

Q1: Business Process Model for Online Agriculture Store

Goal- To develop online application for farmers to buy agriculture products.

Inputs- Farmer details, crop details, product (seeds, pesticides, fertilizers) details, payment options, location details for delivery.

Resources- Internet, software development team, server, network.

Outputs -mobile/web version for agriculture products.

Activities -login, order placing, payment, delivery.

Value created to the end Customer – Ease to farmers, increase in customer base for company, customer satisfaction.

Q2: SWOT Analysis

Strengths - skilled software team to develop application, upfront investment for the project of 2cr, New app so no competitor	Weakness - glitches in product delivery in rural areas, quality and timely maintaining of the stock
Opportunities - agriculture products expansion in rural areas	Threat - revenue recovery, adapting to the app as they are farmers

Q3: What is the Feasibility Study

Hardware – Java installed system, Database storage.

Software - network server and security, Java API

Resources – Developers and testers with Java expertise, Network admin, Business Analyst

Budget – 2Cr investment on project

Time frame – 18months

Q4: What is Gap Analysis

AS-IS State - No online application to do farming to buy agriculture products.

Farmers must go to the physical store to purchase agriculture products.

Difficulty in procuring pesticides, seeds and fertilisers.

TO-BE State - One platform for all agriculture products delivering directly to farmers.

24/7 support available to famers.

Q5: Risk Analysis-List down different risk factors that may be involved

Internal risk– dependency on external vendors to maintain stock, quality of product.

External risk– usage of application by farmers i.e., application needs to be user friendly.

Project/process risk – technical issues in the application.

Hassle free payment methods.

On time delivery and also maintaining stock from vendors.

BA risk - communication between both farmers and technical team.

Requirements gathering and change requests is a challenge.

Q6: Stakeholder Analysis – RACI matrix

Responsible– Project Manager Vandanam Software development team, Mr Karthik delivery head

Accountable – Mr Henry, Project manager Vandanam, Delivery Head Mr Karthik

Consulted– Farmers, companies, BA

Informative– companies, Project manager Vandanam, Development team, farmers, sponsor head

Q7: Prepare Business Case Document

Change – Instead purchasing from physical store all agriculture products for farmers at one platform.

Need– To make all agriculture products available for farmers all 365 days.

Solution– Implement mobile/web application i.e online agriculture store

Stakeholder- companies

Value– Reduces physical strain to reach stores to buy agriculture products.

Context– As there is no online store for agriculture it is completely a new process.

Q8: Write about SDLC methodologies

SDLC Methodologies

Sequential – waterfall – This is one of the oldest methods in SDLC. In this method each phase has to be completed to move to the next step. Basically, it is a step-by-step process.

It has 6 phases:

1. Requirements gathering
2. System design
3. Implementation
4. Testing
5. Deployment
6. Maintenance

Iterative – RUP

In this method each iteration includes planning, designing, development, and testing. Development process is done in iterations and repetitively.

Evolutionary – Spiral

This method is structured as a spiral model with four main phases per cycle. It combines both Waterfall and Iterative models focusing on risk analysis.

Agile – Scrum

Tasks are delivered in small sprints and it is flexible, suitable for complex projects.

Q9: Write about Waterfall RUP Spiral and Scrum Models

Waterfall

This is a step-by-step model. Completes one phase only after which can start the next phase.

It is used for projects with clear requirements. Also, in this model the requirements are fixed and no changes are made once after starting the project.

RUP

It is a combination of both Waterfall and Iterative models. In this method development is done in phase. Development can be done in parallel. This model is apt for large and complex systems.

Spiral

This model is highly risky to opt for any project. Development is done in loops (spirals), with risk in each phase. This model is widely used in defense projects. Not commonly used due to complex planning. It is best suited for highly risk based project.

Scrum

This model is most flexible and can be delivered on time. In this model teams are small and they work in sprints and attain fast feedback it is a workflow management. Mainly used in projects with changing requirements and a faster delivery.

Q10: Write about Waterfall vs V-Model

Waterfall model

It is cost effective

Step-by-step process

Used for small projects and with fixed requirements

Testing is done after development

V-Model

Expensive compared to waterfall model

Not a linear process

Most reliable model

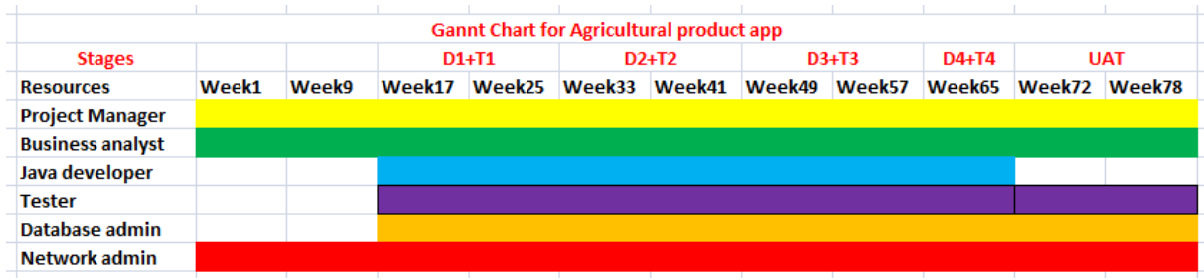
At every phase testing is done after development

Q11: Justify your choice

V-model is suggested as it is a new process. Although the project has pre-defined requirements testing at every stage is necessary to avoid post deployment failures.

Q12: Gantt Chart

Gantt chart is prepared by project manager. It represents the work breakdown structure of the project.



Q13: Fixed Bid Vs Billing

A fixed bid is one in which the service provider agrees to deliver a specific scope of work for a fixed budget. The scope of work, deliverables and timeline are agreed upon upfront, and the service provider assumes the risk for any cost increase. Hence fixed bid is more suitable for project with clear scope.

A billing project is one in which the service provider bills the client for the actual time and expenses on the project. The client pays for the service providers time and expenses and the scope of work can be adjusted as needed throughout the project. Hence billing project is more flexible and can accommodate evolving risks.

Q14: Prepare Timesheets of a BA in various stages of SDLC

Design Timesheet of Agricultural product app					
S.No.	Tasks	Work to be done	Start time	End time	Duration
1	Stake holder meeting	Identify stake holder meeting to list down stakeholder	10:00 AM	11:00 AM	1 hr
2	Client interaction	Call to update client	11:00 AM	1:00 PM	2 hr
3	Gathering inputs for BRD	SME discussion	2:00 PM	3:00 PM	1 hr
4	Requirement sorting	Working on template	3:00 PM	4:30 PM	1.5 hr
5	Team meeting	Discussion on inputs	4:30 PM	7:00 PM	2.5 hr
Development Timesheet of Agricultural product app					
S.No.	Tasks	Work to be done	Start time	End time	Duration
1	Stake holder interview	Identify stake holder meeting to list down stakeholder	10:00 AM	12:00 PM	2 hr
2	System design	Create Use Case diagrams	12:00 AM	2:00 PM	2 hr
3	Functional specification	Write functional specs and test traceability	3:00 PM	5:00 PM	2 hr
4	UAT planning	Create UAT test scenarios	5:00 PM	7:00 PM	2 hr

Testing Timesheet of Agricultural product app					
S.No.	Tasks	Work to be done	Start time	End time	Duration
1	UAT	Prepare UAT test cases based on BRD	10:00 AM	1:00 PM	3 hr
2	System testing support	Reviewed test scripts created by QA	2:00 PM	3:00 PM	1 hr
3	SME discussion	Participated in UAT	3:00 PM	5:00 PM	2 hr
4	Team meeting	Discussion with QA and Dev team	5:00 PM	7:00 PM	2 hr
UAT Timesheet of Agricultural product app					
S.No.	Tasks	Work to be done	Start time	End time	Duration
1	UAT desing	Drafted test cases	10:00 AM	12:00 PM	2 hr
2	UAT review	Reviewed cases with stakeholder	12:00 AM	1:00 PM	1 hr
3	UAT execution	Executed UAT cases	2:00 PM	5:00 PM	3 hr
4	Team meeting	Discussion with QA and Dev team	5:00 PM	7:00 PM	2 hr