Nurturing Process - **Capstone Project 3** – 2/2

COEPD – Traditional Development

Q1. What is the difference between Brainstorming and JAD Sessions?

Answer:

Brainstorming: Brainstorming is a creative problem-solving technique used to generate ideas, solutions, or insights. It involves gathering a group of people (or working individually) to think freely and suggest as many ideas as possible without judgment or criticism. The goal is to encourage creative thinking and explore a wide range of possibilities, some of which may lead to innovative solutions.

JAD: JAD stands for Joint Application Development or Joint Application Design. It is a collaborative approach to gathering requirements and designing systems, typically used in software development and business process improvement projects. JAD sessions bring together stakeholders, such as business users, IT professionals, and project team members, to work together in a structured and facilitated workshop setting.

The difference between them is as follows,

Sr. No	Brainstorming	JAD
1.	Generate a wide range of creative ideas or solutions.	Gather detailed requirements and collaboratively design solutions for a specific project or system.
2.	Focuses on Encouraging, free-flowing ideas without immediate evaluation or structure	Focuses on, Structured process focused on decision-making, requirement gathering, and design with clear outcomes.
3.	Participants include open to any group of people, often includes diverse participants for creativity.	Specific stakeholders such as business users, SMEs, technical staff, and facilitators relevant to the project.
4.	May or may not involve a facilitator, less formal.	Always involves a trained facilitator to manage sessions and ensure productivity.
5.	Example: Generating marketing campaign ideas, solving abstract problems, product design brainstorming.	Example: Gathering software requirements, defining workflows, designing enterprise solutions, or refining business processes.

Q 2. Why Document Analysis is one of the compulsory techniques we use in a Project? Justify

Answer:

Document Analysis is a compulsory technique in many projects, especially in requirements gathering, system design, and business process improvement, because it offers several essential benefits. Here is why it is so important and often considered indispensable:

1. **Provides Historical Context and Background Information**

Documents such as existing system specifications, reports, user manuals, contracts, and policies give valuable insights into the current state of the system or business process. This helps project teams understand what has been tried before, what works, what does not, and what the existing constraints are.

- **Justification**: Without reviewing past documentation, teams might miss key historical context, leading to redundant or ineffective solutions.

2. Helps Identify Stakeholder Requirements

Existing documents like business rules, user stories, or requirements specifications provide a detailed understanding of stakeholder expectations. Reviewing these documents ensures that nothing is overlooked and that all stakeholders' needs are considered, particularly for large or complex projects.

- **Justification**: Missing a requirement or misunderstanding a critical stakeholder need can derail the project, leading to delays or cost overruns.

3. Reduces the Need for Time-Consuming Interviews or Surveys

Document analysis can be a more efficient first step before engaging stakeholders. By analysing existing documents, project teams can quickly gather foundational knowledge, reducing the need for exhaustive interviews or surveys at the outset.

- **Justification**: This saves time and resources, especially when stakeholders are not readily available or have limited time to contribute.

4. Ensures Accuracy and Completeness

Documents often contain formalized, approved, and validated information. This helps ensure that the data being used in the project is accurate and complete, reducing the likelihood of errors due to miscommunication or assumptions.

- **Justification**: Inaccurate or incomplete requirements can lead to project failure, scope creep, or unnecessary revisions. Using established documentation can prevent this.

5. Uncovers Implicit Knowledge

Documents often contain implicit knowledge about organizational processes, workflows, or technical requirements that may not be readily available through interviews or surveys. These documents might reveal challenges, constraints, or requirements that have not been explicitly communicated to the project team.

- **Justification**: Relying solely on interviews or meetings might lead to overlooking critical details. Document analysis helps uncover these hidden insights.

6. Provides a Basis for Validation and Verification

Once a project's deliverables or solutions are defined, document analysis allows for validation and verification against original requirements, specifications, or standards. This helps ensure that the solution meets the agreed-upon criteria and avoids discrepancies between the original goals and final output.

- **Justification**: Without comparing the solution to documented requirements, there is a risk of deviating from the project's original objectives, resulting in dissatisfaction from stakeholders.

Q3. In Which Context we will use Reverse Engineering?

Answer:

Reverse Engineering: Reverse engineering is the process of analysing a product, system, or software to understand its design, functionality, and structure by deconstructing it. It is commonly used in several contexts, depending on the goals and challenges of the project. Below are the primary contexts in which reverse engineering is applied:

1. **Software Maintenance and Legacy Systems:** When working with an old or undocumented software system that requires updates, debugging, or migration.
   Usage: To understand how a legacy system operates when no documentation is available. To identify and fix bugs or vulnerabilities.

2. **Competitive Analysis (Product Analysis)**: Understanding competitors' products to analyse their features, designs, and technologies.
   Usage: To learn about competitors' innovations. To identify unique selling points or potential weaknesses in competing products.

3. **Product Redesign and Improvement**: Modifying or improving an existing product when design documentation is unavailable.
   Usage: To enhance product performance or add new features. To identify design flaws or inefficiencies. To extend the lifecycle of a product.

Q4. What is the difference between Brainstorming and Focus Groups?

Answer:

Brainstorming: Brainstorming is a creative problem-solving technique used to generate ideas, solutions, or insights. It involves gathering a group of people (or working individually) to think freely and suggest as many ideas as possible without judgment or criticism. The goal is to encourage creative thinking and explore a wide range of possibilities, some of which may lead to innovative solutions.

Focus Group: A Focus Group is a qualitative research technique used to gather insights, opinions, and feedback from a selected group of people about a specific topic, product, service, or concept. It typically involves a moderated discussion among 6 to 12 participants who share their thoughts and experiences, allowing researchers or project teams to explore a wide range of views and ideas.

Difference between them is distinguished below,

Sr. No	Brainstorming	Focus Group
1.	To generate many creative ideas or solutions to a problem.	To gather insights, opinions, and perceptions about a specific topic, product, or concept.
2.	Structuring for the Brainstorming is Informal, flexible, and open-ended, encourages free-thinking and idea generation.	Moderated and structured; focuses on guided discussions based on predefined questions or topics.

3.	Participants typically includes a small team of individuals (colleagues or stakeholders) relevant to the topic.	Involves a diverse group of participants, often representing the target audience or end-users.
4.	May or may not have a facilitator, participants share ideas freely.	Always involves a skilled moderator to guide the discussion and ensure balanced participation.
5.	Focuses on, generating a variety of ideas without immediate evaluation or judgment.	Focuses on, understanding opinions, behaviours, and preferences of participants.

Q5. Observation Technique – Explain both Active and Passive approaches.

Answer:

Observation Technique: The Observation Technique is a method used to gather information by watching and analysing behaviours, actions, or processes in a natural or controlled setting. It is widely used in business analysis, user experience design, and research to understand how people interact with systems, tools, or environments. Observation can be classified into Active and Passive approaches, based on the observer's level of involvement.

1. Active Observation

In Active Observation, the observer engages directly with the participants or processes they are studying. This may involve asking questions, interacting with users, or participating in the activities themselves to gain deeper insights.

Characteristics:

Interaction: The observer interacts with participants and may ask questions for clarification.

Engagement: The observer is actively involved in the process, sometimes as a participant.

Purpose: Often used to gather detailed insights about workflows, challenges, or user needs.

Environment: Can be done in real-time or in a controlled setup.

2. Passive Observation

In **Passive Observation**, the observer does not interfere or interact with the participants. They simply watch and record the behaviours, actions, or processes without influencing them.

Characteristics:

Non-intrusive: The observer remains silent and uninvolved during the activity.

Objective: Focuses on documenting what is observed without influencing the environment.

Purpose: Used to observe natural behaviours and processes as they occur.

Q6. How do you conduct the Requirements Workshop

Answer:

Requirement Workshop: A Requirements Workshop is a collaborative session where stakeholders, business analysts, project managers, and subject matter experts (SMEs) come together to gather, refine, and prioritize project requirements. Properly conducting a requirements workshop ensures that the team achieves a shared understanding of project goals, scope, and deliverables.

Here are the key steps to conduct an effective requirements workshop,

Preparation Phase: Includes

- Define Objective
- Identify the Participants
- Plan the Agenda

Execution Phase: Includes,

- Set the Stage
- Facilitate Discussion
- Manage Conflicts
- Document Requirement in Real time.

Post Workshop Phase: Includes,

- Consolidate Notes and Outputs
- Share a Summary Report
- Validate with Participants
- Plan Follow-Up Activities

Q7. In which context, Interview Technique can be conducted by a BA? How may approaches are there in conducting Interviews? (Structured – Unstructured) Explain them. Explain the difference between Open Ended Questions and Closed ended Questions

Answer:

Interview: The Interview Technique is a method used by Business Analysts (BAs) to gather information directly from stakeholders through a one-on-one or group discussion. It helps in understanding requirements, processes, challenges, and expectations for a project.

Contexts for Conducting Interviews is stated below,

1. **Eliciting Requirements**: To gather detailed insights about business needs, goals, and processes. To understand pain points, inefficiencies, or gaps in the current system.

2. **Understanding Stakeholder Perspectives**: To capture diverse viewpoints from various stakeholders (e.g., users, sponsors, SMEs).

3. **Validating Information**: To confirm and clarify information gathered from other techniques like document analysis or workshops.

4. **Identifying Risks**: To explore potential risks and challenges from stakeholders' perspectives.

5. **Defining Scope**: To refine the project’s boundaries and priorities based on stakeholder inputs.
6. **Problem-Solving**: To identify the root cause of a problem through in-depth discussions with affected stakeholders.

Difference between Open Ended and Close Ended Questions.

Sr. No	Open Ended Questions	Close Ended Questions
1.	Defined as the, questions that allow for detailed, explanatory answers.	Questions that require short, specific responses (e.g., yes/no).
2.	Purpose is to, explore ideas, thoughts, and feelings in depth.	To gather specific, quantitative, or factual data.
3.	Its flexibility is high, participants can elaborate freely.	Flexibility is low, responses are limited to predefined options.
4.	Use case can be understanding user pain points or opinions.	Gathering statistics or binary feedback can be the use case.

Q8. Questionnaire Technique – Where we will use? Give one example

Answer:

Questionnaire Technique: Questionnaire Technique is a method used to collect information from a group of people through a series of predefined questions. It is widely used in business analysis, market research, and surveys to gather data efficiently.

It will use in,

- **Large Audience**: The information is required from a large or geographically dispersed group of people.
- **Quantifiable Data**: The focus is on collecting measurable, structured data (e.g., statistics, preferences).
- **Anonymity is Important**: Participants may provide honest feedback without direct interaction.
- **Time is Limited**: Participants can fill out the questionnaire at their convenience without requiring a live session.

Example:

A Business Analyst is tasked with redesigning an e-commerce website to improve user experience.

Application of Questionnaire:

- The BA sends out a questionnaire to existing customers with questions like:

  Closed-Ended: “How often do you shop on our website? (Daily/Weekly/Monthly/Rarely)”

  Open-Ended: “What challenges have you faced while shopping on our website?”

  Rating Scale: “Rate your satisfaction with our website's navigation on a scale of 1–5.”

Multiple Choice: "What devices do you typically use to access our website? (Laptop, Mobile, Tablet)"

Q9. How to Sort the Requirements – Where we will use? Give one example

Answer:

Sorting Requirement: Sorting requirements involves organizing and prioritizing them to ensure clarity, alignment with project goals, and effective resource allocation. It is a critical step in requirement management and helps stakeholders focus on the most valuable aspects of a project.

To Sort by,

By Priority,

- **High Priority**: Requirements that are essential for project success (e.g., must-have features).
- **Medium Priority**: Important but not critical requirements (e.g., nice-to-have features).
- **Low Priority**: Optional or future requirements that can be deferred.

By Category,

- **Functional Requirements**: What the system or process should do (e.g., user authentication).
- **Non-Functional Requirements**: How the system should perform (e.g., speed, security).
- **Technical Requirements**: Infrastructure or technical constraints.
- **Business Requirements**: High-level objectives of the organization.

By Dependency: Identify requirements that depend on others and sequence them accordingly. Example: A report generation feature depends on data collection and storage.

By Stakeholder Type: Sort requirements based on who they impact (e.g., customers, employees, administrators).

Using Prioritization Techniques,

- **MoSCoW Method**: Must Have, Should Have, Could Have, and Will not Have.

Sorting can be used,

Requirement Workshops: To align stakeholders on priorities.

Agile Development: For creating and maintaining a product backlog.

Scope Definition: To finalize which features will be part of the current project phase.

Budget Planning: To allocate resources effectively to high-priority requirements.

Example: A BA is gathering requirements for a mobile banking app.

Sorting Approach:

1. **Categorize Requirements**:
    - **Functional**: Login, fund transfer, account summary.

    - **Non-Functional**: High availability, secure encryption.
2. **Prioritize with MoSCoW**:
    - **Must Have**: User login, fund transfer, account balance.
    - **Should Have**: Transaction history, push notifications.
    - **Could Have**: Budget tracking, financial tips.
    - **Would Have**: Cryptocurrency integration (deferred for future phases).
3. **Dependency Sorting**:
    - Fund transfer requires login authentication and account balance validation.

Q10. Prioritise the Requirements – Where we will use? Give one example

Answer:

Prioritizing requirements: Is the process of ranking requirements based on their importance, urgency, and value to the project. This helps in ensuring that critical requirements are addressed first and less important ones can be deferred or scoped out if necessary.

Can be used in,

Scope Management: To identify which requirements are essential for the current phase of the project and which can be deferred.

Budget and Resource Constraints: To focus on delivering high-value features within limited resources.

Agile Development: To create a Product Backlog and ensure that the most valuable user stories or features are implemented first.

Change Management: To assess which new requirements should be incorporated without disrupting the project timeline or budget.

Conflict Resolution: To resolve disagreements among stakeholders by aligning on priorities.

Example: A BA is working on a customer relationship management (CRM) tool for a sales team.

Steps:

1. Gather the list of requirements:
    - **Login system.**
    - **Lead management module.**
    - **Analytics dashboard.**
    - **Integration with email.**
    - **Social media integration.**

2. Use the **MoSCoW Method** to prioritize:
    - **Must Have**: Login system, lead management module.
    - **Should Have**: Analytics dashboard.
    - **Could Have**: Integration with email.
    - **Would Have**: Social media integration (deferred for future versions).
3. Finalize the prioritized list with stakeholders and focus the initial development efforts on the Must Have requirements.

Q11. Weekly status reporting – How we will drive?

Answer:

Weekly status: It is a reporting which is a critical tool for driving progress and ensuring alignment within a team or organization.

Purpose-Driven Reporting

- **Why:** Focus on actionable insights, keeping stakeholders informed and engaged.
- **How:** Highlight achievements, challenges, and next steps. Avoid lengthy details; instead, provide a concise overview.

2. Consistent Structure: Use a standard template with the following sections:

- **Highlights:** Key accomplishments for the week.
- **Challenges:** Issues or risks encountered.
- **Priorities:** Focus areas for the upcoming week.
- **Metrics:** Quantifiable progress updates.

3. Collaboration and Input: Encourage team members to contribute their updates before the deadline. Use collaboration tools (e.g., Google Docs) to centralize reporting.

4. Real-Time Updates: Utilize dashboards or tools like Jira or Trello to provide real-time visibility into project progress.

5. Action-Oriented Reviews: Schedule regular review meetings to discuss the report. Focus on solving challenges and aligning on priorities.

Q12. Meeting Minutes Document – prepare one Sample

Answer:

Meeting Minutes Document: A meeting minutes document is an official record that summarizes the key points, discussions, decisions, and action items from a meeting. It serves as a reference for attendees and stakeholders, ensuring everyone is aligned and accountable for agreed-upon tasks or decisions.

It mainly includes,

- Meeting details (date, time, location)
- Names of attendees and absentees
- Agenda items discussed
- Key points from discussions
- Decisions made
- Assigned tasks with deadlines
- Date and time of the next meeting

Meeting Title: Food Delivery System	
Date and Time	1.01.2025 and 3.30 PM to 4.30 PM
Location	Pune office
Attendees	13 – 15 Members
Discussion Summary	Application Development, User Interfaces, UI Testing, UAT
Decision Made	Product Owner, Project Manager, Domain Expert, Subject Matter Expert.
Owner	Product Owner, Business Owners, Project Managers
Due Date	5.01.2025
Agenda Summary	Discussion about the Product/Project Modules, User Interfaces, Testing Life Cycle, Delivery Estimations.
Next Meeting: 3.01.2025	
Date and Time	3.01.2025 and 2.30 PM to 3.30 PM
Location	Online/Pune Office
Expected Attendees	10 – 12

Case Study:

Q16. What reports Accounts Departments will generate (minimum 5 reports)

Answer:

The Accounts Department in TTS Company's Employee Loan Management System would likely generate the following reports:

1. **Loan Disbursement Report**: This report details all loans disbursed during a specific period. It includes information such as employee name, loan amount, disbursement date, and loan type.

2. **Loan Repayment Report**: This report tracks repayments made by employees. It shows details such as the amount repaid, balance remaining, repayment dates, and any missed or late payments.

3. **Outstanding Loan Balance Report**: This report provides a summary of all outstanding loan balances, including total amounts owed by each employee, the total company liability, and aging of the loans (e.g., 30 days, 60 days overdue).

4. **Loan Approval and Rejection Report**: This report includes data on the number of loans approved and rejected within a certain timeframe. It can also include reasons for rejections and the total amount approved.

5. **Salary Deduction Report**: This report lists all automatic deductions made from employees' salaries for loan repayments. It provides details such as the employee's name, loan ID, deduction amount, and the corresponding payroll period.

Q17. What is the structure of the message/mail communicated from the HR department to the employee in case the Loan is rejected?

Answer:

The structure of the message/mail communicated from the HR department to the employee in case of loan rejection would typically include the following components stated below,

- **Subject Line:** Notification of Loan Application Status
- **Greeting: Dear [Employee Name]**
- **Introduction:** A brief introduction indicating the purpose of the email.
  We hope this message finds you well. We are writing to inform you about the status of your recent loan application.
- **Main Body:**
- **Loan Rejection Notification:** Clearly state that the loan application has been rejected**.**
  After careful review by the HR and Accounts departments, we regret to inform you that your loan application has been declined.
- **Reason for Rejection**: Provide a clear and concise reason for the rejection.
  The primary reason for the rejection is [specific reason, e.g., 'insufficient eligibility based on current salary and financial commitments.
- **Encouragement and Next Steps**: Offer encouragement or next steps if applicable.
  We understand this may be disappointing, and we encourage you to review the eligibility criteria for future applications. You may consider reapplying if your financial circumstances change.
- **Conclusion:** A closing statement to offer further assistance.
  Should you have any questions or need further clarification, please do not hesitate to contact the HR department.
- **Closing:**
  Sincerely,
  HR Representative's Name
  HR Department
  Company Name

Example:

Subject Line: Notification of Loan Application Status.

Dear Balaram,

We hope this message finds you well. We are writing to inform you about the status of your recent loan application.

After careful review by the HR and Accounts departments, we regret to inform you that your loan application has been declined. The primary reason for the rejection is insufficient eligibility based on current salary and financial commitments. We understand this may be disappointing, and we encourage you to review the eligibility criteria for future applications. You may consider reapplying if your financial circumstances change.

If you have any questions or need further clarification, please do not hesitate to contact the HR department.

Sincerely,

Vasudev Dwarkadish.

HR Department.

Krishna Infotech.

Q18. What is the structure of the message/mail communicated from the HR department to the employee in case the Loan is approved?

Answer:

Subject Line: Notification of Loan Application Status.

Dear Balaram,

We hope this message finds you well. We are writing to inform you about the status of your recent loan application.

After careful review by the HR and Accounts departments, we inform you that your loan application has been approved. We encourage you to review the applications once. You may consider an approval for the loan application.

If you have any questions or need further clarification, please do not hesitate to contact the HR department.

Sincerely,

Vasudev Dwarkadish.

HR Department.

Krishna Infotech.

Q19. Design a sample report on the Loans applications Received by the accounts department

Answer:

As of mentioned above, in the Accounts Department, the Loan Application can be mentioned,

Date: 19.01.2025

Summary: This report provides an overview of the loan applications received by the Accounts Department during the reporting period. The report includes details on the total number of applications, application statuses, and relevant observations.

Application Type is as mentioned below,

Personal Loan: PL100. This is the loan which is used for the personal usage and can be utilize it for the personal purpose.

Business Loan: BL101. This is the loan, which is utilize for the Company Growth Purpose, thereafter which has the usage for the making the hold as the capital for the Business Stake Purpose. This can be found as the Investing into one Business Aptitude for the exploring the growth for self.

Home Loans: HL102. This is used for the Home Loans, which carry specific amount of the PayScale which helps, for building the Loans for the Home.

Q20. Which reporting Tools we will use for generating reports.

Answer:

To generate reports for the Employee Loan Management System, various reporting tools can be utilized, depending on the organization's existing technology stack and reporting needs. Here are some commonly used reporting tools placed below,

Microsoft Power BI: Interactive dashboards, data visualization, real-time data access. User-friendly, integrates with various data sources, and offers powerful analytics and visualization capabilities.

2. Tableau: Advanced data visualization, real-time updates, and a wide range of connectors. Intuitive interface, robust data blending capabilities, and extensive support for various data types.

Excel with Power Query and Power Pivot: Data transformation, advanced analytics, and interactive dashboards. Familiar interface for many users, powerful for data manipulation and reporting when combined with Power Query and Power Pivot.

SQL Server Reporting Services (SSRS): Server-based report generation, scheduling, and subscription services. Integrates well with SQL Server databases, suitable for generating detailed, structured reports.