**Project Prep 1 Case Part 1**

**Online Agriculture Products Store**

**1 Question**

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

**Answer**

Goal - To develop online agricultural store to provide a platform for customers to purchase agricultural products & services conveniently through the internet.

Inputs – Products information, customers information, order information.

Resources – Website, online platform, payment gateway, delivery logistics.

Outputs – customer satisfaction, feedback.

Activities – Product listing, order processing, inventory management, providing customer support.

Value created to the customer – Convenience, access to a wide range of products, timely delivery, transparency.

**2 Question**

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.

**Answer**

Strengths – Providing wide range of products

 Cost effective

 Convenience

Weakness – Gap in technology

 Technical issues

 Lack of personal interaction

Opportunities – Market expansion

 Diversification

Threats – Insufficient resources

 Someone else launching similar platform

 Competition.

**3 Question**

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**

Hardware requirements - Servers, networking, devices.

Software requirements - E-commerce, content management system, security measures.

Trained resources - Technical expertise, marketing & sales.

Budget - Development cost, maintenance cost, marketing & promotion.

Time Frame - Development timeline, launch and growth.

**4 Question**

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**

| **Feature** |  **AS-IS (Current Process)** |  **TO-BE (Future Process)** |
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| **Accessibility** | Limited to local markets and manual visits | Online access from any location with internet |

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| **Product Range** | Limited product variety and inconsistent supply | Wide range of products from multiple manufacturers |

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| **Efficiency** | Time-consuming and labor-intensive | Fast, digital, and automated ordering process |

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| **Communication** | No direct interaction with manufacturers | Direct communication between farmers and suppliers |

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| **Order Tracking** | No tracking—manual follow-up |  Real-time order tracking via the app |

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| **Payment** | Cash-based and manual |  Secure digital payment options |

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| **Support** | No dedicated customer support |  24/7 customer support via the app |

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| **Data Insights** | No data tracking |  Comprehensive analytics for decision-making |

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| **Scalability** | Limited to local areas |  Nationwide reach and expansion opportunities |

**5 Question**

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

**Answer**

Business Analysis Risks:

1) Changes in market demand for agricultural products can impact the success of the online store.

2) Intense competition from existing or new players in the market may affect the store's profitability.

3) Dependency on agricultural suppliers for product availability and quality can be a risk.

4) Understanding and predicting customer behavior and preferences accurately can be challenging.

5) Insufficient knowledge of the technology required to develop the online product store.

Process/Project Risks

1) Inadequate IT infrastructure and internet connectivity in remote areas leading to difficulty in accessing the online store.

2) Security risks associated with online transaction and personal information of the users.

3) Technical risks associated with the development and implementation of the online store such as software bugs or system crashes.

4) Delay in delivery of materials due to unforeseen circumstances.

**6 Question**

Perform stakeholder analysis (RACI Matrix) to find out the key stakeholders who can take

Decisions and Who are the influencers

 **Answer**



**7 Question**

Help Mr Karthik to prepare a business case document

**Answer**

* Why is this project initiated?

This project is initiated because most of the farmers facing trouble in farming due to lack of agricultural products.

* What are the current problems?

The current problem is that the farmers are facing difficulties in procuring fertilizers, buying seeds.

* With this project, how many problems could be solved?

It helps to solve the problems of farmers who are facing trouble to buy the agricultural products.

* What are the resources required?

Website, online platform, inventory management system, payment gateway, delivery logistics.

* How much organizational change is required to adopt this technology?

To adopt this technology we need to make some organizational changes which include setting up a dedicated team, establishing partnerships with farmers, and implementing new processes for inventory management and order fulfillment.

* What is the time frame to recover ROI?

The time frame of the project is 18 months so the recover of ROI could be probably after 1 year.

* How to identify stakeholders?

By considering customers, suppliers, farmers, delivery partners.

**8 Question**

Four SDLC Methodologies

**Answer**

SDLC Methodologies

**Sequential – waterfall model**

It is a linear and step-by-step process where we can complete one stage before moving on to the next. This methodology is often used when there is a clear and well-defined path to achieving a goal, and each step depends on the successful completion of the previous step. It helps to ensure that a project or process is executed in a logical and organized manner by reducing the risk of mistakes.

**Iterative – RUP model**

In this approach, we don't necessarily have to complete all tasks in a linear sequence. Instead, we have to start with a basic concept and then continually refine and enhance it through multiple iterations. Each iteration involves feedback, evaluation, and adjustments, allowing for improvements and adaptations as the project or solution evolves.

**Evolutionary – Spiral model**

This methodology emphasizes continuous adaptation and improvement over time. In this method, the initial solution or concept is not fixed but is allowed to evolve and change based on ongoing feedback, learning, and the dynamic needs of the situation.

**Agile – Scrum model**

This methodology emphasizes flexibility, collaboration, and responsiveness to change. It is like a dynamic and adaptable roadmap for completing tasks or projects. In this methodology, work is divided into small, manageable parts called iterations.

**9 Question**

 Waterfall RUP Spiral and Scrum Models

**Answer**

**Waterfall model:**

The Waterfall model is a sequential and linear approach to software development and project management. In this methodology, the entire project is divided into distinct phases that must be completed one after the other, similar to how water flows down a waterfall in a continuous manner. The Waterfall model is often used in projects where the requirements are well-understood and unlikely to change significantly. It offers a structured and predictable approach to development, with each phase building upon the previous one.

Stages in waterfall model:

* Requirements gathering
* Requirements Analysis
* Design
* Development – coding
* Testing
* Deployment & implementation

**RUP model:**

In this model phase wise application is developed. It is a heavy weight process model. We can track the defects at early stage it helps to avoid the downward flow of the defects. This model will have multiple stages which requires more resources and more budget. It is often used in larger and more complex software development projects where there is a need for detailed processes and documentation.

**Spiral model**

The spiral model is a risk- driven process model. It contain four parts such as: planning, risk analysis, engineering and evaluation. This model repeatedly passes through these phases in iterations.

**Scrum model**

The Scrum model is an agile software development methodology that focuses on delivering small, functional increments of a product in short, time-boxed iterations called sprints. It emphasizes collaboration, adaptability, and regular feedback to continually improve the product. Scrum uses roles like Scrum Master, Product Owner, and Development Team, as well as various ceremonies, such as daily stand-up meetings and sprint reviews, to manage and guide the development process.

**As a business analyst, which methodology do you think would be better for this project?**

As a Business analyst, I think that V- model would be better for this project.

**10 Question**

Waterfall Vs V-Model

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| **Waterfall model** | **V- model** |
| * The cost is low
 | * It is expensive
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| * It moves in a linear way
 | * It doesn’t move in a linear way
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| * Testing activity start at the later stages
 | * Testing activities start at the first stage
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| * Less customer involvement
 | * More customer involvement
 |
| * Identification of defects is done in the testing stage
 | * Identification of defects can be done from the beginning
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| * It is a continuous process
 | * It is a simultaneous process
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**11 Question**

Justify your choice - As a BA, state your reason for choosing one model for this project.

**Answer**

As a business analyst I would like to choose v-model for this project, because it could emphasis on testing and verification. It ensures that each development phase has a testing phase, which helps in identifying, resolving issues in early stage and reduces risk and ensuring that the final product meets its desired quality standards.

**12 Question**

Gantt Chart

**Answer**

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**13 Question**

Fixed Bid Vs Billing

**Answer**

Fixed bid model

In a fixed bid model, the price is predetermined and agreed upon before the project or service begins. The client and the provider agree on a fixed amount to be paid for the entire project or a specific set of deliverables. Clients benefit from cost predictability, as they know upfront what the project will cost, regardless of the actual time or resources required. The provider takes on the risk of delivering the project within the agreed-upon budget. If it takes longer or costs more than anticipated, the provider still receives the fixed fee.

Billing model

Billing models can encompass a range of pricing methods, such as hourly rates, value-based pricing and more. The specific billing model used can vary based on the nature of the service and client preferences. Billing models offer more flexibility, as clients are typically charged based on actual time spent or resources used, which can be suitable for projects with evolving requirements. Depending on the billing model, the risk can be shared between the provider and the client. For example, in an hourly rate model, clients pay for actual hours worked, and providers are compensated for the effort they put in. Billing models can adapt to different projects, clients, or industries, allowing for customization based on specific needs.

**14 Question**

 Timesheets

**Answer**

**Requirement gathering Phase:**

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**Requirement Analysis Phase:**

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**Design phase**

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**Testing phase**

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**UAT Timesheet:**

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**Deployment and implementation timesheets of a BA**

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