

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

1.GOAL

1. To facilitate remote area farmers to (**EASILY AND DIRECTLY PURCHASE**) essential agriculture products (seeds, fertilizers, pesticides) from manufacturers/companies using an online web/mobile application.

2.INPUTS

1. **Product Data:** Details, pricing, and inventory from manufacturers (Companies).
2. **Farmer Demand/Request:** Product selection, quantity, and delivery location from farmers
3. **Payment Information:** Transaction details for purchase.

3.RESOURCES

1. **Technology Platform:** The Online Web/Mobile Application (built by APT IT SOLUTIONS).
2. **Personnel (SOONY & APT IT):** Project team, administration, finance (Mr. Henry, Mr. Pandu, Mr. Dooku, Mr. Karthik, Mr. Vandanam , Developers, Testers, Admins).
3. **Logistics/Delivery Network** (Implied): To fulfil the orders and deliver to the remote farmer locations.
4. **Financial Capital:** ₹2 Crores INR Budget.

4.OUTPUTS

1. **Completed Orders:** Confirmation of purchase and successful transaction.
2. **Product Delivery:** Timely delivery of seeds, fertilizers, or pesticides to the farmer's location.
3. **Direct Communication:** Established link between farmers and manufacturers.

5.ACTIVITIES

1. **Manufacturer Onboarding:** Companies upload their product inventory and details to the application.
2. **Product Display:** Application displays available products to all registered farmers.
3. **Order Placement:** Farmers browse, select products, and submit a purchase request (order).
4. **Order Processing & Fulfillment:** The manufacturer/platform processes the order, manages inventory, confirms payment, and arranges logistics.
5. **Delivery:** Products are delivered to the farmer's specified location.

6.VALUE CREATED TO THE END CUSTOMER

1. **Accessibility and Availability:** Farmers in remote areas (like Peter, Kevin, and Ben) get direct access to essential agricultural supplies (fertilizers, seeds, pesticides) that were previously difficult to procure.
2. **Reduced Costs/Time:** Potential for lower prices by directly connecting with manufacturers and saving time/effort compared to traditional procurement methods.
3. **Reduced Pests & Better Yields:** Having timely access to the right products directly helps solve problems like the lack of pesticides and seeds, leading to better crop management and potentially higher yields.

Q2.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.

1.STRENGTHS

1. **Available Talent Pool:** A dedicated team (Mr.Vandanam), developers, admins, testers) is already identified and ready.
2. **Clear Scope & Budget:** A defined \$2 Crores INR budget and 18 month duration minimize financial and timeline uncertainty.
3. **Strong Connections:** Mr.Karthik's existing connects were key to bagging the project, suggesting a good relationship with the client.

2.WEAKNESSES

1. **New Domain:** Lack of specialized expertise in the **AgriTech/Agriculture supply chain** domain could lead to learning curves and requirements issues.
2. **User Experience Challenge:** The core requirement for the application to be **"user friendly" for remote farmers** is a difficult UX/UI challenge.
3. **BA Resource:** The BA (YOU) is a new joiner; the core team lacks established support at the time of analysis.

3.OPPORTUNITIES

1. **Market Entry into AgriTech:** This project allows APT IT SOLUTIONS to build expertise and a portfolio in the massive, growing **rural/agriculture tech** sector.
2. **Strategic Client Relationship:** Securing a CSR initiative for a wealthy businessman's company (SOONY) ensures a high-value, long-term client relationship.
3. **Direct User Access:** Peter, Kevin and Ben provide a direct, valuable source of **end-user requirements**.

4.THREATS

1. **Connectivity in Remote Areas:** The core reliance on **internet connectivity** for remote farmers is a major risk, as poor infrastructure could make the application unusable.
2. **Scope/Requirement Volatility:** Non-technical farmer stakeholders may present vague, changing, or complex requirements that lead to scope creep.
3. **Logistics & Regulations:** Dealing with the supply chain of regulated products like **fertilizers and pesticides** carries unknown logistical and legal complexity.

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.

1. Hardware

1. **Production Server Requirements:** Will the application (Java backend, database, web server) require dedicated cloud infrastructure (AWS, Azure, etc.) or on-premise servers?
2. How much **RAM, CPU, and storage** will be needed to handle expected farmer and company traffic (scalability)?
3. **Disaster Recovery/Backup:** Is the HW setup redundant to ensure high availability?

2. SOFTWARE

1. **Java Ecosystem:** Are the required frameworks (e.g., Spring Boot for the backend, Hibernate for ORM) open-source/licensed?
2. **Database Selection:** (JOHN DB ADMIN) needs to assess if the chosen DB(e.g., PostgreSQL, MySQL) supports the load and the required complexity of product, order, and user data.
3. **Mobile Compatibility:** Will the application be a native Android/iOS app (more SW complexity) or a mobile-responsive web app (simpler SW build)

3. TRAINED RESOURCES

1. **Existing Team Skill Set:** Does (MS JUHI) and the team (TEYSON, LUCIE, BRAVO, TUCKER) have specific experience in **e-commerce, payment gateways, and logistics integration** within?
2. **Training Needs/Cost:** If skills gaps exist (e.g., mobile development, new version), what is the cost and time required for training?

4.BUDGET

1. **License Costs:** While JAVA itself is free, are there any costs for development tools, specialized JAVA libraries, or DB/OS licenses?
1. **HW/Costs:** What is the recurring cost for the necessary production and staging environments?
2. **Personnel Costs:** Does the \$2 Crore budget cover the salaries of all APT resources for the full **18 months**, including potential overtime or bonuses for meeting the timeline?

5.TIMEFRAME

1. **Complexity vs. Duration:** Is an **18-month duration** realistic for building a full e-commerce system that involves two distinct user types (FARMERS and COMPANIES), inventory management, payment, and logistics?
2. **Integration Time:** How long will it take to integrate with external systems (payment gateways, logistics providers, company)?

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.

1.PROBLEM GOAL

1. AS-IS (EXPECTING PROCESS): - Farmers face **procurement difficulties** for essential products (fertilizers, seeds, pesticides) due to remoteness and lack of direct supply chain access.
2. TO-BE (FUTURE ONLINE STORE): - Farmers can **easily and directly purchase** products from manufacturers through a mobile/web application.
3. **Accessibility Gap:** Difficulty and time spent in sourcing vs. **immediate, 24/7 access** to a comprehensive product catalogue.

2.PRODUCT SOURCING

1. AS-IS -Manual, fragmented, and often reliant on **local middlemen/suppliers**, leading to high costs and low availability (as experienced by Peter, Kevin, and Ben).
2. TO-BE (FUTURE ONLINE STORE): - **Direct connection** with **certified manufacturers** (Companies), ensuring product quality, better selection, and competitive pricing.
3. SUPPLY CHAIN GAP: - Indirect, expensive, and unreliable supply chain vs. **direct, transparent, and efficient** communication.

3.INFORMATION

1. AS-IS- Farmers have **limited knowledge** of new products, best prices, or reliable sources. Companies have **zero visibility** into remote area demand.
2. TO-BE (FUTURE ONLINE STORE): - Manufacturers provide detailed **product specifications, stock, and pricing** directly on the app; Farmers get real-time, consolidated information.
3. INFORMATION GAP-Opaque pricing and product data vs. **transparency and consolidated** data for informed decisions.

4.TRANSACTION

1. AS-IS: - Inefficient, cash-based transactions often requiring the farmer to **travel long distances** and commit to bulk purchases from limited sellers.
2. TO-BE: - **Online order placement and payment** (implied) from the farm, with delivery directly to the farmer's location.
3. PROCESS & TIME GAP: - High overhead of travel and manual transactions vs. **digital, convenient, and time-saving** purchasing.

5.VALUE/IMPACT

1. 1.AS-IS: - Low crop yields and profit due to lack of timely access to supplies (e.g., Ben's concern about pests).
2. 2.TO-BE: - Improved crop yield, reduced pest damage, and **higher farmer profitability** due to timely availability and better-quality products.
3. PROFIT GAP: - Suboptimal farming output vs. **optimized resource availability** leading to greater returns on investment.

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

1.((Focus on Requirements & Users))

1.REQUIREMENT VOLATILITY

- Farmers (KEVIN, BEN, PETER) and Companies may have **changed or evolving needs** as they start seeing the application, leading to continuous scope changes.

2.Lack of Clarity

- The requirement for the app to be **"user friendly" for new, non-tech-savvy users** (remote farmers) is abstract and subjective, risking poor adoption.

3.Incomplete Stakeholder Identification

- Failing to include critical external stakeholders, such as **logistics partners** or **regulatory bodies** for pesticides/fertilizers.

4.Ambiguous Manufacturer Requirements

- Companies might have complex text {APIS} or inventory systems that are poorly documented, making integration requirements difficult to capture.

1.(Focus on Execution & Delivery)

1. Technology/Connectivity Failure

1. Poor or non-existent **internet connectivity** in remote villages (a known threat from the analysis) may render the mobile application unusable.

2. Scope Creep

- Uncontrolled addition of features not covered by the \$2 CRORE budget, driven by the mission or stakeholder enthusiasm.

3. Technical Integration Risk

- Failure to successfully integrate the platform with **multiple external systems** (payment gateways, logistics providers, various manufacturers' inventory systems).

4. Resource Dependency

- High reliance on single individuals, such as Mr. Vandanam (PM), Ms. Juhi (Senior Java Developer), or John (DB admin).

5. Change Management

- Farmers and manufacturers may be **resistant to changing** their current, established (though inefficient) ways of working.

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

- A **RACI Matrix** is a tool used for **stakeholder analysis** that defines and documents the roles and responsibilities of stakeholders for specific project activities or deliverables.

1)APPROVE BUDGET & SCOPE

- Mr Henry (Sponsor)-ACCOUNTABLE
- Mr Pandu (Finance)-CONSULTED
- Mr Dooku (Coordinator)-INFORMED
- Mr Karthik (Delivery Head)-RESPONSIBLE
- Mr Vandanam (Project Manager)-CONSULTED
- Peter,kevin,ben(farmers)-INFORMED

- Manufactures (Company)-INFORMED

2.GATHER FARMER REQUIREMENTS

- Mr Henry (Sponsor)-INFORMED
- Mr Pandu (Finance)-INFORMED
- Mr Dooku (Coordinator)-CONSULTED
- Mr Karthik (Delivery Head)-RESPONSIBLE
- Mr Vandanam (Project Manager)-ACCOUNTABLE
- Peter,kevin,ben(farmers)-CONSULTED/RESPONSIBLE
- Manufactures (Company)-INFORMED

3.APPROVE TECHNICAL DESIGN

- Mr Henry (Sponsor)-INFORMED
- Mr Pandu (Finance)-INFORMED
- Mr Dooku (Coordinator)-CONSULTED
- Mr Karthik (Delivery Head)-ACCOUNTABLE
- Mr Vandanam (Project Manager)-RESPONSIBLE
- Peter,kevin,ben(farmers)-INFORMED
- Manufactures (Company)-CONSULTED

4.DEVELOP & CODE APPLICATION

- Mr Henry (Sponsor)-INFORMED
- Mr Pandu (Finance)-INFORMED
- Mr Dooku (Coordinator)-INFORMED
- Mr Karthik (Delivery Head)-CONSULTED
- Mr Vandanam (Project Manager)-ACCOUNTABLE
- Peter,kevin,ben(farmers)-INFORMED
- Manufactures (Company)-INFORMED

5.PERFORM UAT TESTING

- Mr Henry (Sponsor)-INFORMED
- Mr Pandu (Finance)-INFORMED
- Mr Dooku (Coordinator)-CONSULTED
- Mr Karthik (Delivery Head)-INFORMED
- Mr Vandanam (Project Manager)-RESPONSIBLE
- Peter,kevin,ben(farmers)-ACCOUNTABLE
- Manufactures (Company)-CONSULTED

6.APPROVE GO-LIVE(DEPLOYMENT)

- Mr Henry (Sponsor)-ACCOUNTABLE
- Mr Pandu (Finance)-CONSULTED
- Mr Dooku (Coordinator)-RESPONSIBLE
- Mr Karthik (Delivery Head)-CONSULTED
- Mr Vandanam (Project Manager)-RESPONSIBLE
- Peter,kevin,ben(farmers)-CONSULTED
- Manufactures (Company)-CONSUTLED

Key Takeaways for Decision-Makers and Influencers

- Key Decision-Makers (Accountable - A)- **Mr. Henry** (Final Sign-off), **Mr. Pandu** (Budget), **Mr. Karthik** (Design), **Mr. Vandanam** (Execution), **Farmers** (PETER, KEVIN, BEN) (User Acceptance).
- Influencers (Consulted - C)- **Mr. Pandu, Mr. Dooku, Mr. Karthik, Farmers, and Manufacturers.**
- **Farmers-** Directly influence the **usability and feature requirements.**
- **Manufacturers-** Directly influence **system integration and product display** requirements.
- **Mr. Dooku-** Influences coordination and alignment with SOONY's strategic goals.

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

Business Case: Online Agriculture Product Store

1.Executive Summary

- The project aims to create a mobile/web application to connect **remote farmers directly with manufacturers** of essential supplies (seeds, fertilisers, pesticides). This project directly addresses the goal of supporting rural communities by overcoming the **accessibility gap** and ensuring reliable, transparent access to high-quality products. With an **budget** and an **timeline**, this investment is critical to improving farmer productivity and profitability.

2.Statement (AS-IS)

- **Inefficient Supply Chain:** Farmers in remote areas (like PETER, KEVIN, BEN) struggle to procure high-quality supplies due to reliance on expensive, limited local suppliers and middlemen.
- **Lack of Accessibility:** The remoteness results in timely delivery issues and high travel costs for farmers.
- **Reduced Productivity:** The inability to access specific fertilisers, seeds, or pesticides (like Ben's pest concern) directly impacts crop health and overall yield.

3. Proposed Solution (TO-BE)

- **Name:** Online Agriculture Product Store (or a proposed brand name).
- **Description:** A user-friendly web and mobile application designed for farmers with basic internet access.
- **Core Functionality:**
- **Portal:** Allows companies to upload and manage product inventory and pricing.
- **Farmer Portal:** Allows farmers to browse, select, and purchase products from various manufacturers.
- **Logistics Integration:** Facilitates direct delivery to the farmer's remote location.

4.STRATEGIC ALIGNMENT & VALUE PROPOSITON

- Mr. Henry/SOONY- Fulfils the **mandate** by providing a lasting, scalable solution for rural upliftment.
- Farmers- **Direct access, transparent pricing, and timely delivery** of critical supplies, leading to better crop management and higher profits.
- Manufacturers - Access to a **new, untapped market** of remote farmers and real-time demand data.

5.Financial & Time Analysis

- Budget Required -\$2 CRORES INR
- Project Duration - 18 Months
- Resources – APT IT SOLUTIONS dedicated team (PM, Java developers, admins, testers, BA).
- Return on Investment (ROI) - **Intangible:** ROI: SOONY's brand enhancement through CSR impact, farmer loyalty, and media recognition.

6. Feasibility & Risk Summary

- **Feasibility:** APT IT is confident in the **technical feasibility** using JAVA robust technology, and the necessary skilled resources are allocated.
- **Top Risks:**
- **Remote Connectivity:** Ensuring the app works reliably in low-bandwidth areas.
- **User Adoption:** Managing the change from traditional buying to digital purchasing for non-tech-savvy farmers.
- **Scope Creep:** Managing evolving requirements from multiple stakeholder groups.

7.RECOMMENDATION

We recommend the SOONY Committee **approve the initiation** of this project immediately. The project is strategically vital to the CSR initiative, has a dedicated team, and the potential for social and market impact significantly outweighs the manageable risks. The next step is to begin the detailed requirements gathering phase with PETER, KEVIN AND BEN.

Q8. Question 8 – Four SDLC Methodologies

1.SDLC Methodologies

- **Sequential Methodologies (e.g., Waterfall Model)**
- **Clarity:** approaches complete one phase entirely before starting the next. It moves linearly down like a cascading waterfall.
 - *Phases:* Requirements Design Implementation Verification
Maintenance.
- **Best for this Project? NO**
 - **Why Not:** This project involves (remote farmers) and complex, potentially evolving requirements (e-commerce, logistics). models are rigid and handle changes poorly. If the farmer's UX feedback comes late, it requires expensive rework.

Iterative Methodologies (e.g., Iterative and Incremental)

- **Clarity:** methods build the system in small, repeated cycles (iterations). Each iteration produces a working, but incomplete, version of the software. The focus is on **repetition** to refine the product based on feedback.
- *Core Idea:* Build Test Evaluate Repeat.
- **Best for this Project?** YES
- **Why:** It allows the team to tackle high-risk areas first (like the mobile UX for remote connectivity) and get early feedback from without waiting until the end.

. Evolutionary Methodologies (e.g., Spiral Model)

- **Clarity:** models focus heavily on **risk analysis** and iterative refinement, similar to the approach, but with a major focus on gradually **growing the system** over time. The Spiral Model, a key example, cycles through planning, risk analysis, engineering, and evaluation repeatedly.
 - *Core Idea:* The product evolves over time, and major decisions are preceded by a risk assessment.
- **Best for this Project?** YES
 - **Why:** Given the project's mission and the inherent **risks** (remote connectivity, adoption), an approach ensures these risks are addressed and mitigated in early cycles.

Agile Methodologies (e.g., Scrum, Kanban)

- **Clarity:** is a set of principles that promotes adaptive planning, evolutionary development, early delivery, and continuous improvement, encouraging rapid and flexible response to change. It is highly **customer-centric** and relies on frequent, small releases.
 - *Core Idea:* Value customer collaboration over contract negotiation, and responding to change over following a plan.
- **Best for this Project?** STRONGLY YES
 - **Why:** is ideal because it directly supports the need for a **user-friendly** application. PETER, KEVIN AND BEN can act as product owners/representatives, providing feedback in short, frequent cycles (sprints), ensuring the final product meets the needs of the non-technical remote farmer.

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?

Understanding SDLC Models

1)

- Methodology - WATERFALL
- Type-SEQUENTIAL
- key characteristics- Highly structured; progress flows downwards. Requirements must be **complete and fixed** before design begins. No customer feedback until the end.

2)

- Methodology- **RUP** (RATIONAL UNIFIED PROCESS)
- Type -ITERATIVE/EVOLUTIONARY
- Key characteristics- **Risk-driven** and driven. Developed in four phases (INCEPTION, ELABORATION, CONSTRUCTION, TRANSITION), with frequent iteration and rigorous change management.

3)

- Methodology- SPIRAL
- Type-EVOLUTIONARY
- Key characteristics- Cycles through four activities (PLANNING, RISK ANALYSIS, ENGINEERING, EVALUATION). Focuses heavily on **risk mitigation** at each turn, producing incremental builds.

4)

- Methodology-SCRUM
- Type-AGILE/ITERATIVE
- Key characteristics- Time-boxed iterations (SPRINTS), focusing on delivering working software frequently. Highly collaborative and adaptable to **changing requirements**.

Recommended Methodology for the Project

The project has several characteristics that make strict models (like WATERFALL OR V-MODEL) unsuitable:

- **High User Uncertainty:** The application must be "**user friendly**" for new, non-tech-savvy users (REMOTE FARMERS). This requires frequent validation and feedback.
- **Changing Requirements:** Integration with multiple manufacturers and complex logistics are high-risk areas likely to require changes.

Mediating the Conflict: V-Model vs. Waterfall

- **Project Team's Preference (WATERFALL):** The team is leaning on WATERFALL because it's familiar and provides structured documentation. However, it delays user feedback until deployment, which is a **major risk** for a project where UX is critical.
- **SME's Preference (V-MODEL):** The V-MODEL is an extension of WATERFALL that places a strong emphasis on **testing and verification** corresponding to each development phase. While good for quality, it is **just as rigid** as WATERFALL and doesn't handle evolving requirements well.

BA Recommendation: Scrum (Agile) or RUP (Iterative)

As the Business Analyst, I would advocate for an **Iterative** or **Agile (Scrum)** approach:

- The **Scrum model** is the most suitable methodology for this project:
 - **Manages UX Risk:** Scrum's short and working software increments allow for frequent testing with farmer representatives (FARMERS). This directly addresses the **"user friendly"** requirement and mitigates the risk of adoption failure.
 - **Handles Change:** Scrum embraces changing requirements. As manufacturers and logistics complexities become clear, the team can **adapt and reprioritise** the remaining work easily.
 - **Encourages Collaboration:** Scrum promotes daily communication between 's team and the stakeholders (MR DOOKU and FARMER representatives), ensuring continuous alignment with the CSR mission.
- ❖ If a more structured approach is needed due to the e-commerce/integration complexity, **RUP** (Rational Unified Process) is a strong alternative as it is **risk-driven** (like SPIRAL) and explicitly manages iterations and changes, which is vital given the project risks identified in the RISK ANALYSIS.

Q10 Write down the differences between waterfall model and V model.

1)WATERFALL MODEL

- **Testing Timing-** Testing is a **separate phase** that occurs *after* all coding is completed.
- **Quality Focus-** Primarily focused on **finding bugs** late in the cycle.
- **Flow-** **Linear** and unidirectional (like a cascading waterfall).
- **Verification-** Requirements and design are typically verified **after** they are finished.
- **Validation-** The final product is validated against user needs **only at the end** (UAT).

2)V-MODEL

- Testing Timing- **Testing is planned in parallel** with the corresponding development activity.
- Quality Focus - Focuses on **defect prevention** by ensuring quality checks at every stage.
- Flow - **V-Shaped**, linking development stages to specific testing stages.
- Verification - Verification occurs **during** the development stages (e.g., reviewing requirements before design).
- Validation - Validation (testing) occurs against its corresponding development stage (e.g., System Testing validates Design)

Q11.As a BA, state your reason for choosing one model for this project.

- As the Business Analyst (BA), I would choose the **Scrum (Agile) Model** for this project.
- The primary reason for this choice is the critical requirement for the application to be **"user friendly"** for new users—the **remote farmers** (KEVIN, BEN, PETER).
- **High UX Risk Mitigation:** Scrum's core principle is to deliver working software in short, fixed iterations (SPRINTS). This allows the team to get **frequent, early feedback** from the farmer stakeholders. We can build a basic user interface, have PETER, KEVIN, BEN test it, and then quickly adapt the design, minimizing the risk that the final product will be rejected due to poor usability.
- **Handles Evolving Requirements:** The project involves complex integration with **Manufacturers** and unpredictable **Logistics**. Scrum embraces change; as we uncover new complexities, the team can easily **re-prioritize the backlog** for the next SPRINT without major schedule disruption.
- **Customer Collaboration:** Scrum emphasizes continuous collaboration. The Committee (MR HENRY, MR DOOKU) and the farmer representatives work closely with the team, ensuring the project continuously aligns with the CSR **mission** and the real-world needs of the end-user.

Q12.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.

Conceptual Gantt Chart for V-Model

1) Activity (V-MODEL Stage)

(Requirements Gathering)

- Duration – 4 WEEKS
- Resources-BA, PM, MR DOOKU AND FARMERS(C)
- (Verification/Validation)- Requirement document signed off by MR HENRY.

(Requirement analysis)

- Duration- 2 Weeks
- Resources- BA, PM
- (Verification/Validation)- System requirement and UAT PLAN defined.

(Design (HIGH LEVEL))

- Duration- 4 Weeks
- Resources- PM, SENIOR JAVA DEVS, DB ADMIN, NW ADMIN
- (Verification/validation)- Architecture/System design approved

(D1(MODULE 1 CODING))

- Duration –6 Weeks
- Resources-Java Devs
- (Verification/validation)- COMPLETED MODULE 1 CODE (e.g., User Login).

(T1(UNIT TESTING)

- Duration-2 Weeks
- Resources- Java Devs, Testers(c)
- (Verification/validation)- D1 code verified against LOW-LEVEL DESIGN.

(D2(MODULE 2 CODING)

- Duration- 8 Weeks
- Resources- Java Devs
- (Verification/validation)- COMPLETED MODULE 2 CODE (e.g., Product Catalogue).

(T2(INTEGRATION TESTING)

- Duration- 4 Weeks
- Resources – Testers, DB admin
- (Verification/validation) – D1 and D2 integrated and verified against.

(D3(MODULE 3 CODING)

- Duration-10 Weeks
- Resources-Java Devs
- (verification/validation)-COMPLETED MODULE 3 CODE (e.g., Order Processing/Payment).

(T3(SYSTEM TESTING)

- Duration-4 Weeks
- Resources- TESTERS, DB ADMIN, NW ADMIN
- (Verification/Validation) – ENTIRE SYSTEM verified against SYSTEM REQUIREMENTS.

(D4(FINAL INTEGRATION/FIXES)

- Duration- 4 Weeks
- Resources- Java Devs
- (Verification/Validation) - Final, stable code baseline.

(T4(ACCEPTANCE TESTING)

- Duration –3 Weeks
- Resources- Testers, BA
- (Verification/Validation)- SYSTEM verified against HIGH-LEVEL REQUIREMENTS.

(UAT)

- Duration- 4 Weeks
- Resources- BA, FARMERS(A), MR DOOKU(A)
- (Verification/Validation)- FINAL PRODCUT validated against the **initial business needs**.

Q13.Explain the difference between Fixed Bid and Billing projects.

1) Fixed Bid (Fixed Price)

- Cost Structure – **Fixed, single price** agreed upfront for the entire scope.
- Financial Risk – **Contractor (Vendor) assumes the risk**. Overruns mean the contractor loses money.
- Scope Flexibility – **Rigid**. Changes require formal, costly change requests.
- Requirements – Must be **completely defined and stable** before the project starts.
- Best For - Small, well-defined projects (e.g., a simple upgrade).

2)BILLING PROJECTS

- Cost Structure –Client pays for **actual time and effort** (hourly/daily rates) and materials used.
- Financial Risk-**Client assumes the risk**. Overruns mean the client pays more.
- Scope Flexibility-**Flexible**. Scope can easily evolve and adapt during development (best for Agile).
- Requirements-Can be **vague or evolving**; refined throughout the project.
- Best For -Complex, long-term product development with uncertainty.

Q14. Preparer Timesheets of a BA in various stages of SDLC

- Design Timesheet of a BA
- Development Timesheet of a BA
- Testing Timesheet of a BA
- UAT Timesheet of a BA
- Deployment n Implementation Timesheet of a BA

(1) Design Timesheet of a BA (Linking to Technical Design)

➤ **DESIGN REVIEWS AND WALKTHROUGHS**

- Time Allocation (HRS) -12 HRS
- Key Tasks- Attending design meetings; ensuring HIGH-LEVEL DESIGN and LOW-LEVEL DESIGN TO satisfy all captured requirements.
- Deliverable Focus - Design Sign-off

➤ **DATA AND INTERFACE MAPPING**

- Time Allocation-10 HRS
- Key tasks- Working with DB ADMIN (MR JOHN) to ensure data models support business rules; defining integration points with Manufacturer systems.
- Deliverable focus - Interface Specifications

➤ **REQUIREMENTS CLASSIFICATION**

- Time allocation- 8 HRS
- Key tasks- Answering technical team's (JAVA DEVS) questions about edge cases, business rules, and non-functional requirements.
- Deliverable focus - Resolved Queries Log

➤ **TEST PLANNING**

- Time allocation- 6 HRS
- Key tasks- Reviewing the T2(INTERGATION) and T3(SYSTEM) test plans to ensure they cover all requirements.
- Deliverable focus- Test Coverage Matrix

➤ **CONTIGENCY/ADMIN**

- Time allocation- 4 HRS
- Key tasks- Documentation updates, status reporting to MR VANDANAM(PM).
- Deliverable focus- Weekly status report.

2) Development Timesheet of a BA (D1, D2, D3, D4 - Coding Phases)

➤ **DEVELOPER SUPPORT**

- Time allocation – 15 HRS
- key tasks- Daily check-ins/stand-ups; clarifying business rules during coding; addressing bugs filed early by developers.
- Deliverable focus – Resolved Queries Log

➤ **CHANGE REQUIREMENT MANAGEMENT**

- Time allocation – 10 HRS
- key tasks- Identifying, documenting, and managing any scope changes or requirement adjustments that arise during development.
- Deliverable focus – Change Request (CR) Log

➤ **REQUIREMENTS REVIEW**

- Time allocation- 8 HRS
- Key tasks – Reviewing code (or screen functionality) against the original requirements to identify early deviations.
- Deliverable focus – Traceability Matrix Update.

➤ **FUTURE UAT PREPARATION**

- Time allocation- 4 HRS
- Key tasks – Developing preliminary UAT scripts and test cases based on business scenarios for the final stage.
- Deliverable focus – Scenario Outline

➤ **CONTINGENCY/ADMIN**

- Time allocation – 3 HRS
- Key tasks- Status reporting, risk updates.
- Deliverable focus- Status Report/Risk Log

3) Testing Timesheet of a BA (T1, T2,T3,T4-QA Phases)

➤ **TEST CASE REVIEW AND SIGN OFF**

- Time allocation-10 HRS
- Key tasks- Working with (JASON/AKLEYA) to ensure all T1/T2/T3 test cases accurately reflect business needs and acceptance criteria.
- Deliverable focus- Test Case Sign-off

➤ **DEFECT TRIAGE & CLASSIFICATION**

- Time allocation- 15 HRS
- Key tasks- Analysing and prioritizing defects reported by testers; determining if a defect is a **bug**, a **new requirement**, or a **misunderstanding**.
- Deliverable focus- Defect Priority Log

➤ **FUNCTIONAL TESTING**

- Time allocation- 8 HRS
- Key tasks- Performing informal functional testing or smoke testing on newly released builds to ensure business-critical functions work.
- Deliverable focus- Functional Test Reports

➤ **UAT PREP & ENVIRONMENT SETUP**

- Time allocation- 5 HRS
- Key tasks- Coordinating with NW ADMIN(MIKE) and DB ADMIN(JOHN) to prepare the final environment and data for UAT.
- Deliverable focus- UAT Environment Checklist

➤ **CONTINGENCY/ADMIN**

- Time allocation- 2 HRS
- Key tasks- Status reporting, dependency checks
- Deliverable focus- Weekly Status Report

4) UAT TIMESHEET OF A BA(UAT)

➤ **UAT Execution Management**

- Time allocation- 15 HRS
- Key tasks- Leading UAT sessions with farmer stakeholders (PETER, KEVIN, BEN) and MR DOOKU; managing the test schedule and data.
- Deliverable focus- UAT Session Log

➤ **Defect/Feedback Analysis**

- Time allocation- 15 HRS
- Key tasks- Capturing, documenting, and analysing feedback from farmers; classifying issues as showstoppers, minor bugs, or future enhancements.
- Deliverable focus- UAT Defect Log

➤ **Sign-off Coordination**

- Time allocation- 6 HRS
- Key tasks- Coordinating with MR DOOKU and MR HENRY on completion status and securing final business approval to move to deployment.
- Deliverable focus- UAT Final Report/Sign-off

➤ **Training Material Input**

- Time allocation- 4 HRS
- Key tasks- Providing functional content and procedural steps for the user manuals based on the final, approved system.
- Deliverable focus- Training Material Content

5) Deployment & Implementation Timesheet of a BA

➤ **System Training & Support**

- Time allocation-15 HRS
- Key tasks- Conducting training for SOONY support staff and creating user guides for farmers and manufacturers.
- Deliverable focus- User Training Sessions

➤ **Post-Deployment Validation (Go-Live Check)**

- Time allocation-10 HRS
- Key tasks- Executing critical business scenarios (e.g., placing the first few real orders) to confirm the system is stable in the production environment.
- Deliverable focus- Production Smoke Test Report

➤ **Hypercare Support**

- Time allocation-10 HRS
- Key tasks- Addressing urgent production issues and providing immediate clarification to the support team on unexpected business scenarios.
- Deliverable focus- Hypercare Issue Log

➤ **Lessons Learned & Closeout**

- Time allocation- 5 HRS
- Key tasks- Participating in the project closeout meeting; documenting successes, failures, and recommendations for future phases.
- Deliverable focus- Lessons Learned Document

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