1. **Identify Business Process Model for Online Agriculture Store – (Goal, Inputs, Resources, Outputs, Activities, Value created to the end Customer)**

**Ans.**

Goal - CSR; to help other people by solving their problems

Inputs - Details of the desired agri product

Resources - Internet connection, mobile/Laptop/PC and HR

Outputs - Online purchase and delivery of the desired agri product

Activities - Browsing of various agri products available from various companies

Value created to - Farmers can buy agri products and get them delivered without visiting the companies

the end Customer

1. **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**

**Ans.**

Strengths - Good connections and terms with Mr. Henry; Skilled team members

Weakness - Less budget and time; No experience of such application development

Opportunity - Application is first of its kind & hence there can be new business opportunities

Threat - Competitors trying to build similar application; resistance to accept the technology

1. **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**

**Ans.**

HW - Project consist of Java developers hence all the available resources should be checked

SW - All the available systems and libraries available should be compatible with Java

Trained Resources -Considering the given time and budget all the available HR should be adequate in qty

Budget - Considering the HW/SW/HR the budget should be analysed whether enough or not

Time frame - After analysing the HW/SW/HR time should be analysed considering possible delays

1. **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**

**Ans.**

Gap analysis is done to understand how the application will be helpful to end user by showcasing the difference between the present conditions (AS IS) and the conditions after using the application (TO BE). The following points can be showcased:

AS IS:

* + - Difficulty faced by farmers to purchase of agri products from suppliers considering their remote location
    - Cannot choose from variety of products as suppliers are far off

TO BE:

* + - Easy purchase of agri products: No need to physically visit the manufacturers and purchase
    - Less cost: App will avoid the intermediaries that are presently involved which will reduce the purchasing price
    - Better purchasing experience: More options available at a single platform will increase purchase efficiency

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

**Ans.**

BA risks:

* + Stakeholder management – Stakeholders will be farmers and manufacturers. Hence the conflict of interests as well as different requirements may lead to difficulties in stakeholder management
  + Requirements gathering – Large number of requirements may arise due to variety of stakeholders which can lead to difficulties in finalising and prioritising the requirements

Process/Project risk:

* + Project quality - Less budget and time can be a risk as the desired product could be of inferior quality
  + UAT – Considering that end users are farmers, the user acceptance testing could be difficult
  + Integrations – Manufacturers to be integrated with logistic, payment systems etc. which could be time consuming

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

**Ans.**

R - Mr. Vandanam, Ms. Juhi, Mr Teyson, Ms Lucie, Mr Tucker, Mr Bravo, Mr Mike, John, Mr Jason, Ms Alekya and Me

A - Mr. Henry, Mr. Pandu, Mr. Dooku

C - Peter, Kevin, Ben

I - All farmers and manufacturers

1. **Help Mr Karthik to prepare a business case document**

**Ans.**

|  |  |
| --- | --- |
| Project Name | Online Store for Agriculture Products |
| Vendor | Apt It solutions |
| Client | Soony Company |
| Project Manager | Mr Vandanam |
| Budget | 2cr INR ( includes maintenance, development, deployment, marketing etc) |
| Time allocated | 18 months |
| Problem | Most of the farmers in the rural area have to put lot of effort to buy important and essential agricultural equipment due to limited access, higher cost of supplies and limited manufacturer alternatives.The primary objective of the project is to create/build user friendly online platform for the farmers so that they can multiple options from where they can purchase products and communicate without any barrier |
| Solution | Create the user friendly online platform which will help farmers to ensure easy order and quick delivery of agri products |
| Risks | Timely tracking and milestone check  Lots of testing before launch for smooth experience  Training sessions for farmers and aware them with the platform  Collaboration of multiple manufacturer and different types of delivery partner |

**8. Four SDLC Methodologies**

Ans – There are four SDLC methodologies tha includes sequential, iterative, evolutionary , agile

Sequential – It is a linear approach that is step by step approach where each phase is completed before the moving to the next.

Iterative – It follows the approach in which the initial development work is completed based on the initial requirements that are defined and later features are added through iteration till the final system is completed.

Evolutionary – It breaks the development process into smaller and feasible iterations and each iteration allows for continuous testing, feedback, changes.

Agile – In agile the process is divided into small and manageable cycles called as sprints. It helps in customer satisfaction with fast with collaborative iterations.

**9. Waterfall RUP Spiral and Scrum Models**

Ans – Waterfall model – This is a step-by-step approach where each phase of a project must be completed before moving on to the next. It is a sequential approach with distinct phases which includes requirement, design, implementation, testing, and maintenance. Waterfall model is advantageous for projects with well-defined requirements and a clear scope, making it easier to manage and predict outcomes compared to more flexible models like Agile. But it may not be the best choice for projects where requirements are likely to change.

RUP (Rational Unified Process) – It is an iterative framework that emphasizes early and continuous testing. It's more flexible than waterfall, with multiple rounds of development.

Spiral model – It is iterative model combining waterfall and prototyping approaches, emphasizing risk management throughout each cycle.

Scrum – It is an agile framework that breaks projects into small, manageable parts called sprints, usually lasting 2-4 weeks. Teams work together in short cycles to deliver small pieces of the project, allowing for quick adjustments and collaboration with key roles of product owner, scrum master, and development team.

**10. Waterfall Vs V-Model**

Ans- 1.Waterfall model follows a linear sequential approach, while V-model involves a sequential process for testing and development.

2.In the waterfall model, testing occurs after the development phase, whereas in V-model, testing is planned in parallel with each stage of the development phase.

3.Waterfall model requires thorough documentation at each phase whereas V-model places more emphasis on creating detailed test plans and documentation prior to implementation.

4.Waterfall assesses risks mainly at the start, while the V-Model encourages ongoing risk assessment.

5.Waterfall is rigid about changes once a phase is complete on other hand the V-Model allows for some adjustments through ongoing validation.

5.Waterfall has limited feedback opportunities, but the V-Model offers continuous feedback through testing.

6.Waterfall model may result in a longer development cycle due to its linear nature, while V-model encourages faster delivery of increments by incorporating testing early in the process

**11. Justify your choice as a BA, state your reason for choosing one model for this project**

Ans- As a BA I would choose scrum model as it divides the project into smaller parts which makes easy to go with the flow. It will allow me for the regular assessments of progress as it will help me to look into the priorities. This also includes the stakeholders continuously in development allowing them to know real time feedbacks. It will eventually increase the quality of work as teams will focus on limited things during each sprint.It will be easy for teams to communicate with each other’s by doing daily standup meetings and regular reviews.

**12. Gantt Chart –**

**13. Fixed Bid Vs Billing**

Ans- Fixed bid – It is cost which contractor agrees to deliver certain project at the fixed or set price.This fixed bid mostly decided before start of the project.If any changes in requirements there during project so it is highly risky to contractor.

Billing- It is the cost given to the client for the work performed over time period.In this payments actually done on how resources used to complete project.Low risk as amount to be decided on work done and them payment will issued.It is more flexible than fixed bid.

**14. Prepare Timesheets of a BA in various stages of SDLC**

Ans-

**Time sheet for BA**

|  |  |  |
| --- | --- | --- |
| **Task** | **Description** | **Time allotted for task(in hrs)** |
| 1 | Conduct meetings with stakeholders for the requirement gathering and analysis (functional and non functional) | 15 |
| 2 | Do market research of existing agri product online platforms and feasibility study | 10 |
| 3 | Create business requirement document with all functionalities. | 12 |
| 4 | Design primary UI/UX wireframe will which user friendly to the farmers | 12 |
| 5 | Identify the risks and plan according to that | 8 |
| 6 | Do review of project and take feedbacks from the stakeholders (Sign off) | 5 |

**Development timesheet of BA**

|  |  |  |
| --- | --- | --- |
| Task | Description | time allotted (in hrs) |
| 1 | Coding the user interface, business logic and implementation of design(Backend) | 40 |
| 2 | Building the UI components and database interactions (Frontend) | 40 |
| 3 | Creation of API and testing the same. Integration of backend and front end | 30 |
| 4 | Implementation of database and work on data security part | 50 |
| 5 | Review the stated code and make optimization | 15 |

**Testing timesheet of BA**

|  |  |  |
| --- | --- | --- |
| Task | Description | time allotted (in hrs) |
| 1 | Prepare the test plan for entire testing phase and its scope | 15 |
| 2 | Combine testing parts to check smooth user interface and check requirements are meeting or not | 40 |
| 3 | Check performance of facility under different conditions whether it is performing | 30 |
| 4 | Check for any securities bugs or system bugs and try resolve them | 25 |

|  |  |  |
| --- | --- | --- |
| Task | Description | time allotted (in hrs) |
| 1 | Create and execute test cases and get the feedback as align with requirements | 25 |
| 2 | Execution of user acceptance test | 20 |
| 3 | Identify any defects and fix the bugs | 16 |
| 4 | Ask users if any changes needed or not based on that make changes as per there feedback | 20 |
| 5 | Take approval from the stakeholders for final deployment | 10 |

**UAT timesheet of BA**

**Development and implementation sheet of BA**

|  |  |  |
| --- | --- | --- |
| Task | Description | time allotted (in hrs) |
| 1 | Create a plan for deployment | 15 |
| 2 | Configuration of setup servers | 20 |
| 3 | Transfer or migrate data for new system updates | 20 |
| 4 | Deploy the final setup which will runs smoothly | 10 |
| 5 | Monitor and check for the performance statbility,interfaces | 25 |
| 6 | Arrange the training sessions for farmers so that they will get familiar with the setup | 20 |