Client Company: SOONY

* Owner: Mr. Henry
* Finance Head: Mr. Pandu
* Project Coordinator: Mr. Dooku

Stakeholders: Peter, Kevin, Ben

Software Company: APT IT Solutions

* Budget: 2 Cr INR
* Duration: 18 Months
* Delivery Head: Mr. Karthik
* Project Manager: Mr. Vandanam
* Sr. Java Developer: Ms. Juhi
* Java Developers: Mr. Teyson, Ms. Lucie, Mr. Tucker, Mr. Bravo.
* Network Admin: Mr. Mike
* DB Admin: John
* Tester: Mr. Jason, Ms. Alekya
* BA: Myself

***Decoding the case-study:***

* Project Idea: To make online agriculture store to facilitate remote area farmers to buy agricultural related products. Also, bring farmers and agriculture companies to a common platform for fulfilling demands and supplies for farming products.
* Current needs: Accept the product from companies and display them to farmers, application should be user friendly with basic interface for farmers to use.
* Overview of the project: It is an e-commerce project for agricultural products to be used by farmers. This is a completely new project where budget and time is fixed.
* Current problems: Farmers facing difficulties in procuring seeds, fertilizers and pesticides in remote location.

**Question 1:** **Business Process Model**

* Goal: To facilitate farmers to buy agriculture product from anywhere and get it delivered to their door step.
* Inputs: Farmer’s data, Company’s names and products (Fertilizers, Seeds and Pesticides).
* Resources: Warehouses, Delivery services, Application.
* Outputs: Increase in sales and revenue. Availability of seeds, fertilizers and pesticides to farmers, increasing farming productivity.
* Activities: Connecting companies directly to farmers. Online sell and purchase.
* Value: Increasing product reach in remote areas. Farmer’s satisfaction.

**Question 2:** **SWOT Analysis**

* Strength:
  + Strong Financial condition of Mr. Henry.
  + Farmers can connect directly to company and vice-versa. B2C
  + Farmer’s convenience
* Weakness:
  + Supply Chain
  + Farmers digital literacy
* Opportunities:
  + Huge market scope
  + Partnership with agricultural companies.
  + More learning opportunities for farmers and companies about farming conditions and ways to improve it.
* Threats:
  + Supply chain disruption
  + Digital fraud
  + Resistance from local shops and vendors.

**Question 3:** **Feasibility Study**

* Technology: Java, Payment gateways, location API’s.
* Hardware: Network systems, Data storage devices.
* Software: Payment gateway, content management, UI/UX.
* Resources: Developers, testers, Project manager, BA, Network Admin, DB Admin.
* Budget: 2 Cr
* Time Frame: 18 months

**Question 4:** **GAP Analysis**

* Current State (AS IS):
  + Difficulty in procurement of Seeds, pesticides and fertilizers due to lack of supply in remote areas for farming needs.
  + Dependence on local vendors, transportation and limited agricultural companies.
* Future State (TO BE):
  + Online sell and purchase of farming products like seeds, fertilizers and pesticides.
  + Delivery facility in remote areas.
  + Communication between farmers and agricultural companies.
  + Increase in companies reach to remote areas.

**Question 5:** **Risk Analysis**

* Internal risks:
  + Dependency on External vendors
  + Inventory management
* External risks:
  + Government regulations
  + Transportation
  + Payment related security.
  + Conflict with local vendors and companies
* BA risks:
  + Change in requirement
  + Understanding of project and domain
  + Project Documentation
* Project based risks:
  + Payment failure
  + Product unavailability
  + Shipment or delivery failure

**Question 6: Stakeholder Analysis (RACI Matrix)**

|  |  |  |
| --- | --- | --- |
| **RACI** | **Name of the Resource** | **Designation** |
| Responsible | Mr. Karthik | Delivery Head |
| Ms. Juhi | Senior Java Developer |
| Mr. Jhon | DB Admin |
| Accountable | Mr. Karthik | Delivery Head |
| Mr. Vandanam | Project Manager |
| Mr. Jay Kishan | Business Analyst |
| Consulted | Mr. Doku | Project Co-Ordinator |
| Peter, Kevin, Ben | Committee member |
| Mr. Henry | Client |
| Informed | Mr. Pandu | Financial Head |

**Question 7:** **Business Case Document**

* Why is this project initiated?
  + This project is initiated by Mr. Henry on looking at the challenges faced by remote area’s farmers in their day-to-day work.
* What are the current problems?
  + Current problem is Farmers facing difficulty in procuring seeds, fertilizers and pesticides for their farming needs.
* With this project, how many problems could be solved?
  + The problems that could be solved are:
    - Online availability and delivery of farming products.
    - Increase in farming efficiency, quality and diversity of crops.
    - Farmers and companies can directly connect to each other.
    - More brand options for farmers to choose from.
    - Increase in digital literacy.
* What are the resources required?
  + Resources required are: Mobile and Web Application, Delivery Partner, Warehouse Solutions.
* How much organizational change is required to adopt this technology?
  + As this is a new project, there is no organizational changes required.
* What is the time frame to recover ROI?
  + Mr. Henry has given a time line of 18 months to complete this project. There is no such time-frame to recover ROI.
* How to identify stakeholders?
  + Stakeholders are identified by using the information provided and stakeholder analysis.

**Question 8:** **Four SDLC Methodologies**

* Sequential: In sequential methodology, it follows a sequential approach, where each step is followed by another. The steps are: Requirement gathering, Design, Implementation, Testing and deployment. It is used where the requirements are well defined and very limited changes are done.
* Iterative: This methodology works in iterations. In this, the project is completed in part by part. After each iteration, testing is done and then project moves to next iteration.
* Evolutionary: Evolutionary methodology is used where the requirement is not clear or keeps on changing with time. At first a basic prototype is developed and later features are added as per changing requirements.
* Agile: It is used in a fast-paced project. The project is developed in sprints.

**Question 9:** **Waterfall, RUP, Spiral and Scrum Models**

* Waterfall: Waterfall model is a sequential approach where a project is developed step wise. The process is moved to the next stage only after it has been successful in previous stage. This model is followed in the projects where requirements are clear and detailed. The steps are: Requirement gathering, Design, Implementation, Testing, Deployment.
* RUP: Rational Unified Process is an iterative approach. In this model the project is divided into four phases: Inception, Elaboration, Construction, Transition.  
  In Inception phase project planning is done by defining the project scope, identifying stakeholders, conducting feasibility and risk analysis.

In Elaboration phase designing is done like creating use cases, UML diagrams and prototyping.  
In Construction phase development and implementation is done. Whereas, transition phase consists of deployment and providing support.

* Spiral: Spiral model is an Evolutionary approach. In this, the model consists of multiple spirals divided into four phases: Planning, Risk analysis, Engineering and Evaluation phase. Each phase is repeated multiple time to avoid risk in project. This model is used where the chances of risk is very high and is evaluated in every iteration.
* Scrum: It is an Agile framework, where a project is developed in sprints. The project is delivered in small functional parts on regular basis. The Scrum team has 7 to 10 members and a sprint is of maximum 2 weeks. In scrum, documentation is not a priority.

**Question 10:** **Waterfall Vs V-Model**

* Waterfall model is a linear and sequential approach, whereas V-model is sequential approach that follows validation and verification approach.
* In waterfall, testing is done only after development phase is completed, whereas in V model, testing is done in parallel with development phase.
* It is difficult to make changes in waterfall model. In V-model making changes are easier because of early testing.
* Waterfall model has high risks, where as V-model has low risk due to continuous testing and verification while development.
* Customer involvement in Waterfall is less as compared to V-model.

**Question 11:** **As a BA, state your reason for choosing one model for this project.**

* As a BA, I would opt for V-model approach. Few reasons are:
  + We have Peter, Kevin and Ben who will be directly impacted by the solution and also committee members, therefore, we can use their experience as a farmer and their pov while creating test cases. This will also enable us to do testing simultaneously with development phase.
  + SME’s have more domain knowledge about the operations.
  + Waterfall model would require more detailed information.

**Question 12:** Gantt Chart

Plan Duration are in weeks:





**Question 13:** **Explain Difference between Fixed bid and Billing projects.**

* Fixed Bid Project:
  + Budget is fixed before project starts.
  + Requirements are clearly defined and fixed.
  + Changes are very less.
  + This is for short to medium term projects.
* Billing Project:
  + Payment is done on hourly basis and resources utilized.
  + Requirements are flexible and changes can be made later if required.
  + This is for long term projects.

**Question 14:** **Prepare time-sheets of a BA in various stages of SDLC.**

* Design time-sheet of a BA:

|  |  |  |  |
| --- | --- | --- | --- |
| S.no | Tasks | Actionable Items | Duration |
| 1. | Requirement gathering and Analysis. | Meeting with stakeholders | 2 Hrs. |
| 2. | Creating Functional Requirements | Documentation | 2 Hrs. |
| 3. | Preparing Business Process Model | Documentation and Workflow. | 1.5 Hrs. |
| 4. | Reviewing with the team. | Team meeting & Document sharing. | 2.5 Hrs. |

* Development time-sheet of a BA:

|  |  |  |  |
| --- | --- | --- | --- |
| S.no | Tasks | Actionable Items | Duration |
| 1. | Sharing Requirements with Development team. | Meeting with Tech team. | 2 Hrs. |
| 2. | Sharing, reviewing and supporting developer team with functional scenarios. | Sharing user-stories | 3 Hrs. |
| 3. | Tracking and reviewing development progress. | Feedback | 2 Hrs. |
| 4. | Updating requirements if required and documenting progress. | Working on Change requests. | 1 Hrs. |

* Testing time-sheet of a BA:

|  |  |  |  |
| --- | --- | --- | --- |
| S.no | Tasks | Actionable Items | Duration |
| 1. | Sharing details and reviewing test cases with testing team. | Team meeting | 2 Hrs. |
| 2. | Sharing requirements and conveying functionalities. | Team meeting | 2 Hrs. |
| 3. | Validating test results and conducting functional tests. | Business Logic check and providing feedback on workings. | 2.5 Hrs. |
| 4. | Documentation for risks and defect tracking. | Providing feedback if any. | 1 Hrs. |

* UAT time-sheet of a BA:

|  |  |  |  |
| --- | --- | --- | --- |
| S.no | Tasks | Actionable Items | Duration |
| 1. | Preparing scenarios and test cases. | Share the scenarios with stakeholders. | 2 Hrs. |
| 2. | Coordinating with users and reporting issues. | Ensuring smooth testing and documenting issues. | 2.5 Hrs. |
| 3. | Tracking and checking resolutions | Coordinating with developers to get the issue resolved. | 2.5 Hrs. |
| 4. | Finalizing UAT sign-off documents | Prepare sign-off documents and get approved. | 1 Hrs. |

* Deployment and Implementation Time sheet of a BA:

|  |  |  |  |
| --- | --- | --- | --- |
| S.no | Tasks | Actionable Items | Duration |
| 1. | Supporting in deployment planning. | Coordinating with team. | 2 Hrs. |
| 2. | Checking functionalities after deployment. | Check for any issues. | 2 Hrs. |
| 3. | Plan training for end users. | Create training schedule for users. | 3 Hrs. |
| 4. | Finalizing documents | Get final approval | 1 Hrs. |