Capstone Project 3 Part-2

Q 1)

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| **Brainstorming** | **JAD** |
| It is used to generate wide range of ideas, solutions or approaches to specific problem or requirement. | It is used to collaborate with stakeholders in structured manner to elicit, refine and finalize detailed requirements. |
| In this technique facilitator is needed but flexible session to conduct as this is informal, it encourage free thinking and ideas, without immediate critique. | It is highly structured and formal session and JAD facilitator is required ,it is focused on the agendas and documentation and also to get the done of specific consensus on the problems. |
| This technique is used at the early stages of requirement gathering or problem solving and when innovative solutions and diverse idea are needed. | When collaboration with multiple stakeholders ,projects has multiple requirements that need detailed discussion and when there is need to resolve conflicting priorities among the stakeholders. |

Q 2) **Document Analysis**

Document Analysis is a critical technique used by business analyst in project because it provides essential insights and context by examining existing documentation related to the business process and systems.

1. Establishes a knowledge foundation – BA understands the current state by reviewing materials like process flows , business rules.
2. Identify gap and opportunity - reviewing past projects reports, defect logs or customer feedback helps BA identify the inefficiencies and drawbacks.
3. Complement stakeholder input – with incomplete or conflicting approach of stakeholders document analysis ensure that requirement are grounded in documents on fact and reality.
4. Supports compliance and standard – projects need to follow with laws and standards of regulatory authority.
5. Enhances requirement quality – document provides precise detailed information.
6. Cost and risk reduction – it helps the understand the predictive losses and with this approach we can avoid the loss.

Q 3) **Reverse Engineering**

Reverse engineering is used in a business analysis and project context to understand and anlyze existing system or product when documentation is incomplete , outdated or unavailable. It involves deconstructing and examining a system to extract knowledge about its components and design.

1. Migration to new system – when organization plans to replace outdated system with new modern system. Ex- extracting a data structures from legacy CRM to map them into a modern cloud based CRM.
2. System integration – when integrating third party application or system with existing solution understanding its components.
3. Security analysis- identifying vulnerabilities in an application or system.
4. Product redesign or enhancement- when improving or enhancing an existing product without complete details.
5. Knowledge recovery – in cases where critical document is lost or never existed.

Q 4) Brainstorming and Focus group

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| **Brainstorming** | **Focus Group** |
| When the objectives is to explore possibilities, generate a large pool of ideas or solve problem creatively. | When the goal is to gain details user feedback, validate assumptions or understand specific user needs or behaviors. |
| Participants are small in number (team members , SME or users) | A group of selected individuals ( usually 6 to 12) who represent the target audience or user group. |
| It is a informal session with free thinking with no immediate critical feedback often led by moderator. | It is structured session with balanced participation focuses on users feedback and their experiences. |
| Ex a team brainstorming session to generate features for a new mobile app. | Ex a focus group of farmers discussing the usability of an online agriculture product store. |

Q 5) **Observation Technique**

The observation technique is a requirement elicitation technique where BA gathers information by observing users performing tasks or processes in their actual work environment.

1. Active Observation- the observer actively observes or engages with the user or process. The observer may ask questions or clarify actions or interact with the system during observation. It gives deeper understanding of the process by interacting with participants and asking contextual question. Challenge is this it may disturb the workflow, and helps identify the hidden requirements and efficiencies. Ex – cashier in the bank we observe him and get some input
2. Passive Observation- the observer silently watches the process or user interactions without interfering or interacting with the clients. the observer does not interact with the clients.the focus is recording action and workflows. Ex – BA watches a computer operator he connects with each lan with computers after every shift of the exam and keep ready for the next shift.

Q 6) **Requirement Workshop**

Requirement workshop is a collaborative event that brings together stakeholders, business analysts and SME to gather analyses and prioritizes requirement for a software products.

1. Planning the workshop- in this we define objectives, identify stakeholders, prepare agenda , select techniques and arrange logistics and finalize pre workshop preparation.
2. Conducting a workshop- in this step we set a ground rules for the workshop, facilitate the discussions , uses visual aids, capture requirements and manage the conflicts.
3. Post workshop activities- in this step we documents the output, share the report, address the open item, validate and finalize the requirements.
4. Following points need to remember
5. Time management
6. Stakeholders balance
7. Engage participants
8. Use a neutral facilitator
9. Review workshop goal regularly

Ex Payment gateway module workshop

Q 7) **Interview Technique**

It is used by BAs to gather detailed information, understand requirements, or clarify processes by engaging directly with stakeholders. This technique is particularly effective in the following

1. Eliciting requirements
2. Understanding processes
3. Validating requirements
4. Gathering expert opinion
5. During stakeholder engagement

Following approach to conduct interviews

1. Structured interviews : a formal approach where a predefined questions are asked. questions are consistent for all interviews.
2. Unstructured Interviews: an informal approach where the BA starts with informal questions and general topics but allow the conversation to flow naturally based on interviews response. In this no strict questions.

Difference between Open Ended and Close Ended questions

1. Open ended question – in this questions are designed to encouraged a detailed , explanatory notes. To explore opinions ideas and experience in depth.it generally starts with what why and how.
2. Closed ended question- in this questions are designed to elicit or specific, concise response.it helps gather specific answers. sometimes we get answers in yes or no .

Best practices to conduct the interviews

1. Preparation
2. Engagement
3. Follow up

Q 8) **questionnaire Technique**

Questionnaire is a technique used for research and collection of data to gather information from a large number of participants in a structured manner. In this, a set of questionnaire is prepared with some options given and then it distributed among participants then they select answers based on their choice or opinion.

This technique is used in following circumstances

1. When gathering input from a large audience
2. For a quantitative data collection
3. When seeking anonymity
4. For preliminary requirement gathering

Ex – online Angriculture Product Store Project

Business Analyst needs feedback from farmers and manufacturers on their preferences for the application.

Closed Ended Questions-

1. On a scale 1 to 5 how would you rate?
2. Do you prefer mobile friendly platform for product browsing (yes/no) ?

 Open Ended Question-

* What features do you want if you want to purchase it online?
* What challenges do you face while purchasing online?

To understand user pain points, preferences, and requirements before finalizing.

Q 9) **Sorting Requirements**

Sorting the requirements is one of the important step in requirement engineering where the elicited requirements are sorted, organized and prioritized based on their importance and need.

It helps ensure clarity, relevance and business goals. We have to ensure that most critical and high value requirements are addressed first.

Sorting requirements are used during the planning and prioritization phase of project. It helps determine

* Determine scope
* Resource allocation
* stakeholder alignment
* feasibility analysis

Ex Online agriculture product store project

For the online agriculture product store team has gathered a various requirements such as product catalogue browsing, secure payment gateways and delivery tracking. The team needs to determine which requirements address first.

* Prioritize by business value
* Sorted requirements
* Consider dependencies
* Assesses complexity
* Stakeholder input

Result – team has decided to implement the log in module and product catalogue as part of first release and then payment design.

Q 10) **Prioritize the requirements**

Prioritize the requirements involves ranking requirements based on the importance , urgency or value to the project. It ensures that most critical functions are implemented first.

Prioritize requirements are used in following

* Project Planning
* Budget and time constraints
* Stakeholder alignment
* Risk management

Ex- Online agriculture project store

The team has gathered the requirements such as user login , product login product catalogue, search functionality, payment process and delivery tracking. Due to limited time for the first release they need to prioritize which requirements to implement first.

Approach for Prioritization

* Using Moscow method

Using above method , I have derived the following priority

Must have- product login, product catalogue

Should have- delivery tracking, search functionality

Could have – product ratings

* Stakeholders discussion

Collaborate with stakeholders to finalize the product based on their needs.

So the first release with the priority which is defined above that is user login, product catalogue and secure payment gateway.

Q 11) **Weekly status report**

weekly status report is a kind of an update about the whole week which includes what things are completed, what are in progress and did the team met the weekly goal. It involves regularly updating all parties involved in the project achievements, challenges and upcoming plans.

* Define the reporting framework with goals and deadline
* Identify key metrics
* Gather input and communicate the expectations
* Create the report, review and take follow up
* Use reporting tools
* Present the report and share the opinions
* Track feedback and update and act accordingly the findings

The followings points need to mention

* Executive summary’
* Achievements

Risks and issues

* Action items
* Next week plan

Q 12) Meetings minute document

Meetings minutes are the notes that are captured or documented during the meeting is conducted. This records what is discussed in the meeting, what are actions required.

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| **Meetings minute document** |
| Weekly status report Online agriculture product store |
| Date : January 3, 2025 | Time: 10.30 AM |
| Facilitator  | Mr. Vandanam (Project Manager) |
|  | Ms Juhi, Mr Tyson, Mr Mike, Mr Nikhil, Mr Nilesh |
| Agenda | * Discuss about the design of the system
* Review the changes made
* Create UML and design model
* Review risk and issues
* Discuss action items and next steps
 |
| Progress Update | * BA requirement gathering completed, waiting for stakeholders approval.
* User stories for login and product catalogue finalized.
* Testing ; test case for login module prepared and shared for review.
 |
| Risk and Issues | * Delay in stakeholder feedback on delivery tracking
* Network latency affecting remote setup.
 |
| Actions | * BA to schedule a meeting with stakeholders for delivery tracking meeting
* Testers to finalize test cases for product catalogue.
 |
| Next Step | * Complete coding for login and product coding
* Prepare testing environment for UAT
 |
| **Decision Made** : finalized priority for the current sprint login and product details.Testing team to collaborate with development on the edge case scenarios. |
| Next Meeting  | Date : January 9, 2024 Time : 10.30 AM |
| Agenda | Review progress on login and product catalogue modules.Discuss initial feedback from stakeholders and deliver new features to the product. |

Q 13) **Change Tracker Document**

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| **Change Tracker Document** |
| Application version: 1.0.1 | Date : January 3, 2025 |
| Change Details |
| Change request number : 2 | Date : January 1, 2025 |
| Requested by : Nikhil Nandeshwar | Description : to add a save to favorite function |
| **Change Assessment** |
| Impact Analysis : no impact on other functions | Risk Analysis: no such a risk is there whike developing |
| Feasibility Analysis: Completely feasible | Estimated time: 1 week |
| Priority : High |  |
| Approve status : Approved | Approval Date : January 2, 2025 |
| **Implementation Details** |
| Developer : Rahul Nandeshwar | Test Coverage : two working days |
| Start date : January 4, 2025 | End Date : January 7, 2025 |
| Test result : Success | Deployment Plan: Should be deployed by January 10, 2025 |
| Roll Back Plan |
| Procedure: Create an environment similar to the end users environment. | Test Plan: Make a few people to test this new feature |
| Test the function before deploying |
| Date : January 9, 2025 | Result : Pass |
| **Documentation Update** |
| Affected Documents: BRD, FRD, RTM | Updated description: a new feature is developed and all the details have been updated in the related documents |
| Date : January 9, 2025 | Updated By : Vatsala |
| Approval Details : Approved by Ritesh Merry |
| References |
| Related Documents : BRD, FRD |
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Q 14) **Traditional Development Model and Agile Development Models**

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| **Traditional Development Model** | **Agile Development Model** |
| In this waterfall methodologies next phase cannot be started unless first phase is completed, it is called as linear or sequential | In this method every phase we complete new tasks and it is called incremental method. |
| Changes are not flexible in this method | It is highly flexible changes can be incorporated even in the late in the development. |
| Requirements are fixed at the beginning of the development. | Requirements are evolving with the every phase. |
| Limited stakeholders involvement after the requirement gathering phase | High stakeholders involvement throughout the phase |
| Deliverables are delivered at the end of the project | Deliveries are delivered in the incremental approach at every stage. |
| Suited for large scale projects with well defined scope and requirements. | Suited for dynamic, fast changing projects or those with unclear scope. |
| Testing occurs after the development phase is completed.Ex waterfall, V model | Testing is continuous and integrated into each sprint cycle.Ex Scrum, Kanban, Xp |

Q 15) **Brainstorming Technique**

It is one of the requirement elicitation technique, in which group of people are gathered together to discuss and share their ideas on a particular topic. It encourages free thinking and collaboration and it avoids immediate criticism.

Following techniques are used

* Classic brainstorming : team members are freely suggest ideas without judgement or evaluation during session.
* Round robin brainstorming : participants take turns suggesting ideas in a systematic manner.
* Starbursting : focuses on generating questions rather than answers to explore all aspects of a problem.
* Mind Mapping : ideas are visually represented around a central concepts in a hierarchical manner , showing relationships between them.
* Brainwriting : participants write down their ideas anonymously which are then shared and discussed by the group.
* SWOT analysis : focuses on identifying strength, weakness, opportunities and threats.

This technique is used in following

* Requirement Gathering
* Problem solving
* Decision making
* Process involvement
* Risk analysis and mitigation

Q 16) **reports account departments**

The account department may generate following reports.

Financial Report : this report aims to track, analyze and report your business income. These report examine resource usage and cash flow to assesses the financial health of the business.

Credit Report : a credit report is a statement that has information about your credit activity and current credit situation such as a loan paying history and the status of your credit account.

Loan Approval Report : this report will tell the all loans approved along with the employee details , loan type , loan amount approved, interest rate , tenure and amount sanctioned. this will help the loan department for further details and disbursal.

Loan Performance Portfolio Report: This report will provide an overall assessment of the company's loan portfolio, including total loan balance, outstanding loan balance, average loan amount, interest income generated, and loan delinquency rate. It will help the Accounts department monitor the financial health of the loan portfolio and make informed decisions regarding loan policies and risk management.

Repayment Report : This report will summarize loan repayments made by employees, including employee details, loan type, repayment amount, repayment date, and outstanding loan balance. It will enable the Accounts department to track loan repayment progress, identify any payment delinquencies, and maintain accurate loan balance records.

Q 17) Letter from HR department

Subject: **Regarding the loan rejection**

Dear sir/madam

We hope you are doing well. We regret to inform you that your loan application has been rejected by our loan approval committee.

We understand this is quite disappointing for you but after thorough evaluation of your application and considering various factors, a company lending policies and guidelines this decision has been taken.

We like to tell you as of now our policies may not granted the loan, but in coming time you are free to apply it again after cooling down period which is 15 days. We will again evaluate the profile and will let you know as we always extend help to our valuable customers.

Feel free to connect us,

We wish you a happy time ahead.

Regards,

**Account Department**

**TTS company**

Q 18) Letter for the approval

Subject: **Regarding your loan approval.**

Dear sir/madam

We hope this email finds you well. We are pleased to inform you that your loan application has been approved.

After evaluating your profile, which follows our guidelines and policies , which is eligible for the loan approval you can find following details.

Approved amount : 1000000 INR

Rate of Interest : **7.7% pa**

Loan term : **8 years**

Repayment schedule: EMI **18854 pm**

Please review the loan agreement and terms and conditions carefully. In case of any queries or further assistance please feel free to contact our HR department. We would be more than happy to provide proper assistance and guidance throughout the loan process.

We kindly remind you of the responsibility to fulfill the loan repayment obligations as per the agreed upon terms.

We request you to please visit the account department for further details.

We wish you more success in your financial journey.

Thanking you and happy time.

Regards,

**Account Department**

**TTS**

Q 19 ) **design the loan approval request received.**

Loan Applications Report

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| --- | --- | --- | --- |
| Loan No | Candidate | Loan Amount | Status |
| PL003 | Nikhil Nandeshwar | 5 lakhs INR | pending |
| LHT012 | Rahul Nandeshwar | 9 lakhs INR | Approved |
| THt456 | Nilesh Nandeshwar | 30 lakhs INR | In Process |
| PL004 | Dhamma Nandeshwar | 15 lakhs INR | rejected |

Note:

* Approved loans : loans which is been approved by the bank and met all the requirements.
* Rejected loans: profile does not meet the requirements of the company policies.
* Pending loans: the loan profile which is been in the pipeline.

Q 20) **reporting tools**

The choice for the reporting tool is totally depends on the requirements of the project, nature of the project and requirements of the clients.

**Tableau**: Tableau uses interactive data visualizations so that you can create visuallycompelling reports that viewers can click to explore. It is partially based on the core query language VizQL. It is useful for collecting business analytics.

**Power BI**: Power BI is a collection of analytics and reporting tools which helps ingest, process, model and report data in the form of compelling and easy to digest reports. It is user friendly and convenient to use , and many features are similar to the Microsoft as the reporting tool is product of Microsoft.

**Excel**: this is evergreen reporting tool has been use since the inception of the computer. It is widely used across all the industries as well as allover industries.

Clickview

**SAP BI** : this is reporting tool exclusively use for the SAP based product and its reports.