on the online APS system 2. The customer must have placed an order on the online APS system 3. online APS system platform, warehouse system, and courier service must have the necessary integrations to support status updates and notifications.
Basic Flow of Events	1. The customer places an order on the Online APS platform. 2. The Online APS platform sends an order confirmation notification to the customer via email/SMS/app notification. 3. Upon successful payment processing, the Online APS platform sends a payment confirmation alert to the customer. 4. The warehouse system receives the order details and starts processing. 5. The customer receives an alert indicating that their order is being processed. 6. Once the order is packed and ready for shipment, the warehouse system updates the Online APS platform. 7. The courier service provides real-time updates on the delivery status.

Online Agriculture Products Store

	8. The customer receives periodic alerts regarding the current status of their shipment (e.g., "Out for delivery", "Delayed", etc.). 9. The courier service confirms the delivery of the order. 10. The customer receives a final notification confirming the delivery, including any relevant details such as who signed for the package. 11. Post-delivery, the Online APS platform may send a notification requesting feedback on the delivery experience and the product.
Alternative Flow	**1. <u>Order Cancellation:</u>** If the customer cancels the order before shipment, the system sends a cancellation confirmation notification. If the cancellation occurs post-shipment but pre-delivery, additional steps for return or interception by the courier are initiated, and relevant notifications are sent. **2. <u>Failed Delivery Attempt</u>:** If a delivery attempt fails (e.g., customer not available), the customer receives an alert with options to reschedule the delivery or provide additional instructions. **3. <u>Out of Stock Notification:</u>** If an item in the order is out of stock, the system notifies the customer with options to modify the order, wait for restocking, or cancel.
Post Conditions	1. The customer receives timely notifications at each critical stage of the order and delivery process. 2. The customer has access to a detailed log of the order status and history.
Assumptions	1. The customer has opted in to receive notifications via their preferred communication channels. 2. The integrations between the Online APS platform, warehouse system, and courier service are functioning correctly. 3. The customer has provided accurate contact information.

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Use Case ID	UC005
Use Case Name	Add to cart in APS application
Created By	BA (Self)
Date Created	05/20/2024
Brief Description	This use case allows a user to add a product to their shopping cart from the product listing page or the product detail page on an Online APS platform.
Actors	User, Database
Precondition	1. The user is logged in to the Online APS platform (optional, depending on the platform's requirements). 2. The user is browsing the product listing or product detail page. 3. The product is available and in stock.
Basic Flow of Events	1. The user navigates to the product listing page or product detail page. 2. The user selects the desired product options (e.g., size, color) if applicable. 3. The user clicks the "Add to Cart" button. 4. The system validates the product availability and selected options. 5. The system adds the product to the user's cart. 6. The system updates the cart icon or cart summary to reflect the addition. 7. The system displays a confirmation message to the user indicating that the product has been successfully added to the cart.
Alternative Flow	**1. <u>Product Out of Stock:</u>** The system checks product availability. If the product is out of stock, the system displays an out-of-stock message. The user is prompted to choose a different product or is offered an option to be notified when the product is back in stock. **2. <u>2 User Not Logged In (if required):</u>** The user clicks the "Add to Cart" button. The system checks if the user is logged in. If the user is not logged in, the system prompts the user to log in or create an account.

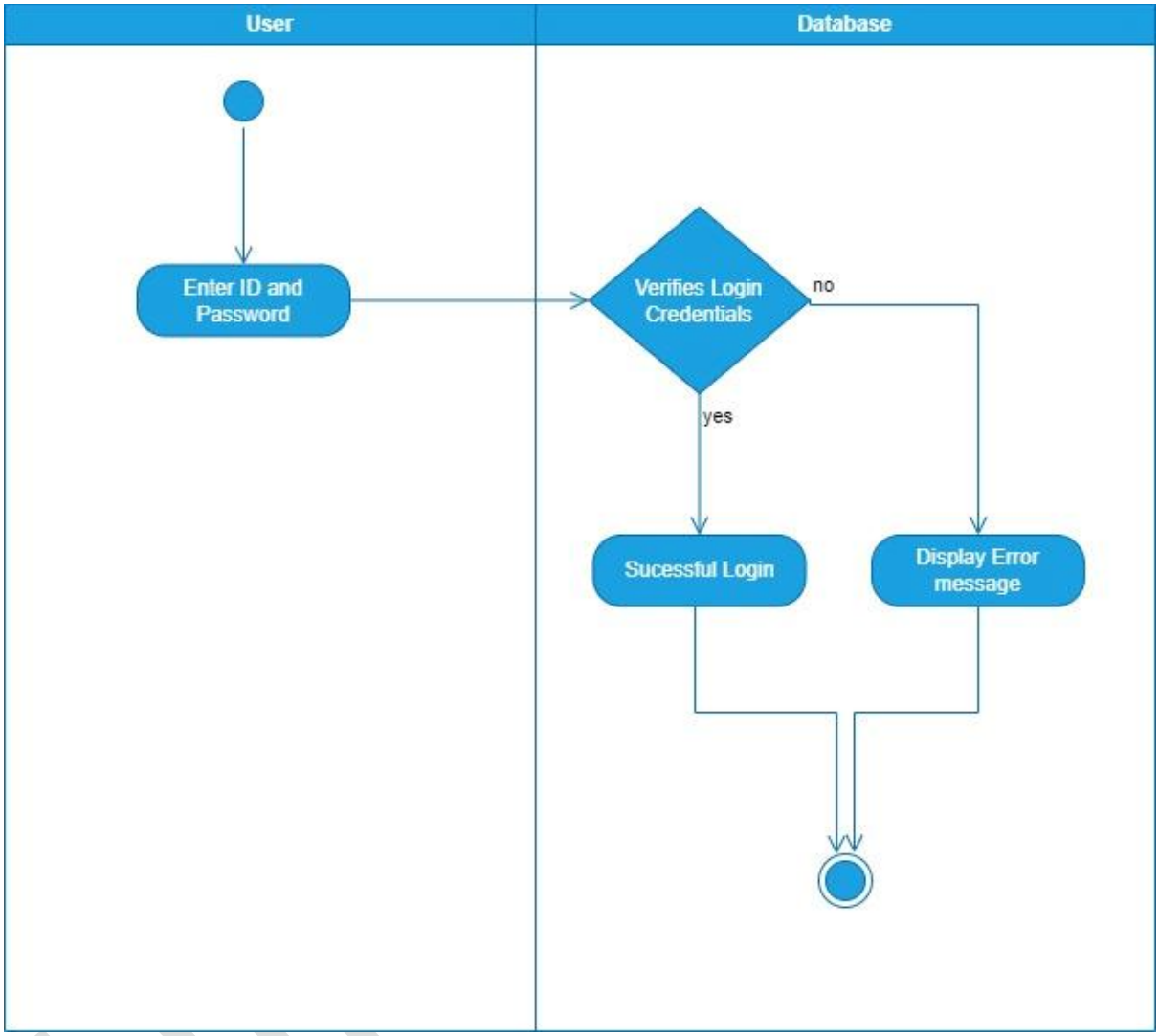
Online Agriculture Products Store

	Upon successful login/registration, the system continues from step 4 of the main success scenario. **3. <u>Invalid Product Options:</u>** The user selects product options. The system validates the selected options. If the selected options are invalid (e.g., combination of size and color not available), the system displays an error message. The user is prompted to select different options.
Post Conditions	1. **Success Postcondition**: The product is added to the user's shopping cart, and the cart is updated to reflect the addition. 2. **Failure Postcondition**: The product is not added to the cart, and an error message is displayed to the user.
Special Requirements	1. The system should provide a seamless and quick response to the "Add to Cart" action. 2. The system should handle concurrent cart updates to ensure consistency. 3. The system should provide a clear and informative user interface for adding products to the cart and viewing the cart summary.
Assumptions	1. The user is familiar with basic Online APS platform operations such as adding products to a cart. 2. The product information displayed on the platform is accurate and up to date.

Online Agriculture Products Store

Question 12 – (minimum 5) Activity Diagrams - 15 Marks
Activity diagrams

Login



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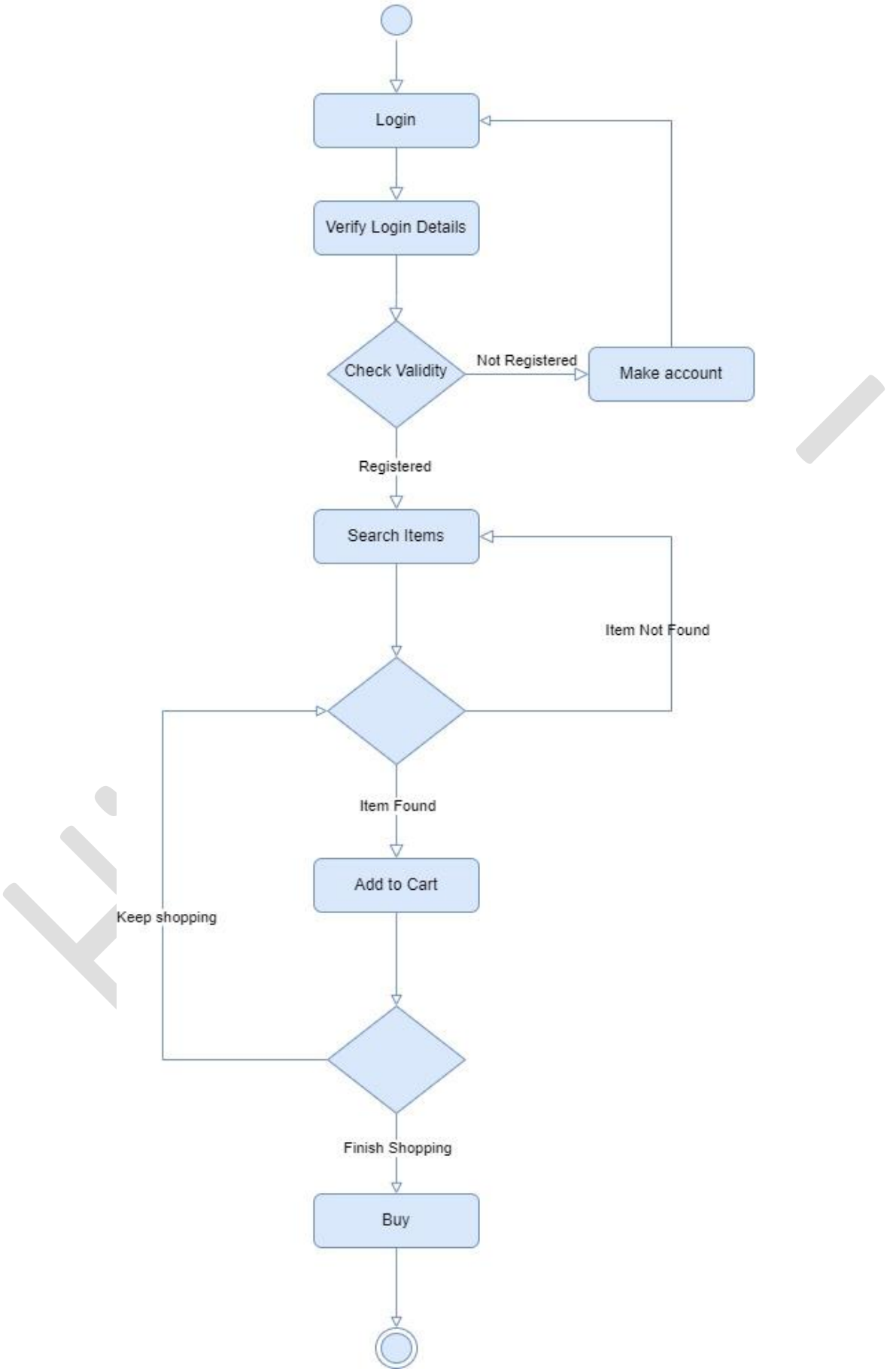
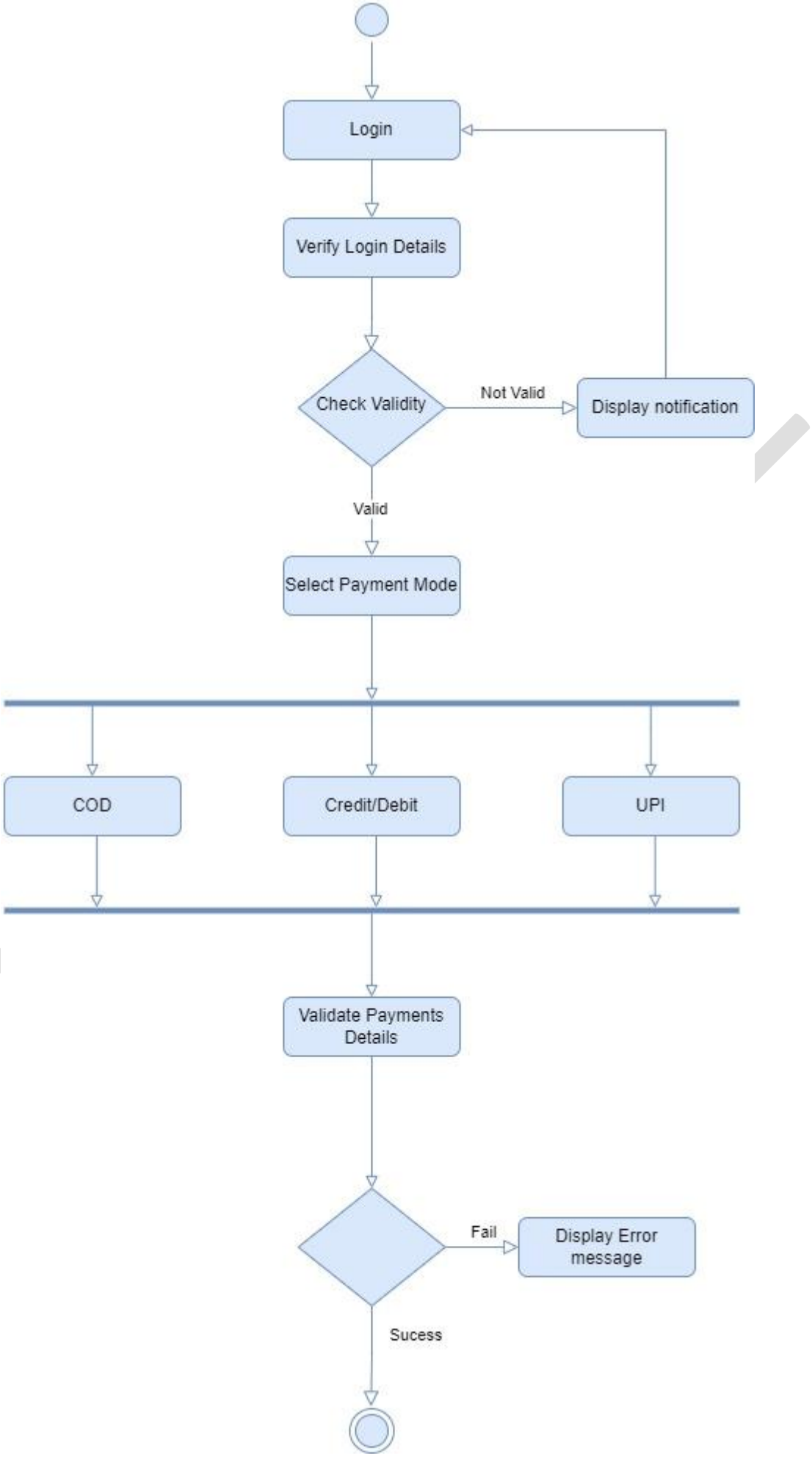
Add to cart & buy



Online Agriculture Products Store

Payment processing



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New User Registration

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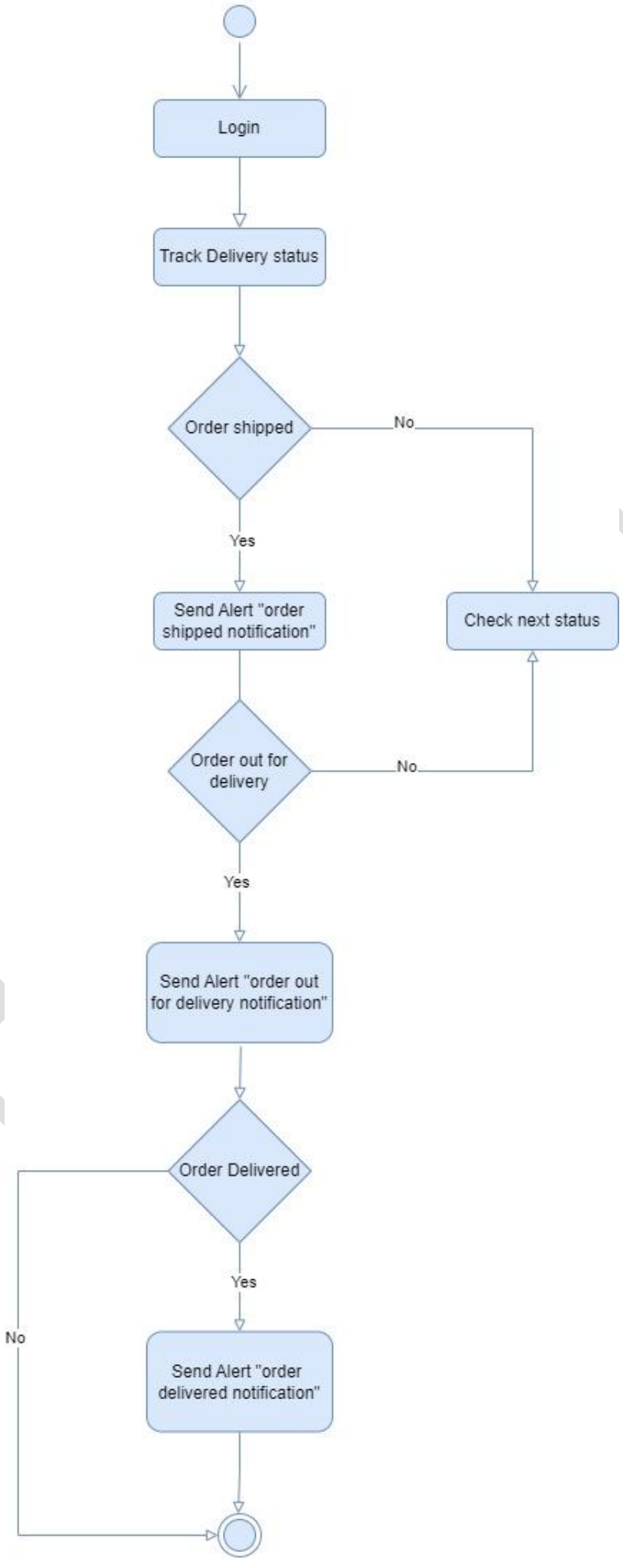
Alerts



Online Agriculture Products Store

Question 1 – Functional Requirements - 15 Marks

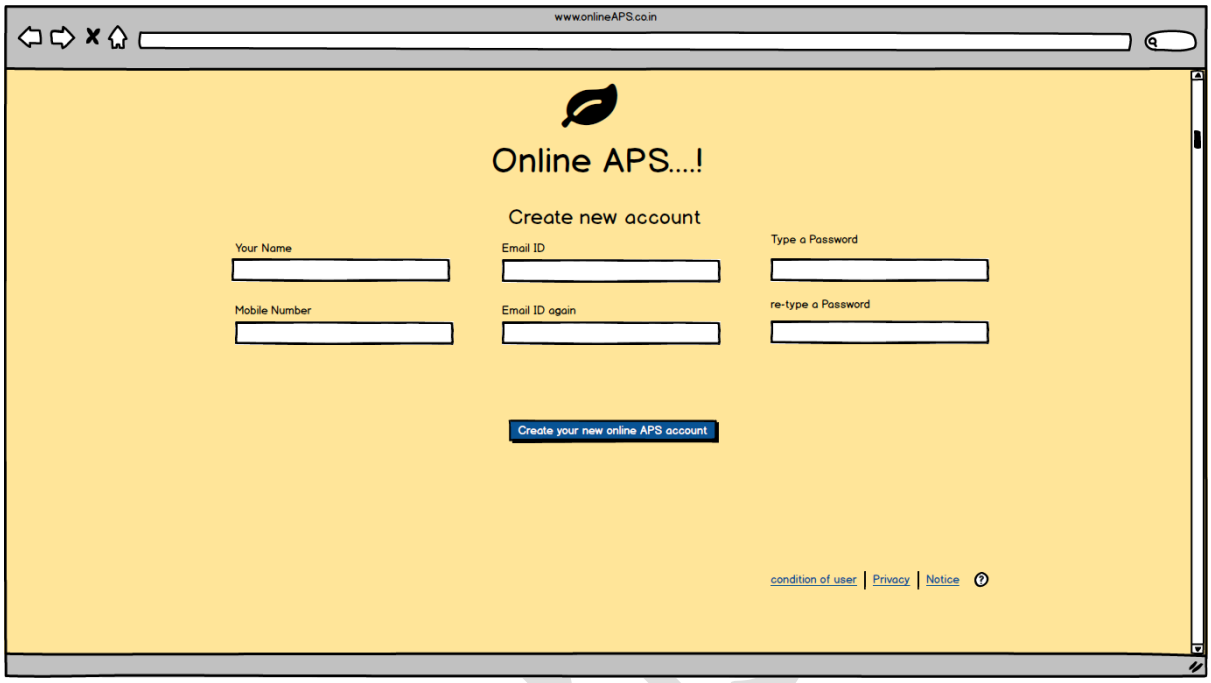
Identify minimum 20 functional requirements

Req ID	Req Name	Req Descriptions
FR0001	Farmer Registration	Allow farmers to register with system using email id or registered mobile number
FR0002	Two step Authentication	Provide secure login
FR0003	User Profile Management	Enable Farmers to create and manage their profiles
FR0004	Role-Based Access control	Implement different user roles (Farmers, manufacturers and admin) with appropriate access levels and permissions
FR0005	Products Catalog and details	Maintain comprehensive list of products available for sale, Including details descriptions, Pricing, availability and images
FR0006	Product Search, Browse and Filtering	Provide robust search functionality with filters
FR0007	Products reviews and ratings	Allow customers to leave reviews and ratings for products helping to take purchase decisions
FR0008	Add to cart	Enable Farmers to add, view, edit, delete and remove to Wishlist products from their shopping cart
FR0009	Payment Processing	Support various payment options such as COD, Credit/ Debit cards and UPI
FR0010	Alerts	Send notifications on emails regarding order status, out for delivery and order delivered.
FR0011	Delivery Trackers	Provide Farmers with tracking information and updates for their deliveries
FR0012	Customer support	Include contact options such as email, phone and chatbots for customers support
FR0013	Manufacturer registration and authentication	Allow manufactures to register and manage their accounts, including product listings and details
FR0014	Upload	Manufacturers should be able to upload and display their products in the application
FR0015	Buy now	Enable Farmers to buy agricultures products
NFR101	Security	Ensure all sensitive data such as payment information is encrypted and stored securely
NFR102	Performance	Application pages must be load within 3 sec
NFR103	Response Time	Application must respond user input within 2 sec
NFR104	Usability	Farmers needs to have an easy-to-use payment gateway
NFR105	Combability	Application should be compatible both on web and mobile

Online Agriculture Products Store

Question 2–Minimum 5 pages designs - 15 Marks
Make wireframe and prototypes

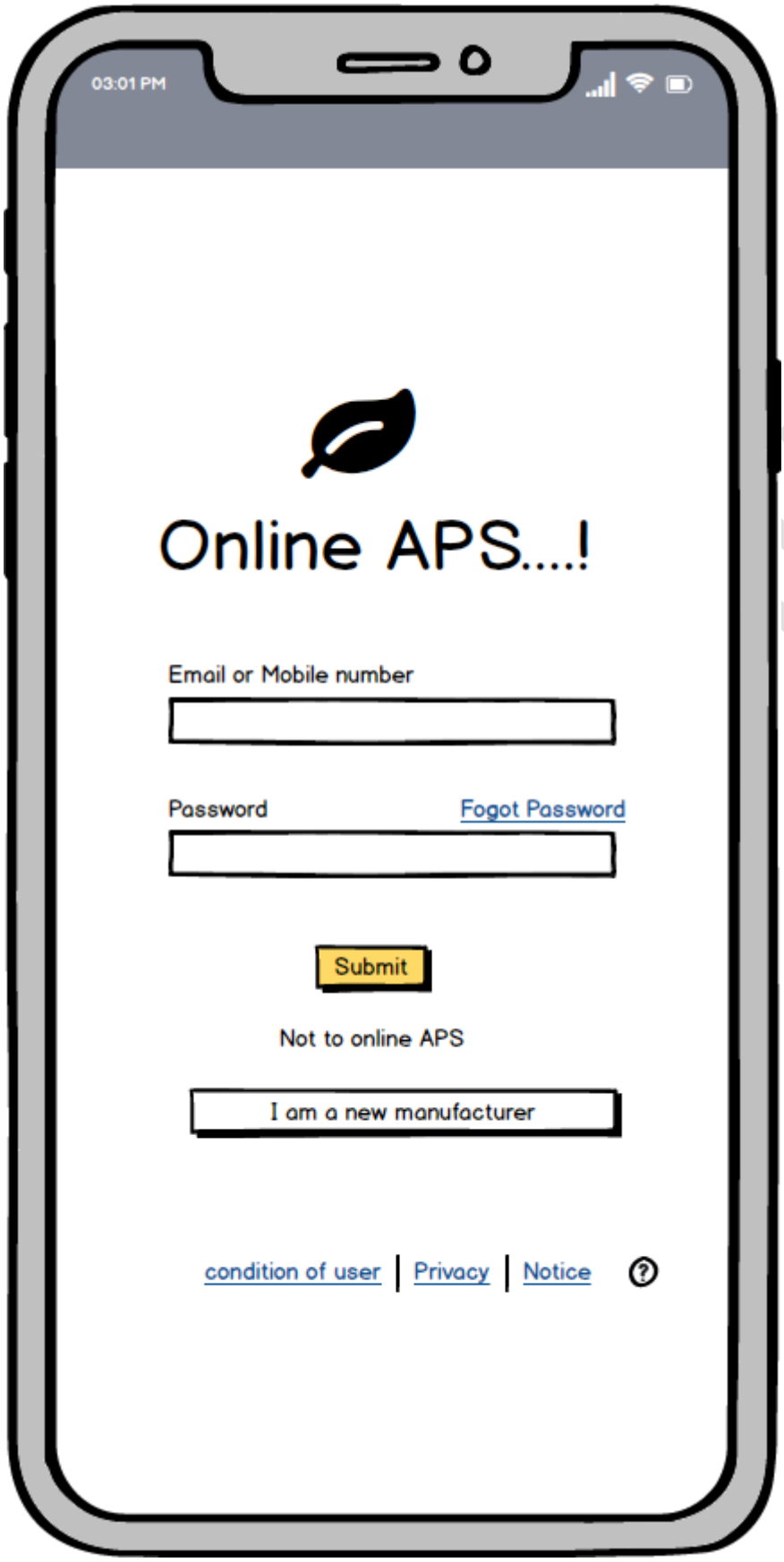
Create new Account



Sign In

Online Agriculture Products Store

Manufacturer login via mobile



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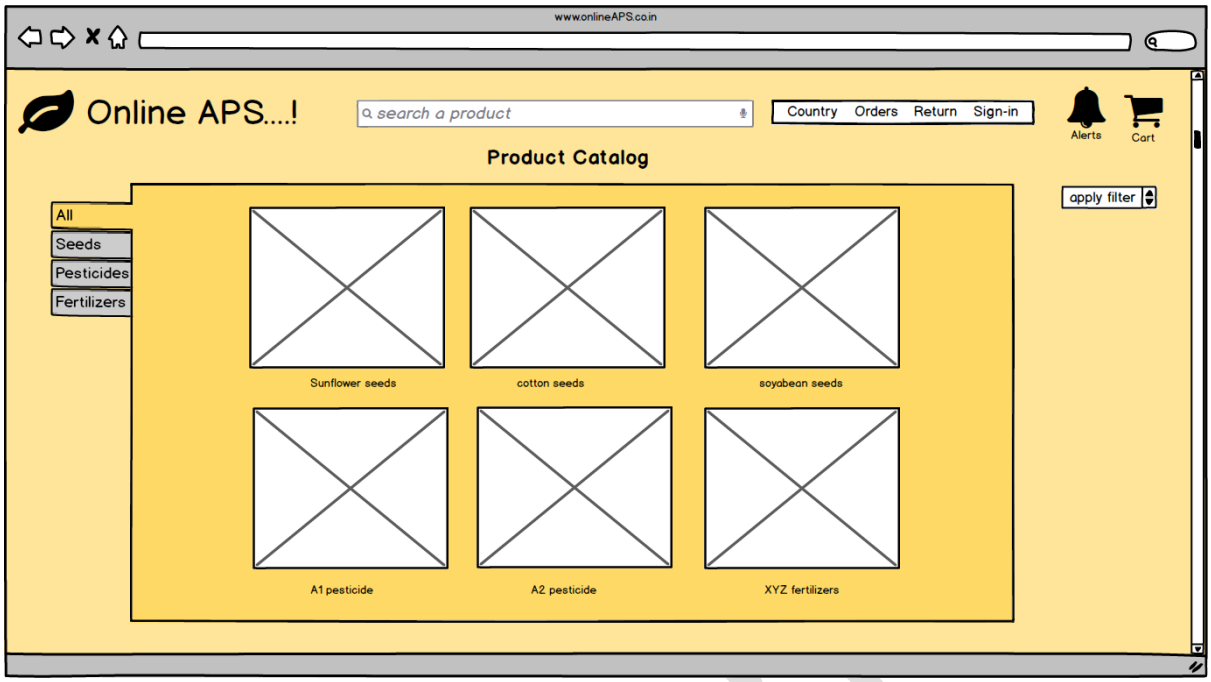
Product Catalog



Product details

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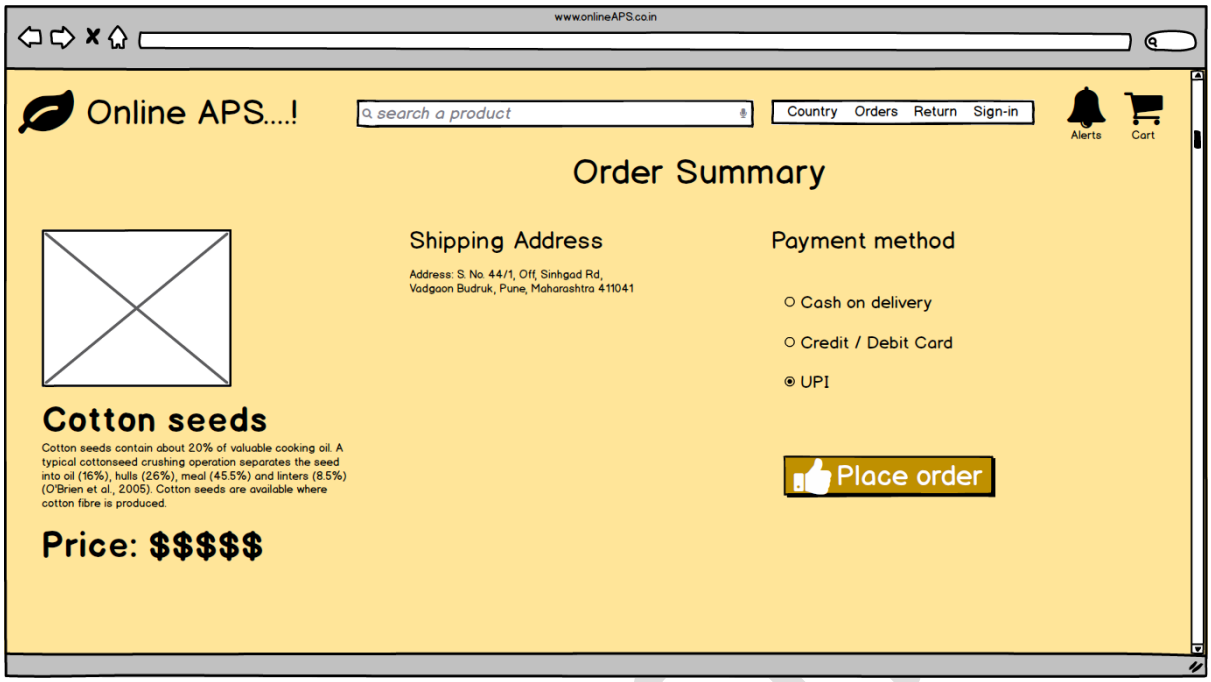
Payment Processing



Question 3 – Tools (Visio, Balsamiq) - 15 Marks
Make a note of the Tools, which you are using for above concepts.

MS- Visio: MS-Visio is diagrammatic tool use to create use cases, flowchart and activity diagrams, swim lanes represent roles and responsibilities and departments in organization.

Balsamiq: for creating mockups and wireframes Balsamiq is used, Balsamiq is a rapid wireframing tool. Easy to use and simple GUI. I created above mockups by using Balsamiq.

Axure RP pro7.0: is more advanced prototyping tool we can create interactive wireframes and prototypes.

Draw.io: Draw.io is diagrammatic tool use to create use cases, flowchart and activity diagrams, swim lanes represent roles and responsibilities and departments in organization. I used this tool for creating use cases and activity diagrams.

Online Agriculture Products Store

Question 4 – RTM - 6 Marks

Req ID	Req Name	Req Descriptions	Design	Coding	UT	CT	ST	SIT	UAT
FR0001	Farmer Registration	Allow farmers to register with system using email id or registered mobile number	Complete	Complete	Complete	Complete	Complete	Complete	Complete
FR0002	Two step Authentication	Provide secure login	Complete	Incomplete	Incomplete	Incomplete	Incomplete	Complete	Incomplete
FR0003	User Profile Management	Enable Farmers to create and manage their profiles	Complete	Incomplete	Complete	Incomplete	Incomplete	Incomplete	Incomplete
FR0004	Role-Based Access control	Implement different user roles (Farmers, manufacturers and admin) with appropriate access levels and permissions	Complete	Complete	Complete	Complete	Complete	Complete	Complete
FR0005	Products Catalog and details	Maintain comprehensive list of products available for sale, Including details descriptions, Pricing, availability and images	Complete	Incomplete	Incomplete	Incomplete	Incomplete	Incomplete	Incomplete
FR0006	Product Search, Browse and Filtering	Provide robust search functionality with filters	Complete	Complete	Complete	Complete	Complete	Complete	Complete
FR0007	Products reviews and ratings	Allow customers to leave reviews and ratings for products helping to take purchase decisions	Complete	Incomplete	Incomplete	Incomplete	Incomplete	Incomplete	Incomplete
FR0008	Add to cart	Enable Farmers to add, view, edit, delete and remove to Wishlist products from their shopping cart	Incomplete	Incomplete	Incomplete	Incomplete	Incomplete	Incomplete	Incomplete
FR0009	Payment Processing	Support various payment options such as COD, Credit/ Debit cards and UPI	Complete	Complete	Complete	Complete	Complete	Complete	Complete
FR0010	Alerts	Send notifications on emails regarding order status, out for delivery and order delivered.	Complete	Complete	Complete	Complete	Complete	Complete	Complete
FR0011	Delivery Trackers	Provide Farmers with tracking information and updates for their deliveries	Complete	Complete	Complete	Complete	Complete	Complete	Complete
FR0012	Customer support	Include contact options such as email, phone and chatbots for customers support	Complete	Incomplete	Complete	Incomplete	Incomplete	Incomplete	
FR0013	Manufacturer registration and authentication	Allow manufactures to register and manage their accounts, including product listings and details	Complete	Complete	Complete	Complete	Complete	Complete	Complete
FR0014	Upload	Manufacturers should be able to upload and display their products in the application	Complete	Complete	Complete	Complete	Complete	Complete	Complete
FR0015	Buy now	Enable Farmers to buy agricultures products	Incomplete	Incomplete	Complete	Incomplete	Incomplete	Incomplete	Incomplete
NFR101	Security	Ensure all sensitive data such as payment information is encrypted and stored securely	Incomplete	Incomplete	Complete	Incomplete			Incomplete
NFR102	Performance	Application pages must be load within 3 sec	Incomplete	Incomplete	Complete	Incomplete	Incomplete	Complete	Incomplete
NFR103	Response Time	Application must respond user input within 2 sec	Incomplete	Incomplete	Complete	Incomplete	Complete	Incomplete	Incomplete
NFR104	Usability	Farmers needs to have an easy-to-use payment gateway	Incomplete	Incomplete	Incomplete	Incomplete	Incomplete	Incomplete	Incomplete
NFR105	Combability	Application should be compatible both on web and mobile	Incomplete	Incomplete	Incomplete	Incomplete	Incomplete	Incomplete	Incomplete

Online Agriculture Products Store

Question 5 – 10 Test Case Documents - 10 Marks
Prepare 10 Test Case Documents

Test Case ID	TC_01		Farmer Registration	Farmer Registration
Project ID	APS_01		**Project Name**	Online APS store
PM ID	PM104		**PM name**	Mr Vandanam
Test Strategy ID	TCS_01		**Tester ID**	T1
Test Plan ID	TCP_01		**Tester Name**	Mr Jason
Test Schedule ID	TCS		**Date of Test**	5/22/2024
Scenario	Explanation about Farmer Registration case Example visit www.onlineAPS.co.in in web browser…Input login credentials…we have two inputs both are compulsory …then click on submit ..and land into home page			
Link to that page				
Input Data	Set 1	Set2	Set3	Set4
	• chinu@gmail.com • 2564kk	• Anju@gmail.com • 5782hj	• kim@gmail.com • 7777j	• Himu@gmail.com • 11hhh5
Expected Behavior	Farmer should login to home page shows valid credentials	Farmer should login to home page shows valid credentials	Farmer should not login to home page	Farmer should not login to home page
Actual Behavior	Farmer logged in home page	Farmer logged in home page	Farmer not logged in home page	Farmer logged in home page
Comments				
Results (Passed/Fail)	P	P	P	F

Online Agriculture Products Store

Test Case ID	TC_02	**Test Case Name**	Two step Authentication
Project ID	APS_01	**Project Name**	Online APS store
PM ID	PM104	**PM name**	Mr Vandanam
Test Strategy ID	TCP_02	**Tester ID**	T1
Test Plan ID	TCP_02	**Tester Name**	Mr Jason
Test Schedule ID	TCP_02	**Date of Test**	5/22/2024
Scenario	Two step Authentication case After login in app ...the code will send to email or mobile number…window will appear showing input code…input 1 4 digits… press validate code…user will land to home page		
Link to that page			

Input Data	Set 1	Set 2	Set 3
	• 1254	• 2561	• 123
Expected Behavior	OTP validate and proceed to home page	OTP validate and proceed to home page	OTP validate and proceed to home page
Actual Behavior	OTP validate successfully and proceed to home page	OTP validate successfully and proceed to home page	OTP validate successfully and proceed to home page
Comments			
Results (Passed/Fail)	P	P	F

Online Agriculture Products Store

Test Case ID	TC_03	**Test Case Name**	User Profile Management
Project ID	APS_01	**Project Name**	Online APS store
PM ID	PM104	**PM name**	Mr Vandanam
Test Strategy ID	TCP_03	**Tester ID**	T1
Test Plan ID	TCP_03	**Tester Name**	Mr Jason
Test Schedule ID	TCP_03	**Date of Test**	5/22/2024
Scenario	User Profile Management case After login in app ...click on edit profile tab and user can add edit 4 input…press update		
Link to that page			
Input Data	Set 1 • KIM • 8/12/1997 • 9815746235	Set 2 • KIM • 8/12/1997 • 8426587942	
Expected Behavior	Editing DOB and press update	Editing mobile and press update	
Actual Behavior	DOB not updated	Mobile number changed successfully	
Comments			
Results (Passed/Fail)	F	P	

Online Agriculture Products Store

Test Case ID	TC_04	**Test Case Name**	Role-Based Access control
Project ID	APS_01	**Project Name**	Online APS store
PM ID	PM104	**PM name**	Mr Vandanam
Test Strategy ID	TCP_04	**Tester ID**	T1
Test Plan ID	TCP_04	**Tester Name**	Mr Jason
Test Schedule ID	TCP_04	**Date of Test**	5/22/2024
Scenario	Role-Based Access control permit user to access specific details.. Input 1 role.. matched then proceed		
Link to that page			

Input Data	Set 1	Set2	Set 3
	• Manufacturer	• farmer	• farmer
Expected Behavior	Manufacturer getting details and control after inputting manufacturer	Farmer not getting details and control after inputting farmer	Farmer not getting details and control after inputting manufacturer
Actual Behavior	Yes, Manufacturer getting details and control after inputting manufacturer	Yes, Farmer not getting details and control after inputting farmer	Yes, Farmer not getting details and control after inputting manufacturer
Comments			
Results (Passed/Fail)	P	P	P

Online Agriculture Products Store

Test Case ID	TC_05	**Test Case Name**	Products Catalog and details
Project ID	APS_01	**Project Name**	Online APS store
PM ID	PM104	**PM name**	Mr Vandanam
Test Strategy ID	TCP_05	**Tester ID**	T1
Test Plan ID	TCP_05	**Tester Name**	Mr Jason
Test Schedule ID	TCP_05	**Date of Test**	5/22/2024
Scenario	Explanation about Products Catalog and details case Farmer should be able to get details of product and product catalog		
Link to that page			

Input Data	Set 1	Set 2	Set 3
	• click on product catalog button	• click on product catalog button	• click on product catalog button
Expected Behavior	Opens product catalog	Opens product catalog	Opens product catalog
Actual Behavior	Opens product catalog	Not opens product catalog	Opens product catalog
Comments			
Results (Passed/Fail)	P	F	p

Online Agriculture Products Store

Test Case ID	TC_06	**Test Case Name**	Product Search, Browse and Filtering
Project ID	APS_01	**Project Name**	Online APS store
PM ID	PM104	**PM name**	Mr Vandanam
Test Strategy ID	TCP_06	**Tester ID**	T2
Test Plan ID	TCP_06	**Tester Name**	Ms Alekya
Test Schedule ID	TCP_06	**Date of Test**	5/24/2024
Scenario	In Product Search, Browse and Filtering case we input products…set filter…A>Z Z>A order L>H H>L price.. apply filter		
Link to that page			

	Set 1	Set 2	Set 3
Input Data	• seeds • A>Z • L>H	• Pesticides • A>Z • L>H	• Fertilizers • Z>A • H>L
Expected Behavior	Should show seeds in ascending order and low to high price	Should show Pesticides in ascending order and low to high price	Should show Fertilizers in descending order and high to low price
Actual Behavior	Showing ascending order and low to high	Showing ascending order and low to high	Showing descending order and low to high
Comments			
Results (Passed/Fail)	P	P	P

Online Agriculture Products Store

Test Case ID	TC_07		**Test Case Name**	Payment Processing
Project ID	APS_01		**Project Name**	Online APS store
PM ID	PM104		**PM name**	Mr Vandanam
Test Strategy ID	TCP_07		**Tester ID**	T2
Test Plan ID	TCP_07		**Tester Name**	Ms Alekya
Test Schedule ID	TCP_07		**Date of Test**	5/24/2024
Scenario	Payment Processing case…input 4 credit card holder name, credit card number, credit card expiry date, credit card Pin…press submit.. execute transaction …placed order successfully			
Link to that page				
Input Data	Set 1 • Kevin • 1254369785 • 1/01/2027 • 4569	Set 1 • peter • 4554369785 • 1/06/2027 • 2562	Set 1 • Duke • 7532369785 • 12/18/2027 • 7894	Set 1 • Henry • 1894569785 • 04/14/2027 • 4569
Expected Behavior	Accepted payment placed order	Accepted payment placed order	Accepted payment placed order	Do not Accept payment not placed order
Actual Behavior	Order is placed and payment is accepted	Order is placed and payment is accepted	Order is NOT placed and payment is accepted	Not to place order and declined payment
Comments				
Results (Passed/Fail)	P	P	F	P

Online Agriculture Products Store

Test Case ID	TC_08	Farmer Registration	Manufacturers Registration	
Project ID	APS_01	**Project Name**	Online APS store	
PM ID	PM104	**PM name**	Mr Vandanam	
Test Strategy ID	TCS_08	**Tester ID**	T1	
Test Plan ID	TCP_08	**Tester Name**	Mr Jason	
Test Schedule ID	TCP_08	**Date of Test**	5/22/2024	
Scenario	Explanation about Manufacturers Registration case Example visit www.onlineAPS.co.in in web browser…Input login credentials…we have two inputs both are compulsory …then click on submit ..and land into home page			
Link to that page				
Input Data	Set 1	Set2	Set3	Set4
	• DON@gmail.com • 2564kk	• DWEN@gmail.com • 5782hj	• KALI@gmail.com • 7777j	• BOB@gmail.com • 11hhh5
Expected Behavior	Farmer should login to home page shows valid credentials	Farmer should login to home page shows valid credentials	Farmer should not login to home page	Farmer should not login to home page
Actual Behavior	Farmer logged in home page	Farmer logged in home page	Farmer not logged in home page	Farmer logged in home page
Comments				
Results (Passed/Fail)	P	P	P	F

Online Agriculture Products Store

Test Case ID	TC_09		**Test Case Name**	Payment Processing
Project ID	APS_01		**Project Name**	Online APS store
PM ID	PM104		**PM name**	Mr Vandanam
Test Strategy ID	TCP_09		**Tester ID**	T2
Test Plan ID	TCP_09		**Tester Name**	Ms Alekya
Test Schedule ID	TCP_09		**Date of Test**	5/24/2024
Scenario	Payment Processing case…input 4 debit card holder name, debit card number, debit card expiry date, debit card Pin…press submit.. execute transaction …placed order successfully			
Link to that page				
Input Data	Set 1 • Kevin • 1254369785 • 1/01/2027 • 4569	Set 1 • peter • 4554369785 • 1/06/2027 • 2562	Set 1 • Duke • 7532369785 • 12/18/2027 • 7894	Set 1 • Henry • 1894569785 • 04/14/2027 • 4569
Expected Behavior	Accepted payment placed order	Accepted payment placed order	Accepted payment placed order	Do not Accept payment not placed order
Actual Behavior	Order is placed and payment is accepted	Order is placed and payment is accepted	Order is NOT placed and payment is accepted	Not to place order and declined payment
Comments				
Results (Passed/Fail)	P	P	F	P

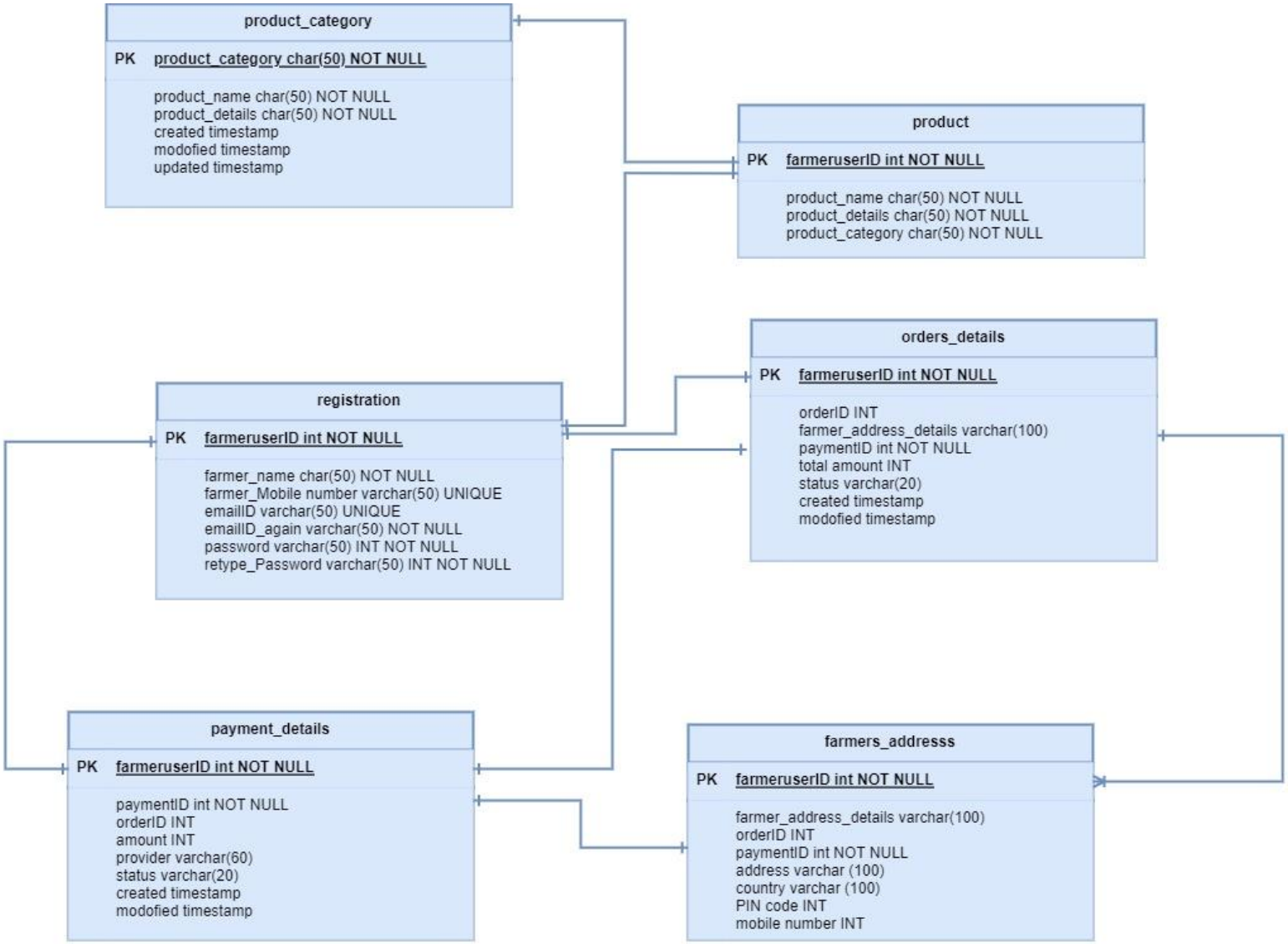
Online Agriculture Products Store

Test Case ID	TC_10	**Test Case Name**	Manufacturer authentication
Project ID	APS_01	**Project Name**	Online APS store
PM ID	PM104	**PM name**	Mr Vandanam
Test Strategy ID	TCP_10	**Tester ID**	T1
Test Plan ID	TCP_10	**Tester Name**	Mr Jason
Test Schedule ID	TCP_10	**Date of Test**	5/22/2024
Scenario	Two step Authentication case for manafactures After login in app ...the code will send to email or mobile number…window will appear showing input code…input 1 4 digits…press validate code…user will land to home page		
Link to that page			

Input Data	Set 1	Set 2	Set 3
	• 1254	• 2561	• 123
Expected Behavior	OTP validate and proceed to home page	OTP validate and proceed to home page	OTP validate and proceed to home page
Actual Behavior	OTP validate successfully and proceed to home page	OTP validate successfully and proceed to home page	OTP validate successfully and proceed to home page
Comments			
Results (Passed/Fail)	P	P	F

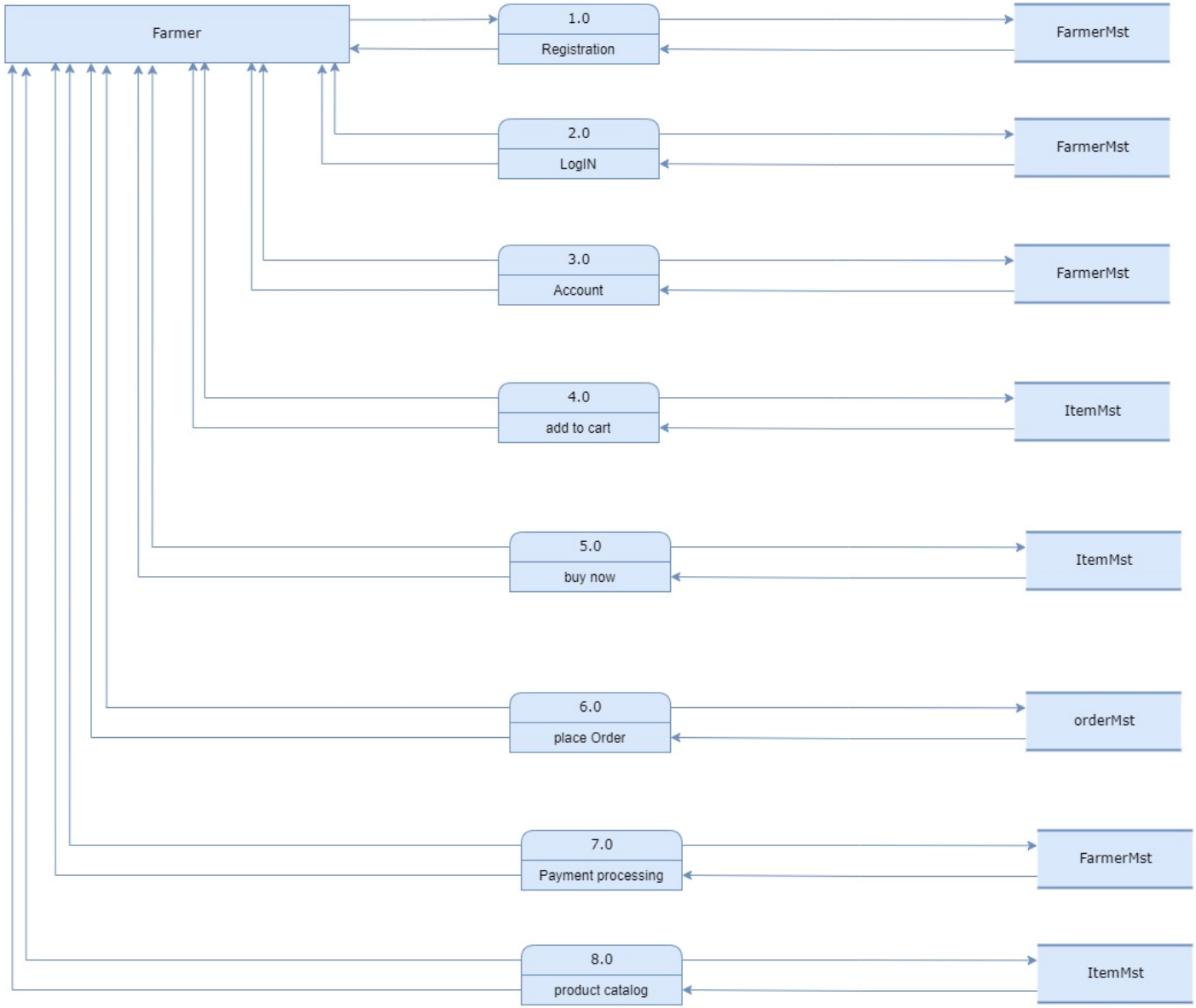
Online Agriculture Products Store

Question 6 – DB Design – 8 Marks After the requirements are thoroughly explained to the entire project team by business analyst, the Database architects have decided to do the database design and also to represent the in-flow and out-flow of data. Draw database schema and ER diagram



Online Agriculture Products Store

Question 7 – Data Flow Diagram - 3 Marks What is a data flow diagram? Draw a data flow diagram to represent the in-flow and out-flow of data when a Farmer is placing an order for the product



Online Agriculture Products Store

Question 8 – Change Request - 10 Marks
Due to change in the Government Taxation structure. we should change the Tax structure How do you handle change requests in a project?

Acknowledge by taking some buffer time to give reply, initially as a BA we document the change request and analyze is really change or defect then BA and PM will decide change request is complex or minor change, here it is a complex one which expand scope and increase delivery time we will take forward to PM for feasibility study to accept change impact analysis to measure change in project and efforts estimation to implement the change,
Pm will give time as a BA we will demand lesser time and he will again then will look for options to reduce time such as extending work hours, weekend working etc and revise complete estimated time add initial buffer time and client communication write and email to client with refined analysis quality and change request with respect time and budget and discuss with tech team

Example Scenario
Scenario: The government has introduced a new tax that affects the cost structure of a project.
Document the Change Request: "Change in tax structure leading to increased costs for materials."
Impact Analysis: Additional $50,000 in costs, project timeline extended by 2 weeks to account for financial adjustments.
Prioritize: Prioritize change request based on risk, urgency, importance and impact
Review: Present to the CCB, stakeholders provide feedback.
Approval: Change approved, project plan updated.
Implement: Adjust budget, inform procurement team, update financial systems.
Communicate: Notify all stakeholders and team members.
Review: After implementation, ensure costs are adjusted correctly and project is on the revised timeline.

Question 9 – Change Request Vs an Enhancement - 5 Marks
This is an enhancement because adding auction system for their crops yields creates value to the stakeholders without disturbing existing process.

Question 10 – Estimations - 6 Marks
Come up with estimations – How many Manhours required
Analysis:
Project duration = 18 months
Project duration in weeks = 78 weeks
Team size = 11 members
Working days in weeks = 5
Working hours per day = 10 hours
To calculate manhours = (Working days in weeks * Working hours per day * Team size)
=5*10*11
=550 hours

Online Agriculture Products Store

Assume 3 days sick leaves = 30 hours
To calculate manhours after deducting 30 hours =520 hours
This comes under medium project.

Trained resources are available so no extra trainers will be required.

Question 11 – UAT – 6 Marks Project has finally completed all the stages i.e., design, development, testing etc. Now, it is the role of a business analyst to contact the client for testing of the final product and have to successfully complete it. How are you going to handle this situation? And once it is done, what will be the process to close the project? Explain UAT Acceptance process

1. Planning Preparation:
Define Objectives: Clearly outline what the UAT aims to achieve. The primary objective is to validate that the system meets business requirements and user expectations.
Develop UAT Plan: Create a detailed UAT plan that includes the scope of testing, timelines, resources, test environment, entry and exit criteria, and risk management.
Identify Testers: Select users who have a deep understanding of business processes and requirements. These users will represent the end-user community and are often called business users or subject matter experts (SMEs).

2. Design Test Cases Creation:
Gather Requirements: Review the business requirements, use cases, and functional specifications to create relevant test scenarios.
Develop Test Cases: Write detailed test cases that cover all critical business functions and scenarios. Ensure test cases are clear, concise, and include expected results.
Prepare Test Data: Identify and create the necessary test data that will be used during UAT. Ensure that the data is realistic and covers various test scenarios.

3. Set Up Test Environment Configuration:
Deploy the System: Set up the UAT environment, which should closely mimic the production environment.
Prepare Tools: Ensure that all testing tools and resources required for UAT are available and configured correctly.
Access and Permissions: Provide the testers with access to the system and necessary permissions to perform UAT.

4. Execute Test Cases Testing:
Run Tests: Testers execute the test cases as per the UAT plan. They interact with the system, following the steps outlined in the test cases, and verify the expected results.
Document Results: Testers document the outcomes of each test case, noting whether it passed or failed. They should capture any discrepancies, issues, or unexpected behavior.

5. Report and Manage Defects Tracking:
Log Issues: When testers find defects or issues, they log them in a defect tracking system. Each defect should include a description, steps to reproduce, severity, and screenshots if applicable.

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Prioritize Defects: Classify defects based on their severity and impact on the business. High-priority defects should be addressed immediately.
Retest and Verify: Once defects are fixed by the development team, testers retest the affected areas to ensure the issues are resolved and do not introduce new problems.

6. Review and Sign-Off Approval:
Consolidate Findings: Summarize the testing outcomes, including the number of test cases executed, passed, and failed, along with defect status.
Final Review: Conduct a review meeting with stakeholders, including business users, project managers, and development teams, to discuss the UAT results.
Sign-Off: Obtain formal sign-off from the business users and stakeholders, indicating that the system meets the business requirements and is ready for production deployment.

7. Post-UAT Activities Wrap-Up:
Training: Provide necessary training to end-users based on the UAT findings to ensure smooth adoption of the system.
Deployment: Prepare for the production deployment, ensuring that all issues identified during UAT have been addressed.
Lessons Learned: Document any lessons learned during the UAT process to improve future testing cycles and project implementations.
Software is ready to go live and take it sign off.

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Question 12 – Project Closure Document - 6 Marks Explain Project closure document

Sr No	Points to Include	Details	Reference links
1.	Project Summary		
	The main purpose to build this online store is to facilitate farmers to buy seeds, pesticides, and fertilizers from anywhere through internet connectivity.	Achieved	
2.	Objectives of the projects		
	User friendly APP	Achieved	
	Farmers Satisfaction	ROI in 5 months	
3.	Functionalities worked on		
	accept the product (fertilizers, seeds, pesticides) details from the manufacturers display them to the Farmers	Achieved	
	Farmers will browse through these products	Achieved	
	buy and deliver them to farmers location.	Achieved	
	login for all its users	Achieved	
	product catalog of fertilizers, seeds, pesticides	Achieved	
	search for products	Achieved	
	payment process	Achieved	
	delivery tracking.	Achieved	
	user gets an email confirmation	Achieved	
4.	Client sign off on UAT testing		
	Sign-off date	05/23/2024	
	Name of source	Mr. Henry	
5.	Funding		
	Amount approved	2 cr	
	Amount Used	1.80 lac	
6.	overall project information		
	Farmers Satisfaction	High	
	Manufacturer Satisfaction	High	
7.	Risks		
	Improper requirement gathering, unavailability of finance head and project coordinator	Done	
8.	challenges		
	change in the Government Taxation structure	Done	