Mr. Henry, after being successful as a businessman and has become one of the wealthiest persons in the city. Now, Mr. Henry wants to help others to fulfil their dreams. One day, Mr. Henry went to meet his childhood friends Peter, Kevin and Ben. They live in a remote village and do farming. Mr. Henry asked his friends if they are facing any difficulties in their day-to-day work. Peter told Mr. Henry that he is facing difficulties in procuring fertilizers which are very important for farm. Kevin said that he is also facing the same problem in-case of buying seeds for farming certain crops. Ben raised his concern on lack of pesticides which could help in greatly reducing pests in crops. After listening to all his friends’ problems, Mr. Henry thought that this is a crucial problem faced not only by his friends but also by so many other farmers. So, Mr. Henry decided to make an online agriculture product store to facilitate remote area farmers to buy agriculture products. Through this Online Web / mobile Application, Farmers and Companies (Fertilizers, seeds and pesticides manufacturing Companies) can communicate directly with each other. The main purpose to build this online store is to facilitate farmers to buy seeds, pesticides, and fertilizers from anywhere through internet connectivity. Since new users are involved, Application should be user friendly. This new application should be able to accept the product (fertilizers, seeds, pesticides) details from the manufacturers and should be able to display them to the Farmers. Farmers will browse through these products and select the products what they need and request to buy them and deliver them to farmers location

Mr. Henry has given this project through his Company SOONY. In SOONY Company, Mr. Pandu is Financial Head and Mr Dooku is Project Coordinator. Mr. Henry , Mr Pandu , and Mr Dooku formed one Committee and gave this project to APT IT SOLUTIONS company for Budget 2 Crores INR and18 months Duration under CSR initiative. Peter, Kevin and Ben are helping the Committee and can be considered as Stakeholders share requirements for the Project

Mr Karthik is the Delivery Head in APT IT SOLUTIONS company and he reached out to Mr Henry through his connects and Bagged this project. APT IT SOLUTIONS company have Talent pool Available for this Project. Mr Vandanam is project Manager, Ms. Juhi is Senior Java Developer, Mr Teyson, Ms Lucie, Mr Tucker, Mr Bravo are Java Developers. Network Admin is Mr Mike and DB Admin is John. Mr Jason and Ms Alekya are the Tester. And you joined this team as a BA

Q1. Identify Business Process Model for Online Agriculture Store – (Goal, Inputs, Resources, Outputs, Activities, Value created to the end Customer)

Answer: - Business process model for online Agriculture store

**Goal**: - To provide solutions for former day-to-day activities in a remote area for procuring fertilizers for farming, pesticides, and buying seeds for specific crops, Revenue.

**Input**: - Demand of Product, Type of product, category of product

**Output**: - Farming products easy availability at door, Revenue, multiple options for former to choose the correct product, Comparison

**Activity**: - Product Availability, Product manufacturer/seller, Product buyer Delivery

**Resource: -** Pesticide product, Seeds, Delivery man, Time, Farmer.

Value: - Time-saving, Easy availability, Comparison of product.

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Q2. Mr Karthik is doing a SWOT analysis before he accepts this project. What Aspects he Should consider as Strengths, as Weaknesses, opportunities and as Threats?

Answer-: SWOT:- Unique business model, Investment available for development of Application, Project initiated under the CSR.

Weaknesses: - Demand will increase or decrees as per season, Lack of knowledge of the product, Knowledge of target population about online store, Budget. Third party dependency for Product. Inventory management.

Opportunities: - Repetitive demand, a connection between the former and the manufacturer create a new business

Threats: - Easy access for manufacturer for high return, High investment risk, Availability of product, License, Product risk. Manufacturer can have denied for supply product during the season.

Q3. 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.

Answer:- Feasibility study of Project: -

**Hardware Requirements**: - System require for development for application -Storage capacity, Updated System, Traffic load testing for hardware system, Laptop, Computer, Mobile, Tablet etc. Fixed cost around – 15 Lakh for 18 month

### Software Requirements: - System software require from development - Server, Online platform, SQL licensee for data management, Java licensee. Estimated cost, Payment Getaway.

### Budget: - Development cost of application, Employee salary, License cost for software which require for development, - 1.2 CR for 18 month

### Time Frame: - Realistic timeline for website development, testing, and deployment. Availability of resource for development. Testing time in specific duration for load test and server test.

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Q4. 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.

Answer : -

**AS- IS** - Currently there is no platform for former to buy any product for their farming.

Time taking activity which impact of farming.

Availability for product should not confirm. Timing issue for visit the store.

Price discrimination, only selected product can buy from 1 store.

Former should have to carry the product.

**TO- BE** – Online platform for Remote, ruler and urban area former for forming product.

Easy access to former for check the availability of product.

Compression for different product, No timing issue in online store.

Compare the pricing for different and according should buy.

Deliver the product at home.

Q5. List down different risk factors that may be involved (BA Risks and process/Project Risks)?

Answer: - Risk very important factor to analysis any project and process before start work on it, as cost is involving everywhere.

1. Internal: - Lack knowledge of demand and supply of product can interrupt the application working.

Application would be user-friendly as it is for remote are people who are not much aware of technology.

1. External: - Easy access of any one in the market many other online platforms available like Amazon, Flipkart Etc. they can also start selling these product as these are very familiar application available in market.

Government approval for buy or sell any agriculture product.

Risk and compliances.

1. BA Risk: - Knowledge of domain (agriculture product risk compliance).

Stake holder requirement. User requirement. Network availability in remote area.

1. Project/Process Risks: - infrastructure and technology which use for development application would be challenge for product.

Development testing would be challenge as demand is not specific

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Q6. Perform stakeholder analysis (RACI Matrix) to find out the key stakeholders who can take Decisions and Who are the influencers

Answer: - RACI matrix is – Responsible, Accountable, Consulted, Informed for the project.

|  |  |
| --- | --- |
| Name |  |
| Mr. Henry | Stakeholder |
| SOONY | Stakeholder |
| Mr. Pandu | Client - Financial Head |
| Mr. Dokue | Project Coordinator- Client side |
| Peter, Kevin, and Ben | Project Coordinator- Client side |
|  |  |
| Mr Karthik | Upper management |
| Mr Vandanam | PM |
| Ms. Juhi | Developers |
| Mr Teyson | Developers |
| Ms Lucie | Developers |
| Mr Tucker | Developers |
| Mr Bravo | Developers |
| Mr Mike | Architect |
| Jhon | Data Base admin |
| Mr Jason and Ms alekya | Tester |
| Ankit | BA |

RACI Matrix Table -

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | Project Plan | BRD | Design | TS |
| Responsible |  | Mr. Vandanam | Ankit | Architect | TL/ Mr. vandanam |
| Accountable |  | Ankit | Mr. Andaman | Ankit | Ankit |
| Consultant |  | Ankit | Developer/ Architect / Data Admin | Developers |  |
| Informed |  | Ankit / Devop/ Architect | Developers/Architect / Tester | Mr. Vandanam | Mr. Vandanam / Architect/ Developers |

Q7. Help Mr Karthik to prepare a business case document.

Answer: - Business case document as per below.

Mr Karthik need to prepare a document with some questions which are like; -

1. Why the project initiated?

The project is initiated by Mr. Henry to help his former friend (Peter, Kevin, and Ben ) in remote area to supply a Farming product which require in day to day farming activity.

1. What are the current problem?

The current problem is as of now former went to from remote are to buy any farming product like Seed, Pesticide and other. Hence it has interrupted the day to day activity as they as to travel in near city in day time.

1. What are the resource requiring?

Resource require form complete the project development and user like – Application development, Former are user friendly about technology. Mobile, Laptop and network availability in remote area.

1. With this problem how many problems could be resolve?

With successful of this project many problems will resolve in 1 time.

1st – Easy availability of product at home.

2nd – Traveling time

3rd – Timing issue Etc

1. The ROI can be return in next 4-5 year after lunch application. It will help to all the former, Pesticides and seed company to connect with each other.

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Q8 – Four SDLC Methodologies –

Answer: - There are 4 SDLC methodologies are below – Sequential, Iterative, Evolutionary and Agile

1. Sequential (waterfall) – Sequential model also referred to as liner sequential life cycle model. In the waterfall model each step have completed before enter in next step. After each phase complete BA/PM have to check if project is ongoing on correct and continue with next step or discard the project.
2. Integrative (RUP – Rational Unified process) – The RUP process is iterative software development process framework. It is set of Building block to describe, what is to be produced and skill require for production and step by step explication as how we can achieve the goal.

Inception – Details discussion with Team and client as what we will produced

Elaboration – Details discussion with Team, Architect and DBA team about the deliverable structure.

Contraction – It is process of implantation of fully functional system.

Transition – it is step where product deliver to client with all the functions and data.

1. Evolutionary – Spiral model – This model is basically for risk analysis due the project.

It has 4 phase – Planning, Risk, Risk Analysis, Engineering and Evolution.

1. Agile – Scrum – Model can be implemented in the project which project required fastest deliverable. No document process require code itself a document and team directly discuss with development team. And all the changes are accepting event late changes are also accepting.

Q9. They discussed models in SDLC like waterfall RUP Spiral and Scrum.

You put forth your 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?

Answer :- Under the SDLC there are multiple model as per below

* Waterfall: - A linear and sequential method for software development. Each phase of the project must be completed before the next project start, with little overlap or iteration. . After each phase complete BA/PM have to check if project is ongoing on correct and continue with next step or discard the project

RUP :- The RUP process is iterative software development process framework. It is set of Building block to describe, what is to be produced and skill require for production and step by step explication as how we can achieve the goal.

V Model:- A linear development model emphasizing validation and verification processes. It's an extension of the Waterfall Model, strongly focusing on testing at every stage.

Spiral :- This model is basically for risk analysis due the project. It has 4 phase – Planning, Risk, Risk Analysis, Engineering and Evolution.

Scrum :- An Agile framework focusing on delivering value in short, iterative cycles called Sprints

-----------------------------------------------------------------------------------------------------------------------------------------10. Write down the differences between waterfall model and V model.

Answer : - Difference between in Waterfall model and V model.

|  |  |
| --- | --- |
| Waterfall model | V Model |
| Testing is performed only after the development phase is complete. | Testing is performed alongside each development phase (early and continuous testing). |
| High cost if any changes require it will come later | Low cost changes requirement will received at the development phase. |
| Sequential progression from one phase to the next. | Each development process a corresponding testing |
| Less customer interaction | High customer Interaction |
| Suitable for small project | Suitable for big project |

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Q. 11 As a BA, state your reason for choosing one model for this project.

Answer – AS a BA I would like to suggest V model for this project as product cost and duration is small. So we have to start development and test need to be to-gather. As the Client requirement are clear which not new for development similar kind of application were already in market so no such research and cost involve. Through the V model we can deliver the project before the time line.

Question 12 – Gantt Chart –

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.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Week1 | Week 10 | Week 20 | Week 40 | Week 55 | Week 70 | Week 78 |
| RG  RA   |  | | --- | |  |   Design  Coding  Testing |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Resource | Week1 | Week 10 | Week 20 | Week 40 | Week 55 | Week 70 | Week 78 |
| PM |  | | | | | | |
| BA |  | | | | | | |
| Developers |  |  |  | | | |  |
| Operation Support |  |  | | | | | |
| Tester |  |  |  |  |  |  |  |
| Network |  |  |  |  |  |  |  |

Question 13 – Fixed Bid Vs Billing - 5 Marks

Answer – Difference in Bid bs Billing as per per below

Fixed have fixed cost about the project and time duration pre decided. – it is generally for small project

Billing have for large project where work done as per work done till time. FTE (Full time employment) and also time duration not fixed for project like Research new product development.

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| BA Time sheet | | | | |
| Series No | Task | Start Time | End Time | Hrs |
| 1 | Stakeholder Meeting | 10:00 AM | 11:00 AM | 1:00 |
| 2 | Meeting with PM/Developers with Update and Client requirement | 11:00 AM | 3:00 PM | 4:00 |
| 3 | Document preparation - BRD Etc | 3:00 PM | 5:00 PM | 2:00 |
| 4 | Again team meeting with PM/Developers for Issue and Update | 5:00 PM | 7:00 PM | 2:00 |