**Question 1 – BPM - 5 Marks**

**Business Process Model for Online Agriculture Store**

**​**

**Goal:**

To create an online platform that facilitates farmers in remote areas to buy agricultural products (seeds, fertilizers, pesticides) directly from manufacturers, ensuring ease of access and improving agricultural productivity.

​

**Inputs:**

* Requirements from stakeholders (farmers, manufacturers)

​

* Product details from manufacturers (seeds, fertilizers, pesticides)

​

* User feedback and requirements
* Budget (2 Crores INR)

​

* Project timeline (18 months)

**Resources:**

​

* Project Committee (Mr. Henry, Mr. Pandu, Mr. Dooku)

​

* APT IT SOLUTIONS team (Project Manager, Java Developers, Network Admin, DB Admin, Testers, BA)

​

* Technology stack (Java, databases, network infrastructure)
* Financial resources
* Hardware and software tools

**Outputs:**

* Functional online agriculture product store

​

* User-friendly web/mobile application
* Product listings (seeds, fertilizers, pesticides)
* Order management system
* Delivery tracking system
* User accounts for farmers and manufacturers

**Activities:**

1. **Requirement Gathering:**

​

* + Meet with stakeholders to understand their needs.

​

* + Document functional and non-functional requirements.

1. **Design:**
   * Create use case diagrams and design documents.
   * Develop UI/UX designs for the application.
2. **Development:**
   * Code the application using Java.
   * Integrate product listings and order management system.
   * Develop user account management features.
3. **Testing:**

​

* + Create and execute test cases.
  + Perform unit testing, integration testing, and system testing.
  + Conduct User Acceptance Testing (UAT).

1. **Deployment:**
   * Prepare deployment plan.
   * Coordinate with IT and development teams for deployment.
   * Monitor deployment and perform post-deployment validation.
2. **Implementation:**
   * Train end-users (farmers and manufacturers).
   * Gather and analyze user feedback.
   * Provide ongoing support and maintenance.

**Value Created to the End Customer:**

​

* **Accessibility:** Farmers in remote areas can easily access and purchase agricultural products.

​

* **Convenience:** Simplifies the procurement process for seeds, fertilizers, and pesticides.

​

* **Efficiency:** Reduces the time and effort required for farmers to obtain necessary products.

​

* **Direct Communication:** Facilitates direct interaction between farmers and manufacturers, potentially reducing costs and improving product availability.

​

* **Improved Productivity:** Ensures timely availability of agricultural inputs, leading to better crop yields and overall productivity.

**Question 2 – SWOT - 5 Marks**

**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.**

**SWOT Analysis for Online Agriculture Store Project**

**Strengths:**

​

1. **Experienced Team:** APT IT SOLUTIONS has a skilled team with expertise in Java development, network administration, and database management.

​

1. **Clear Vision and Support:** Strong backing from Mr. Henry and the committee, ensuring clear project goals and financial support.

​

1. **High Demand:** There is a significant need for an online platform to help farmers in remote areas procure agricultural products.

​

1. **CSR Initiative:** The project is part of a Corporate Social Responsibility (CSR) initiative, which can enhance the company's reputation.

​

**Weaknesses:**

​

1. **Limited Budget:** The project has a fixed budget of 2 Crores INR, which may limit flexibility in case of unforeseen expenses.

​

1. **Time Constraints:** The project has a strict timeline of 18 months, which may be challenging to meet if there are delays.
2. **Dependency on Internet Connectivity:** The success of the platform relies heavily on internet connectivity in remote areas, which may be inconsistent.

​

**Opportunities:**

​

1. **Market Expansion:** The platform can be expanded to include more products and services, such as farming equipment and advisory services.
2. **Partnerships:** Potential to form partnerships with more manufacturers and suppliers, increasing the variety of products available.
3. **Scalability:** The platform can be scaled to other regions and countries facing similar challenges.
4. **Technological Advancements:** Leveraging new technologies like AI and IoT to enhance the platform's functionality and user experience.

**Threats:**

​

1. **Competition:** Other companies may develop similar platforms, leading to increased competition.
2. **Regulatory Challenges:** Compliance with agricultural and e-commerce regulations may pose challenges.
3. **Technical Risks:** Potential technical issues during development, deployment, or operation that could impact the platform's performance.
4. **Adoption Resistance:** Farmers may be resistant to adopting new technology, affecting the platform's user base.

By considering these aspects, Mr. Karthik can make an informed decision on whether to proceed with the project and how to address potential challenges.

​

**Question 3 – Feasibility study - 5 Marks**

**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.**

**Feasibility Study for Online Agriculture Store Project**

**1.**

**Hardware (HW):**

​

* **Servers:** High-performance servers to host the application and database.
* **Storage:** Sufficient storage capacity for product data, user information, and transaction records.
* **Network Infrastructure:** Reliable network equipment to ensure seamless connectivity and data transfer.
* **Backup Systems:** Redundant systems for data backup and disaster recovery.

**2. Software (SW):**

* **Development Tools:** Java Development Kit (JDK), Integrated Development Environment (IDE) like IntelliJ IDEA or Eclipse.
* **Database Management System:** Relational databases like MySQL or PostgreSQL.
* **Web/Application Servers:** Apache Tomcat or similar servers for deploying Java applications.
* **Version Control:** Git for source code management.
* **Testing Tools:** JUnit for unit testing, Selenium for automated testing.
* **Project Management Tools:** Jira or Trello for task and project management.
* **Security Software:** Tools for ensuring data security and encryption.

**3. Trained Resources:**

* **Java Developers:** Skilled in Java, Spring Framework, and web development.
* **Database Administrators:** Experienced in managing and optimizing relational databases.
* **Network Administrators:** Proficient in setting up and maintaining network infrastructure.
* **Testers:** Knowledgeable in manual and automated testing methodologies.
* **Business Analysts:** Capable of gathering requirements, performing gap analysis, and ensuring project alignment with business goals.

​

* **Project Manager:** Experienced in managing software development projects, ensuring timely delivery within budget.

**4.**

**Budget:**

​

* **Development Costs:** Salaries for developers, testers, and other team members.
* **Hardware and Software Costs:** Purchase and maintenance of servers, storage, development tools, and software licenses.
* **Training Costs:** Training sessions for team members to stay updated with the latest technologies and best practices.
* **Operational Costs:** Ongoing costs for hosting, maintenance, and support.
* **Contingency Fund:** Allocation for unexpected expenses or risks.

**5. Time Frame:**

* **Requirement Gathering and Analysis:** 2-3 months
* **Design Phase:** 2-3 months
* **Development Phase:** 6-8 months
* **Testing Phase:** 3-4 months
* **Deployment and Implementation:** 1-2 months
* **Buffer Time:** 1-2 months for addressing any delays or issues

By considering these points, Mr. Karthik can assess the feasibility of executing the project using Java technology, ensuring that all necessary resources, budget, and time frames are adequately planned and managed.

​

**Question 4 – Gap Analysis - 5 Marks**

**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**

Sure, I can help with that! Here are some key points to consider when comparing the AS-IS existing process with the TO-BE future process in a Gap Analysis

1. **Current State (AS-IS)**
   * **Process Flow**: Describe the current workflow, including steps, activities, and tasks.
   * **Performance Metrics**: Highlight current performance indicators such as time, cost, and quality.
   * **Tools and Technology**: List the tools, software, and technology currently in use.
   * **Roles and Responsibilities**: Identify the roles and responsibilities of team members.
   * **Challenges and Pain Points**: Outline the issues, bottlenecks, and inefficiencies in the current process.
2. **Future State (TO-BE)**
   * **Process Flow**: Describe the envisioned workflow, including any changes or improvements.
   * **Performance Metrics**: Highlight the expected performance improvements in terms of time, cost, and quality.
   * **Tools and Technology**: List the new tools, software, and technology to be implemented.
   * **Roles and Responsibilities**: Identify any changes in roles and responsibilities.
   * **Benefits and Opportunities**: Outline the benefits, opportunities, and efficiencies expected from the new process.
3. **Gap Analysis**
   * **Identify Gaps**: Compare the AS-IS and TO-BE states to identify gaps and areas for improvement.
   * **Action Plan**: Develop a plan to address the gaps, including steps, timelines, and resources required.
   * **Risk Assessment**: Identify potential risks and mitigation strategies.
   * **Stakeholder Impact**: Assess the impact on stakeholders and how to manage change effectively.

By clearly showcasing these points, Mr. Karthik can effectively communicate the need for the project and the benefits of moving from the current state to the future state. Good luck with the Gap Analysis!

**Question 5 – Risk Analysis - 10 Marks**

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

Absolutely, here are some risk factors to consider for both Business Analysis (BA) and process/project risks:

**Business Analysis (BA) Risks**

1. **Requirements Risks**:
   * Incomplete or unclear requirements.
   * Changing requirements during the project lifecycle.
   * Misalignment between stakeholders' expectations and actual requirements.
2. **Stakeholder Risks**:
   * Lack of stakeholder engagement or support.
   * Conflicting stakeholder interests.
   * Miscommunication or misunderstandings among stakeholders.
3. **Technical Risks**:
   * Inadequate technical knowledge or skills.
   * Integration issues with existing systems.
   * Technology changes or obsolescence.
4. **Resource Risks**:
   * Insufficient resources (time, budget, personnel).
   * Resource allocation conflicts.
   * Dependency on key personnel.
5. **Process Risks**:
   * Inefficient or outdated processes.
   * Lack of process standardization.
   * Resistance to process changes.

**Process/Project Risks**

1. **Scope Risks**:
   * Scope creep (uncontrolled changes or continuous growth in project scope).
   * Poorly defined project scope.
   * Misalignment between project scope and business objectives.
2. **Schedule Risks**:
   * Unrealistic project timelines.
   * Delays in project milestones.
   * Dependency on external factors or third parties.
3. **Cost Risks**:
   * Budget overruns.
   * Inaccurate cost estimates.
   * Unexpected expenses.
4. **Quality Risks**:
   * Poor quality deliverables.
   * Lack of quality control measures.
   * Non-compliance with standards or regulations.
5. **Communication Risks**:
   * Ineffective communication channels.
   * Miscommunication among team members.
   * Lack of timely information sharing.
6. **Risk Management Risks**:
   * Inadequate risk identification and assessment.
   * Lack of risk mitigation strategies.
   * Failure to monitor and control risks.

By identifying and addressing these risks, you can better manage and mitigate potential issues that may arise during the project.

**Question 6 – Stakeholder Analysis (RACI Matrix) - 8 Marks**

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

Sure, let's create a RACI Matrix to identify the key stakeholders, their roles, and their influence in the project. The RACI Matrix stands for Responsible, Accountable, Consulted, and Informed. Here's a basic example:

| **Stakeholder** | **Role** | **Responsible (R)** | **Accountable (A)** | **Consulted (C)** | **Informed (I)** |
| --- | --- | --- | --- | --- | --- |
| Mr. Karthik | Project Manager | R | A | C | I |
| Mr. Henry | Sponsor |  | A | C | I |
| Business Analyst | Requirements Gathering | R |  | C | I |
| Development Team | Implementation | R |  | C | I |
| QA Team | Testing | R |  | C | I |
| End Users | Users |  |  | C | I |
| IT Support | Technical Support |  |  | C | I |
| Marketing Team | Promotion |  |  | C | I |

**Key Stakeholders**

* **Mr. Karthik (Project Manager)**: Responsible for managing the project and ensuring it meets its objectives. He is accountable for the project's success and is consulted for major decisions.
* **Mr. Henry (Sponsor)**: Holds the ultimate accountability for the project. He provides the necessary resources and support and is consulted for strategic decisions.

**Influencers**

* **Business Analyst**: Influences the requirements gathering process and ensures that the project meets the business needs.
* **Development Team**: Influences the technical implementation and ensures that the project is developed according to specifications.
* **QA Team**: Influences the quality of the deliverables by conducting thorough testing.
* **End Users**: Provide feedback and influence the usability and functionality of the final product.
* **IT Support**: Influences the technical support and maintenance aspects of the project.
* **Marketing Team**: Influences the promotion and communication strategy for the project.

**Question 7 – Business Case Document - 8 Marks**

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

Sure, I can help with that! Here's a structured outline for a business case document that Mr. Karthik can use:

**Business Case Document**

**1. Executive Summary**

* **Project Name**: [Project Name]
* **Project Sponsor**: Mr. Henry
* **Project Manager**: Mr. Karthik
* **Date**: [Date]
* **Objective**: Briefly describe the purpose and objectives of the project.

**2. Business Problem**

* **Current Situation**: Describe the current state and the issues or challenges being faced.
* **Impact**: Explain the impact of these issues on the business, including financial, operational, and strategic impacts.

**3. Project Objectives**

* **Goals**: List the specific goals and objectives of the project.
* **Benefits**: Describe the expected benefits, including financial, operational, and strategic benefits.

**4. Solution Options**

* **Option 1**: Describe the first solution option, including its pros and cons.
* **Option 2**: Describe the second solution option, including its pros and cons.
* **Recommended Option**: Identify the recommended solution and explain why it was chosen.

**5. Project Scope**

* **In Scope**: List the activities, deliverables, and tasks that are included in the project.
* **Out of Scope**: List the activities, deliverables, and tasks that are not included in the project.

**6. Financial Analysis**

* **Cost Estimates**: Provide a detailed breakdown of the estimated costs, including capital and operational expenses.
* **Return on Investment (ROI)**: Calculate the expected ROI and payback period.
* **Budget**: Outline the project budget and funding sources.

**7. Risk Analysis**

* **Risk Identification**: List the potential risks associated with the project.
* **Risk Mitigation**: Describe the strategies to mitigate these risks.
* **Contingency Plan**: Outline the contingency plans in case risks materialize.

**8. Stakeholder Analysis**

* **Key Stakeholders**: Identify the key stakeholders and their roles.
* **RACI Matrix**: Include the RACI Matrix to define responsibilities and accountabilities.

**9. Implementation Plan**

* **Timeline**: Provide a detailed project timeline with milestones and deadlines.
* **Resources**: List the resources required, including personnel, equipment, and materials.
* **Dependencies**: Identify any dependencies or prerequisites for the project.

**10. Conclusion**

* **Summary**: Summarize the key points of the business case.
* **Recommendation**: Provide a clear recommendation for proceeding with the project.

By following this outline, Mr. Karthik can create a comprehensive business case document that effectively communicates the need for the project and its expected benefits.

**Question 8 – Four SDLC Methodologies - 8 Marks**

**The Committee of Mr. Henry , Mr Pandu , and Mr Dooku and Mr Karthik are having a discussion onProject Development Approach. Mr Karthik explained to Mr. Henry about SDLC. And four methodologies like Sequential Iterative Evolutionary and Agile. Please share your thoughts and clarity on Methodologies**

Sure, let's dive into the four methodologies Mr. Karthik mentioned:

**1. Sequential (Waterfall) Methodology**

* **Description**: This is a linear and structured approach where each phase of the project must be completed before moving on to the next. It follows a strict sequence: Requirements, Design, Implementation, Testing, Deployment, and Maintenance.
* **Pros**:
  + Clear milestones and deliverables.
  + Easy to manage and understand.
  + Well-suited for projects with well-defined requirements.
* **Cons**:
  + Inflexible to changes once a phase is completed.
  + Can be slow and costly if changes are needed.
  + Not ideal for projects with evolving requirements.

**2. Iterative Methodology**

* **Description**: This approach involves developing the project in small, manageable iterations or cycles. Each iteration includes planning, design, implementation, and testing, allowing for continuous improvement and refinement.
* **Pros**:
  + Flexibility to make changes and improvements.
  + Early detection of issues and risks.
  + Continuous feedback and stakeholder involvement.
* **Cons**:
  + Can be resource-intensive.
  + Requires strong project management and coordination.
  + Potential for scope creep if not managed properly.

**3. Evolutionary Methodology**

* **Description**: Similar to the iterative approach, the evolutionary methodology focuses on developing the project in stages, with each stage building upon the previous one. It emphasizes adaptability and incremental development.
* **Pros**:
  + High adaptability to changing requirements.
  + Continuous delivery of functional components.
  + Encourages innovation and experimentation.
* **Cons**:
  + Can be challenging to manage and coordinate.
  + Requires strong communication and collaboration.
  + Potential for increased complexity over time.

**4. Agile Methodology**

* **Description**: Agile is a flexible and collaborative approach that emphasizes iterative development, continuous feedback, and adaptive planning. It involves cross-functional teams working in short cycles called sprints.
* **Pros**:
  + High flexibility and adaptability to changes.
  + Continuous delivery of value to stakeholders.
  + Strong focus on collaboration and communication.
* **Cons**:
  + Requires a cultural shift and commitment to Agile principles.
  + Can be challenging to scale for large projects.
  + Requires experienced and skilled team members.

Each methodology has its strengths and weaknesses, and the choice depends on the project's specific needs, complexity, and stakeholder preferences. By understanding these methodologies, the committee can make an informed decision on the best approach for their project development.

**Question 9 – Waterfall RUP Spiral and Scrum Models – 8 Marks**

**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?**

Let's break down the models discussed and then address the specific situation at APT IT SOLUTIONS:

**SDLC Models**

1. **Waterfall Model**
   * **Description**: A linear and sequential approach where each phase must be completed before moving on to the next.
   * **Pros**: Clear structure, easy to manage, well-suited for projects with well-defined requirements.
   * **Cons**: Inflexible to changes, can be slow and costly if changes are needed.
2. **Rational Unified Process (RUP)**
   * **Description**: An iterative software development process framework that emphasizes a disciplined approach to assigning tasks and responsibilities.
   * **Pros**: Iterative, allows for incremental improvements, strong focus on documentation and risk management.
   * **Cons**: Can be complex to implement, requires significant training and expertise.
3. **Spiral Model**
   * **Description**: Combines iterative development with systematic aspects of the waterfall model, focusing on risk assessment.
   * **Pros**: High emphasis on risk analysis, iterative, allows for incremental releases.
   * **Cons**: Can be costly and time-consuming, requires expertise in risk management.
4. **Scrum (Agile)**
   * **Description**: An Agile framework that uses iterative and incremental practices to deliver value to stakeholders.
   * **Pros**: Highly flexible, promotes collaboration and continuous improvement, delivers value quickly.
   * **Cons**: Requires a cultural shift, can be challenging to scale for large projects, needs experienced team members.

**V Model vs. Waterfall Model for APT IT SOLUTIONS**

**V Model**

* **Description**: An extension of the waterfall model that emphasizes verification and validation. Each development phase has a corresponding testing phase.
* **Pros**: Strong focus on testing, ensures high quality, clear structure.
* **Cons**: Inflexible to changes, can be slow and costly if changes are needed.

**Waterfall Model**

* **Description**: As mentioned earlier, a linear and sequential approach.
* **Pros**: Clear structure, easy to manage, well-suited for projects with well-defined requirements.
* **Cons**: Inflexible to changes, can be slow and costly if changes are needed.

**Recommendation**

Given the nature of the project to create an online agriculture product store, it is essential to consider the following factors:

* **Requirements Clarity**: If the requirements are well-defined and unlikely to change, the Waterfall model can be suitable.
* **Quality Assurance**: If there is a strong emphasis on testing and quality, the V model might be more appropriate due to its focus on verification and validation.
* **Flexibility**: If there is a need for flexibility and adaptability to changes, an iterative or Agile approach like Scrum might be more suitable.

As a business analyst, I would recommend the **V model** for this project. The V model's strong focus on testing and quality assurance aligns well with the need for a reliable and high-quality online store. Additionally, it provides a clear structure that can help manage the project effectively.

However, it's essential to ensure that all stakeholders are on board with the chosen methodology and understand its implications. Effective communication and collaboration will be key to the project's success.

**Question 10 – Waterfall Vs V-Model - 5 Marks**

**20Write down the differences between waterfall model and V model.**

Certainly! Here are the key differences between the Waterfall model and the V model:

**Waterfall Model**

1. **Structure**:
   * Linear and sequential approach.
   * Each phase must be completed before moving on to the next.
2. **Phases**:
   * Requirements, Design, Implementation, Testing, Deployment, Maintenance.
3. **Flexibility**:
   * Inflexible to changes once a phase is completed.
   * Changes require going back to the previous phases.
4. **Testing**:
   * Testing is a separate phase that occurs after the implementation phase.
5. **Documentation**:
   * Emphasizes thorough documentation at each phase.
6. **Use Case**:
   * Suitable for projects with well-defined and stable requirements.

**V Model**

1. **Structure**:
   * Extension of the Waterfall model with a focus on verification and validation.
   * Each development phase has a corresponding testing phase.
2. **Phases**:
   * Requirements, System Design, Architectural Design, Module Design, Coding, Unit Testing, Integration Testing, System Testing, Acceptance Testing.
3. **Flexibility**:
   * Inflexible to changes once a phase is completed.
   * Changes require going back to the previous phases.
4. **Testing**:
   * Testing is integrated into each phase, with corresponding verification and validation activities.
5. **Documentation**:
   * Emphasizes thorough documentation at each phase, with a strong focus on testing documentation.
6. **Use Case**:
   * Suitable for projects with a strong emphasis on testing and quality assurance.

**Summary**

* **Waterfall Model**: Linear, sequential, testing at the end, suitable for stable requirements.
* **V Model**: Linear, sequential with integrated testing, strong focus on verification and validation, suitable for projects with a strong emphasis on quality assurance.

By understanding these differences, you can choose the model that best fits the project's needs and requirements.

**Question 11 – Justify your choice - 3 Marks**

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

For this project, I would choose the V-Model over the Waterfall Model.

​ Here are my reasons:

1. **Validation and Verification**: The V-Model emphasizes validation and verification at each stage of development. Given the critical nature of the online agriculture product store, ensuring that each component is thoroughly tested and validated before moving to the next phase is crucial.
2. **Early Detection of Defects**: The V-Model allows for early detection of defects since testing activities are planned in parallel with development activities.

​ This can save time and resources by identifying issues early in the process.

1. **Clear and Structured Approach**: The V-Model provides a clear and structured approach, which is beneficial for a project with multiple stakeholders and complex requirements.

​

It ensures that each phase has specific deliverables and review processes, which can help in maintaining quality and meeting the project goals.

​

1. **Alignment with Project Requirements**: The V-Model is well-suited for projects where requirements are well understood and unlikely to change significantly.

​ Since the project involves building an online store with specific functionalities (seeds, pesticides, fertilizers), the V-Model's structured approach aligns well with these defined requirements.

1. **Stakeholder Confidence**: The V-Model can instill confidence in stakeholders (Mr. Henry, Mr. Pandu, Mr. Dooku, and others) as it provides a clear roadmap and ensures that each phase is completed and validated before moving forward.

​ This can help in gaining their trust and support throughout the project lifecycle.

Overall, the V-Model's emphasis on validation, early defect detection, and structured approach makes it a suitable choice for this project, ensuring that the final product meets the high standards required for an online agriculture product store.

​

**Question 12 – Gantt Chart - 5 Marks**

**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.**

Great! It sounds like the project is well-structured and ready to move forward. Here's a high-level outline of how the Gantt chart might look for the V Model approach with the specified phases and resources:

**Gantt Chart Outline**

| **Phase** | **Duration** | **Responsible Resources** |
| --- | --- | --- |
| RG (Requirements Gathering) | [Duration] | PM, BA, SMEs |
| RA (Requirements Analysis) | [Duration] | PM, BA, SMEs |
| Design | [Duration] | PM, BA, Java Developers |
| D1 (Development Phase 1) | [Duration] | Java Developers |
| T1 (Testing Phase 1) | [Duration] | Testers |
| D2 (Development Phase 2) | [Duration] | Java Developers |
| T2 (Testing Phase 2) | [Duration] | Testers |
| D3 (Development Phase 3) | [Duration] | Java Developers |
| T3 (Testing Phase 3) | [Duration] | Testers |
| D4 (Development Phase 4) | [Duration] | Java Developers |
| T4 (Testing Phase 4) | [Duration] | Testers |
| UAT (User Acceptance Testing) | [Duration] | Testers, End Users |

**Resources**

* **PM (Project Manager)**: Mr. Vandanam
* **BA (Business Analyst)**: [Assigned BA]
* **Java Developers**: [Assigned Developers]
* **Testers**: [Assigned Testers]
* **DB Admin (Database Administrator)**: [Assigned DB Admin]
* **NW Admin (Network Administrator)**: [Assigned NW Admin]

**Key Points**

* **RG and RA**: Initial phases focusing on gathering and analyzing requirements with the involvement of PM, BA, and SMEs.
* **Design**: Creating the design specifications with input from PM, BA, and Java Developers.
* **Development Phases (D1, D2, D3, D4)**: Incremental development of the project by Java Developers.
* **Testing Phases (T1, T2, T3, T4)**: Corresponding testing phases to ensure quality and functionality, conducted by Testers.
* **UAT**: Final phase where end users test the system to ensure it meets their requirements and expectations.

This outline provides a clear structure for the project, ensuring that each phase is well-defined and resources are allocated appropriately. If you need more details or specific durations for each phase, feel free to ask!

**Question 13 – Fixed Bid Vs Billing - 5 Marks**

**Explain the difference between Fixed Bid and Billing projects**

Sure! Here are the key differences between Fixed Bid and Billing projects:

**Fixed Bid Projects**

1. **Definition**:
   * A Fixed Bid project is one where the project cost is agreed upon upfront and remains constant regardless of the actual time and resources spent.
2. **Cost**:
   * The cost is fixed and predetermined.
   * The client pays a lump sum amount for the entire project.
3. **Risk**:
   * The vendor bears the risk of cost overruns.
   * If the project takes longer or requires more resources than anticipated, the vendor absorbs the additional costs.
4. **Scope**:
   * The project scope is well-defined and agreed upon at the beginning.
   * Any changes to the scope may require renegotiation and additional costs.
5. **Advantages**:
   * Predictable costs for the client.
   * Encourages efficient project management by the vendor.
6. **Disadvantages**:
   * Limited flexibility for changes.
   * Potential for lower quality if the vendor cuts corners to stay within budget.

**Billing Projects (Time and Materials)**

1. **Definition**:
   * A Billing project, also known as Time and Materials, is one where the client pays for the actual time and resources spent on the project.
2. **Cost**:
   * The cost is variable and depends on the actual hours worked and materials used.
   * The client is billed periodically based on the time and resources consumed.
3. **Risk**:
   * The client bears the risk of cost overruns.
   * If the project takes longer or requires more resources than anticipated, the client pays for the additional costs.
4. **Scope**:
   * The project scope can be flexible and adjusted as needed.
   * Changes to the scope can be accommodated without renegotiation.
5. **Advantages**:
   * Greater flexibility for changes and adjustments.
   * Encourages collaboration and iterative development.
6. **Disadvantages**:
   * Less predictable costs for the client.
   * Potential for higher overall costs if the project is not managed efficiently.

**Summary**

* **Fixed Bid Projects**: Fixed cost, vendor bears risk, well-defined scope, limited flexibility.
* **Billing Projects**: Variable cost, client bears risk, flexible scope, greater adaptability.

Choosing between these models depends on the project's nature, requirements, and the level of flexibility needed. If the project scope is well-defined and unlikely to change, a Fixed Bid model might be suitable. If the project requires flexibility and iterative development, a Billing (Time and Materials) model might be more appropriate.

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

**➢ 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**

**Design Timesheet of a BA**

**​**

| **Date** | **Task Description** | **Hours Spent** | **Comments** |
| --- | --- | --- | --- |
| 01/03/2024 | Requirement gathering and analysis  ​ | 4 | Met with stakeholders  ​ |
| 02/03/2024 | Creating requirement specifications | 5 | Documented functional requirements |
| 03/03/2024 | Reviewing requirements with stakeholders  ​ | 3 | Feedback incorporated |
| 04/03/2024 | Creating use case diagrams | 4 | Use cases for main functionalities |
| 05/03/2024 | Finalizing design documents | 4 | Sent for approval |

**Development Timesheet of a BA**

**​**

| **Date** | **Task Description** | **Hours Spent** | **Comments** |
| --- | --- | --- | --- |
| 10/03/2024 | Assisting developers with requirement clarifications | 3 | Clarified doubts on requirements |
| 11/03/2024 | Updating requirement documents based on feedback | 4 | Minor changes from development team |
| 12/03/2024 | Participating in daily stand-up meetings | 1 | Discussed progress and blockers |
| 13/03/2024 | Reviewing development progress  ​ | 3 | Ensured alignment with requirements  ​ |
| 14/03/2024 | Coordinating with project manager on timelines  ​ | 2 | Adjusted timelines as needed |

**Testing Timesheet of a BA**

**​**

| **Date** | **Task Description** | **Hours Spent** | **Comments** |
| --- | --- | --- | --- |
| 20/03/2024 | Creating test cases based on requirements | 5 | Detailed test cases for all modules |
| 21/03/2024 | Reviewing test cases with QA team | 3 | Incorporated QA feedback |
| 22/03/2024 | Assisting in test execution  ​ | 4 | Supported QA during testing |
| 23/03/2024 | Logging and tracking defects | 3 | Documented and prioritized defects |
| 24/03/2024 | Retesting after defect fixes | 4 | Verified defect resolutions |

**UAT Timesheet of a BA**

**​**

| **Date** | **Task Description** | **Hours Spent** | **Comments** |
| --- | --- | --- | --- |
| 30/03/2024 | Preparing UAT test plan | 4 | Detailed plan for UAT phase |
| 31/03/2024 | Coordinating with users for UAT | 3 | Scheduled UAT sessions |
| 01/04/2024 | Assisting users during UAT | 5 | Provided support and guidance |
| 02/04/2024 | Collecting and documenting UAT feedback | 3 | Feedback from users |
| 03/04/2024 | Analyzing UAT results and reporting | 4 | Reported findings to stakeholders |

**Deployment and Implementation Timesheet of a BA**

**​**

| **Date** | **Task Description** | **Hours Spent** | **Comments** |
| --- | --- | --- | --- |
| 10/04/2024 | Preparing deployment plan | 4 | Detailed steps for deployment |
| 11/04/2024 | Coordinating with IT and development teams | 3 | Ensured readiness for deployment |
| 12/04/2024 | Monitoring deployment process | 5 | Oversaw deployment activities |
| 13/04/2024 | Post-deployment validation | 4 | Verified system functionality |
| 14/04/2024 | Conducting training sessions for end-users | 4 | Trained users on new system |
| 15/04/2024 | Gathering post-implementation feedback | 3 | Collected feedback for improvements |

These timesheets provide a detailed breakdown of the tasks and hours spent by a Business Analyst during various stages of the SDLC, ensuring thorough documentation and tracking of activities.

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