Online Agriculture Products Store

1.BPM

Goal:

Create a Profitable online agriculture store that facilitates farmers to buy Agricultural Products from Manufacture's from their area.

Inputs:

Products and their information (Seeds, fertilizers, details, pricing, etc.) from manufacturers

Orders from farmers

Delivery Location where the product is delivered

Payment information from farmers

Resources: -

Online Platform (App/website)

Servers - (Data Base and Network Infrastructure)

Payment Gateway

Budget 2 Cr

Human Resource (Developers & Testers…)

Logistics Team

Output

Products are accessible to farmers

Farmers can order Product.

Product Tracking and Delivery conformation.

Payment Information

Activates

Farmers Registration in the portal

Farmers can Browse the product

Manufactures registration and product catalogue

Order placement and payment processing

Order Fulfilment and Delivery Support

Customer Support for any enquires

Value Created to End Customer

Direct contact between Farmers and Manufacture's

Middle Man Elimination

Easy access to wide range of products

On time Delivery

Time, effort and Money savings by avoiding travel to physical stores.

2. SWOT Analysis: - Mr. Karthik Should consider the following aspects

Strength

Strong Technical team in APT IT Solution

Will Experienced Project Manager (Mr Vandanam)

Availability of Talent pool

Weakness

Lack of Domain knowledge i.e. Agriculture

Project timeline 18 months may be challenge

Stakeholders(farmers) lack of technical knowledge

Opportunities

There is a great market for online agricultural product

Expanding their market into similar segment

Hiring the new talents

Building strong relationship with the company SOONY

Threat

Competition from existing players and new entities

Poor Internet connectivity in remote areas.

Potential Challenges through logistics from delivering to remote areas.

3.Feasibility Study

Hardware Requirements

Development Servers

Production Servers

Connectivity Servers

Database Servers

Backup and Recovery systems

Software requirements

Java Development kit

Testing Tools (….)

Project Management Tools.

Data Analytics tools (Excel, MySQL, python, Power BI)

Data base management Tools(SQL, etc)

Web Application and mobile Application tools Android/IOS

Connectivity(Internet)

Trained Resources

Java Developers (Ms. Juhi, Mr. Teyson, Ms. Lucie, Mr. Tucker, Mr. Bravo)

Testers (Mr. Jason, Ms. Alekya)

Network Admin (Mike)

Business Analyst

Project Manager (Mr. Vandanam)

Database Admin (Mr. John)

Budget

Project Budget 2Cr

Team salary for 18 Months

Budget allocation for Hardware and Software

Maintenance cost Post and Pre

Timeframe

Project Deadline 18Months

Time allocation for requirements gathering, design, development, testing

Post Implementation support planning

Gap Analysis

Current Process:

In above case study there is no availability of online store.

The store does not have any online presence resulting limited customer reach

Middle Man between Farmers and Manufacturer

In store there is no customer data base management

Communication gap between Farmers and manufactures

Improper inventory Management

Future Process

There is great market for Online store to serve farmers

online store has wide customer reach, smooth online shopping, payment gateway integration

but in online store there is customer data base management

Direct Communication Between farmers and manufactures

Automatically Inventory Management

4.Risk Analysis

BA Risk

Improper Requirement gathering and Documentation.

Improper communication with the stakeholder and technical team

Project Risks

Technical risks with the software and hardware

Security risks

Resource Risk

Schedule risks

5. Stakeholder Analysis (RACI Matrix)

Stakeholder	Responsible	Accountable	Consulted	Informed
Mr. Henry		Accountable	Consulted	Informed
Pandu			Consulted	Informed
Mr. Dooku			Consulted	Informed
Mr. Karthik	Responsible			Informed
Mr. Vandanam	Responsible	Accountable		Informed
(Peter, Kevin, Ben)	Consulted			Informed
Manufacturers	Consulted			Informed
Business Analyst	Responsible		Consulted	Informed

7. Business Case Document

Executive summary

It provides a brief overview of the project, its objectives, benefit, expected cost, timeline and risk associated with the project.

Background

It tells us the problem or opportunity that the project aims to address.

Objectives The objective should be specific, measurable, achievable, relevant and time bound (SMART).

Scope

The scope should be realistic, feasible and aligned with the objectives.

Stakeholders It shows key stakeholder of the project such as customers, suppliers, partners, employees and regulators. The stakeholders should be engaged, informed and satisfied throughout the project.

Strategy It is the approach to achieving the project objective such as business model, value proposition, differentiation, positioning and marketing mix.

Requirements This section specify the functional and non-functional requirements of the project. Such as- feature, interfaces, performance, security, usability and accessibility.

Risks This section should identify the potential risks and their impacts on the project objectives such as technical, financial, legal, operational risks. The risks should be managed, monitor and communicated.

Costs This tells us the cost of the project such as capital, operational and maintenance cost. The cost should be realistic and justifiable.

Timeline This tells us the schedule of the project activities such as planning, design, development, testing, deployment and maintenance phase.

Conclusion This section should summarize the key points of the business case.

8. SDLC Methodologies

There are 4 Methodologies for a software development

1. Sequential
2.Iterative
3.Evolutionary
4.Agil

There are different stages in developing a software it is a structured approach i.e. Planning, Designing, Development, Testing, Deployment, Maintenance. Each Methodology has its strength and weakness. The Methodology depends upon the Project.

1. **Sequential: -** It is known as waterfall Model and it is highly structure and inflexible. In this model we can move to next stage after completion of previous stage.
2. **Iterative: -** This Methodology follows RUP(Rational Unified Process) Model. The Base of RUP is UML extension of project implementation.
   Changes are accepted in development Phases.
   There are different steps in this Model
   Inception, Elaboration, Construction, Transition, Production
3. **Evolutionary: -** Its prototyping model and high flexibility**.** In this model 1st Frame work is done later software is developed and released in certain intervals of time. Actual project is developed based on customer's feedback.
4. **Agile: -** In this model software is developed in a small increment. Each Increments is revived, evaluated and feedback to improve final product.

Continuous deliverables from beginning to end 2weeks to 2 months

9: Waterfall, RUP, Spiral, and Scrum

Waterfall: Linear, sequential phases with strict documentation.
RUP (Rational Unified Process): Iterative, with phases like Inception, Elaboration, Construction, and Transition.
Spiral: Risk-driven, with iterative cycles and prototypes.
Scrum: Agile framework with short sprints, daily stand-ups, and focus on delivering working software.

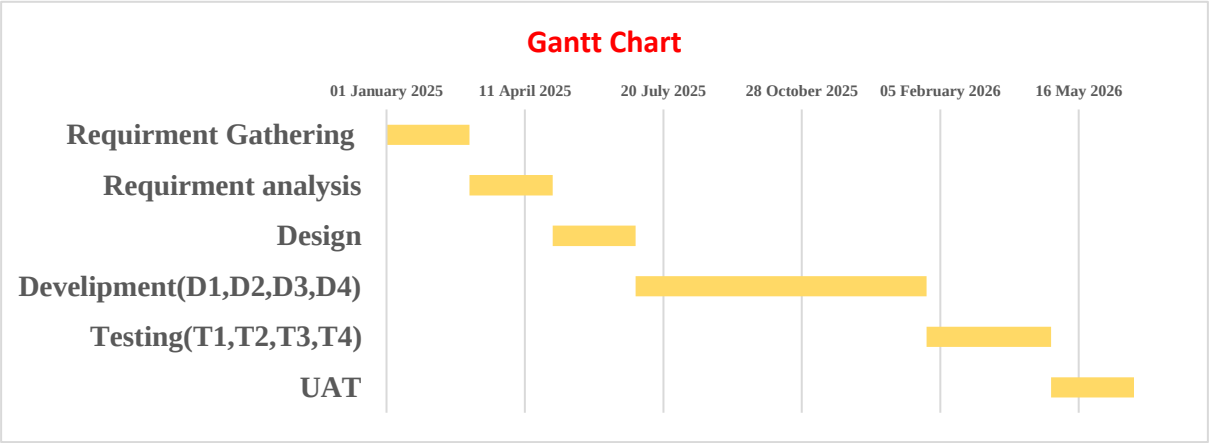
10: Waterfall vs. V-Model

Approach: waterfall model follows a sequential approach and Vmodel follows a verification and validation approach
Testing: In waterfall model testing is conducted only after the development phase is completed, While in Vmodel testing is conducted in parallel with each development phase.
Flexibility: Waterfall method is less flexible and V model is more flexible.
Feedback: Waterfall model provides feedback only after end of the development cycle while Vmodel provides feedback at each stage of development.
Delivery: Waterfall model delivers the final product at he end of development cycle while V model delivers incremental version of product at each stage of development.

11: Choosing a Model

For this project, the V-Model seems most suitable. It provides a structured approach with clear verification and validation points, which is important for a project with a fixed budget and timeframe. The emphasis on testing throughout the process helps mitigate risks and ensures a higher quality product.

12: Gantt Chart



13: Fixed Bid vs. Billing

Fixed Bid: A predetermined price for the entire project, regardless of actual costs.

Billing: Payment based on time and materials used, with potential for variations in the final cost.

14: Timesheets

Development Time sheets		
Task	Time Spent	Description
Requirements Analysis	4 hours	Analysing user stories and creating use case diagrams
Design	3 hours	Collaborating with developers on UI/UX design
Development Support	2 hours	Clarifying requirements and answering developer queries

Timesheet: -

Testing Time Sheets		
Task	Time Spent	Description
Test Case Review	2 hours	Reviewing test cases and providing feedback
Defect Tracking	3 hours	Logging and tracking defects
UAT Support	1 hour	Assisting users during UAT

UAT Timesheet:

UAT Testing time sheets		
Task	Time Spent	Description
UAT Planning	2 hours	Preparing UAT test plan and scenarios

Deployment Timesheet:

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Task	Time Spent	Description
Deployment Planning	4 hours	Collaborating with the technical team to create a deployment plan, including timelines, environments, and rollback strategies.
Environment Setup	3 hours	Working with the DB Admin and NW Admin to ensure the necessary infrastructure is in place for deployment.
Data Migration	2 hours	Overseeing the migration of data from any existing systems to the new platform.
Go-Live Support	4 hours	Providing support during the initial go-live period, monitoring for issues, and troubleshooting as needed.
Post-Implementation Review	2 hours	Conducting a review of the deployment process to identify areas for improvement in future deployments.

Design Timesheet

Design Timesheets		
Task	Time Spent	Description
Requirements Gathering & Analysis	4 hours	Reviewing user stories, creating use case diagrams, and documenting functional requirements.
Process Modelling	3 hours	Developing process flows and diagrams to visualize the system's processes.
Data Modelling	2 hours	Creating entity-relationship diagrams (ERDs) to define the data structure and relationships.
User Interface (UI) Design	4 hours	Collaborating with UI/UX designers to create wireframes and mock-ups for the user interface.
Prototyping	2 hours	Developing interactive prototypes to demonstrate the user flow and functionality.
Documentation	1 hour	Documenting design decisions and specifications.