

Capstone Project 3 - Part 2

Question:1 What is the difference between Brainstorming and JAD Sessions?

Brainstorming and JAD (Joint Application Development) sessions are both collaborative techniques used in problem-solving and requirements gathering, but they differ in purpose, structure, and application. Here's a breakdown of their key differences:

1. Definition & Purpose

- Brainstorming:

- A free-form, creative technique to generate a large number of ideas quickly.
- Focuses on quantity over quality, encouraging out-of-the-box thinking.
- Used in various fields (business, design, education) for innovation.

- JAD Session:

- A structured, facilitated workshop aimed at gathering detailed system requirements.
- Focuses on collaboration between stakeholders (users, developers, analysts) to define software/system needs.
- Primarily used in *software development* and *systems analysis*.

2. Participants

- Brainstorming:

- Open to a diverse group (any stakeholders, team members, or even unrelated individuals for fresh perspectives).

- JAD Session:

- Involves *key stakeholders* (end-users, business analysts, developers, project managers) with decision-making authority.

3. Structure & Facilitation

- Brainstorming:

- Informal, with minimal rules—often just "no criticism" during idea generation.
- May use techniques like mind mapping or sticky notes.

- JAD Session:
 - Highly structured, led by a trained JAD facilitator.
 - Follows an agenda with defined goals (e.g., requirements documentation, UI design).
 - Uses formal techniques like prototyping, use-case modelling, and prioritization.

4. Output

- Brainstorming:
 - A list of raw, unfiltered ideas (later refined through voting or analysis).
- JAD Session:
 - Detailed requirements documents, process flows, or even prototype designs.
 - Results are actionable and used directly in development.

5. Duration

- Brainstorming:
 - Short (30 mins to a few hours).
- JAD Session:
 - Longer (multiple days or weeks, often in intensive workshops).

Question 2: Why Document Analysis is one of the compulsory techniques we use in a Project? **Justify**

Document Analysis is one of the compulsory elicitation techniques for any project.

Documentation of the system could provide lot of information which may include interface details, user manuals and software vendor manuals. It would be easy to transfer lot of information to a new system requirement document.

we have documentation about the current system which could provide some of the input for the new system requirements. Such documentation could include interface details, user manuals and software vendor manuals

You may have documentation about your current system which could provide some of the input for the new system requirements. Such documentation (if it exists) could include interface details, user manuals, and software vendor manuals.

Could be a lot of information and easy to transfer to a new system requirements document.

Document Analysis is an important gathering technique. Evaluating the documentation of a present system can assist when making AS-IS process documents and also when driving the gap analysis for scoping of the migration projects.

Question 3: In Which Context we will use Reverse Engineering?

Reverse engineering :-

Reverse engineering is a process that is designed to extract enough data from a product and then to be able to reproduce that product. It may involve moving to creating a product from scratch or from pre-developed components. It can be applied to any product (such as computer technology, manufactured products, biological products, chemical products, etc.) to determine how the components are put together and how it works.

Reverse engineering is a useful design and development technique with many potential applications. However, it is always important to get legal advice prior to conducting reverse engineering exercises and doubly so if you intend the outputs of your reverse engineering to become commercially available. There is no single process across industries for reverse engineering it is simply a process by which you take an end product and deduce how it is made and works.

Benefits of Reverse Engineering

Benefit	Description
Understanding Legacy Systems	Helps in understanding outdated systems when original documentation is missing.
System Modernization	Useful for migrating old systems to newer platforms or technologies.
Improving System Efficiency	Identifies inefficiencies or bottlenecks in the system that can be optimized.
Bug Fixing & Maintenance	Helps in locating issues or vulnerabilities in poorly documented software.
Security Analysis	Detects hidden malicious code, security loopholes, or malware behaviour.

Question :4 – What is the difference between Brainstorming and Focus Groups?

	Brainstorming	Focus Group
Purpose	Generate ideas	Improve existing ideas
Trigger	A need to solve a problem	A need to study an existing ideas solution or process
Condition	Problem exists	Idea, solution or process exists
Setup		
Number of Participants	6-8	6- 12
Number of participants	Heterogeneous	Can be homogeneous or heterogeneous
Person running the show	Facilitator	Skilled moderator
Knowledge of topic of discussion	Not necessary	In depth knowledge of topic discussion
Guide	Develop criteria for evaluating and rating ideas	Create a discussion guide and moderator scripts
Game Time		
Ground rules	Must have	Nice to have
Duration	Restrict time to produce ideas 1 - 2hrs	1 – 2hrs and sometimes over several days
Types of questions to ask	Progressive closed- ended to generate and build on ideas	Can be open-ended to generate qualitative data or closed-ended to generate qualitative data
Observers	No	Yes
Result	List of ideas combined to form themes	Report of findings could be -bullet list of information learned -Comparative analysis between to solutions -summary of response collect for each question.

Question: 5 - Observation Technique – Explain both Active and Passive approaches

Business analysts use observation techniques to gather information by watching and understanding workplace activities.

It is used to identify needs and opportunities, understand business processes, create performance standards, assess solution performance, and facilitate training and development.

Observation of activities or job shadowing, is the act of studying a work activity as it is being performed. It can be performed in either the user's work environment or in a recreated test environment.

There are two approaches for observation and they are:

Active/noticeable: while observing an activity the observer can ask any questions as they occur. Despite this interruption to the workflow, the observer can quickly understand the reasoning and any undocumented processes within the activity.

Passive/unnoticeable: in this approach, the observer does not interrupt the work while the user is performing the work activity. Any questions would be asked once the observation is over. This allows the natural flow of events to be observed without interference by the observer, as well as the measurement of the time and quality of work.

Question 6: - How do you conduct the Requirements Workshop

This is a structured meeting with the specific goal of capturing requirements. It is used to define, prioritize and hopefully finalize requirements for the new initiative that you're working on. Requirements workshop typically last between one and a few days. They should also be a highly focused event that is led by a seasoned facilitator. Some benefits and disadvantages of the requirements workshop are identified in the following table:

Benefits

1. Faster Requirements Gathering
2. Improved Stakeholder Alignment
3. Higher Quality Requirements

4. Early Conflict Resolution
5. Encourages Team Collaboration
6. Efficient Decision-Making .

Question 7: In which context, Interview Technique can be conducted by a BA? How many approaches are there in conducting Interviews? (Structured – Unstructured) Explain them.

Explain the difference between Open Ended Questions and Closed ended Question.

Interview Technique can be used to verify the facts, clarify ambiguity, trigger enthusiasm, engage end users, identify requirements, and the opinions and ideas. It is used to get more information from the people in a formal or informal setting by asking questions and documenting the responses.

It involves direct communication with the individuals or a group of people who are part of an initiative. There are two basic types of interviews. They are,

- Structured Interview - in which the interviewer has the predefined set of questions. It is a structured way of interview.
- Unstructured Interview - in which the interviewer does not have the predetermined set of questions and it may vary based on the stakeholder responses and interactions.
- Open Ended Questions - Open-ended questions are those that provide respondents with a question prompt and provide them a space in which to construct their own response
- Closed-ended questions- Often the answer is a single word (e.g. Yes or No) or less commonly a short phrase. You are not looking for an explanation or an elaboration to the question in the answer given to the question.

Question 8: Questionnaire Technique – Where we will use? Give one example-

A questionnaire is a research instrument that consists of a set of questions or other types of prompts that aims to collect information from a respondent. A research questionnaire is typically a mix of close-ended questions and open-ended questions.

Open-ended, long-form questions offer the respondent the ability to elaborate on their thoughts. The data collected from a data collection questionnaire can be both qualitative as well as quantitative in nature. A questionnaire may or may not be delivered in the form of survey, but a survey always consists of a questionnaire.

A survey or questionnaire is used to elicit business analysis information including information about the customers, products, work practices, and attitudes from a group of people in a structured way and in relatively short period of time.

Surveys are the preferred elicitation technique when faced with a large number of stakeholders or when stakeholders are geographically dispersed and you need to gather the same information from them.

Examples:

1. How many times have you visited [website] in the past month?

None

Once

More than once

2. What is the primary reason for your visit to [website]?

To make a purchase

To find more information before making a purchase in-store

To contact customer service

3. Who did you purchase these products for?

- Self
- Family member
- Friend
- Colleague
- On behalf of a business

Question 9: How to Sort the Requirements – Where we will use? Give one example-

When all the requirements are gathered there are chances of redundancy in those requirements so basically all the scattered requirements are put together and the repetition of requirements are removed which is known as sorting of requirements. The process for sorting is:

1. Identification of requirements.
2. Dividing the identified requirements into functional and nonfunctional requirements
3. If identified requirements are similar then they are put together and removed.

We will sort the requirements in two ways such as functional requirements and Non-Functional requirements.

- Functional requirements define a function that a system or system element must be qualified to perform and must be documented in different forms. The functional requirements describe the behavior of the system as it correlates to the system's functionality.

Examples of functional requirements are authentication, business rules, audit tracking, certification requirements, transaction corrections, etc.

- Non-functional requirements are not related to the software's functional aspect. They can be the necessities that specify the criteria that can be used to decide the operation instead of specific behaviors of the system.

Examples - usability, reliability, security, storage, cost, flexibility, configuration, performance, legal or regulatory requirements, etc.

Question 10: Prioritize the Requirements – Where we will use? Give one example.

Large software systems have a few hundred to thousands of requirements. Neither are all requirements equal nor do the implementation teams have resources to implement all the documented requirements. There are several constraints such as limited resources, budgetary constraints, time crunch, feasibility, etc., which brings in the need to prioritize requirements.

Most customers on their part have a reasonable idea of what they need and what they want. But during requirements elicitation the customer provides the Business Analyst (BA) with all the requirements that he feels will make his work easier. The customer is not wrong on his part; the BA needs to understand the needs of the business to prioritize the requirements

Most requirements are interdependent and you will hardly find any requirement that exists independently. To understand why we need a dependency map – let us take a scenario where you have 8 requirements X, Y, Z, P, Q, R, M, O and N with priorities, on a 5- level scale where 1 is most critical and 5 least critical, as

1,2,1,4,5,1,2,2,3. So, with these priorities it would be logical to begin with requirements X, Z and R

2. MoSCoW – This prioritization technique was developed by Dai Clegg of Oracle UK Consulting. it is one of the more widely used techniques for its simplicity and ease of use. The letters of the word MoSCoW stand for Must, Should, Could and Won't.

☐ Must have (or Minimum Usable Subset) – These are features that must be included before the product can be launched.

☐ Should have are features that are not critical for the launch, but are considered to be important and of a high value to the user.

☐ Could have are features that are nice to have and could potentially be included without incurring too much effort or cost

☐ Won't have - are features that have been requested but are explicitly excluded from scope for the planned duration and may be included in a future phase of development.

MoSCoW method works better than the numeric rating system as it is much easier for the stakeholders to rate the requirements as Must, Should, Could or Would.

MUST (M)

Defines a requirement that has to be satisfied for the final solution to be acceptable e.g. The HR system “must” store employee leave history.

SHOULD (S)

This is a high-priority requirement that should be included, if possible, within the delivery time frame. Workarounds may be available for such requirements and they are not usually considered as time-critical or must-haves. e.g. The HR system “should” allow printing of leave letters.

COULD (C)

This is a desirable or nice-to-have requirement (time and resources permitting) but the solution will still be accepted if the functionality is not included e.g. The HR system “could” send out notifications on pending leave dates.

WON'T or WOULD (W)

This represents a requirement that stakeholders want to have, but have agreed will not be implemented in the current version of the system. That is, they have decided it will be postponed till the next round of developments e.g. The HR system “won’t” support remote access but may do so in the next release.

Question 11: Weekly status reporting – How we will drive?

A weekly status report, also known as a weekly check-in, is a communication tool that project managers use to keep tabs on their employees' work experiences. While a team lead can do a weekly status report in person, it's easier to do it online.

A weekly status report is a complete overview of your week at work, covering projects you've completed, ones that are still in progress and upcoming plans for the future.

A weekly report is a review of your workweek and provides a summary of what you completed, what projects are in progress and plans that outline your workflow for the next week. Typically, weekly reports are brief and concise and only one page long. Most professionals send weekly reports on Friday afternoons to establish consistent communication with team members and supervisors. Additionally, a weekly report can benefit both you and your employer by providing insight into important aspects of the work you complete.

Question 12: Meeting Minutes Document – prepare one Sample.

Minutes is to create an official record of the actions taken at a Meeting. Minutes serve to both memorialize the actions taken for those attending the Meeting as well as for those who were unable to attend the Meeting.

Meeting minutes are notes that are recorded during a meeting. They highlight the key issues that are discussed, motions proposed or voted on, and activities to be undertaken

Meeting Agenda –

Meeting/project Name:	Sprint Review Meeting		
Date of Meeting: (MM/DD/YYYY)	29/01/2025	Time:	09: 30 AM
Meeting Facilitator:	Business Analyst	Location:	Pune

1. Meeting Objective
1. Discuss status of sprint 2. Discuss progress report of project 3. Discuss about impediments if any 4. Suggest Solutions

2. Attendees			
Name	Department/ Division	E-mail	Phone
Priya Verma	Development Team	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXX
Aman Singh	Technical Team	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXX
Yash Patil	Business Analyst	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXX

3.Meeting Agenda		
Topic	Owner	Time
Decission about the actions n sprints	Development Team	
Decission on WIP items	Development Team	

Question 13: Change Tracker – Document - – prepare one Sample.

The role of BA in change request is very important as the change requests differ in number and complexity across business projects and may come in before, during or after implementation of a solution.

Below are the steps to follow

-->Understand the reason for the change

-->Understand the impact of the change

-->Understand the effort required to implement the change -->Ensure that the change request follows the predetermined approval process

Change Tracker Document

Change no.	Type	Description	Date Modified	Status	Priority	Impact	Remarks
1	Product	Update Login process	20/01/2025	Open	Critical	High	No Issue
2	Product	Change DB path for service module	22/01/2025	Implemented	High	High	DB issue
3	Team	Replace sick Dev member	24/01/2025	Closed	Medium	Medium	No Issue
4	Other	Shift resources for vacation	26/01/2025	Closed	Medium	Medium	No Issue

Question 14: Difference between Traditional Development Model and Agile Development Models.

Traditional Software Development	Agile Software Development
It is used to develop Simple Project	It is used to develop Complicated software.
In this methodology, testing is done once the development phase is completed.	It is methodology, testing and development processes are performed concurrently.
It follows a linear organizational structure	It follows an iterative organizational structure
It Provides less security	It provides high security
Client involvement is less as compared to agile development	Client involvement is high as compared to traditional software development.
It provides less functionality in the software	It provides all the functionality needed by the users
It supports a fixed development model	It supports a changeable development model
It is used by freshers	It is used by professional
Development cost is less using this methodology	Development cost is high using this methodology
It majorly consists of five phases	It consists of three phases.
It is less used by software development firms	It is normally used by software development firms
Expectation is favored in the traditional model	Ability is favored in the agile methodology.
Model based on traditional Software Development Spiral Model Waterfall model V model	Model based on Agile Software development Scrum Extreme Programming Crystal Dynamic Systems Development Method

Question 15: Explain Brainstorming Technique – Where to use?

The basic idea behind brainstorming is to find a conclusion for a specific problem by gathering a list of ideas spontaneously contributed by its member(s).

In other words, brainstorming is a situation where a group of people meet to

generate new ideas and solutions around a specific domain of interest by removing inhibitions

These meetings are used for solving a process problem, inventing new products or product innovation, solving inter-group communication problems, improving customer service, budgeting exercises, project scheduling, etc.

1) Nominal group technique: In this technique Participants are asked to write their ideas anonymously. Then the facilitator collects the ideas and the group votes on each idea. The vote can be as simple as a show of hands in favor of a given idea. This process is called distillation.

2) Group passing technique: In this technique Each person in a circular group writes down one idea, and then passes the piece of paper to the next person, who adds some thoughts. This continues until everybody gets his or her original piece of paper back. By this time, it is likely that the group will have extensively elaborated on each idea.

3) Team idea mapping method: This method of brainstorming works by the method of association. It may improve collaboration and increase the quantity of ideas, and is designed so that all attendees participate and no ideas are rejected.

4) Directed brainstorming: Directed brainstorming is a variation of electronic brainstorming (described below). It can be done manually or with computers. Directed brainstorming works when the solution space (that is, the set of criteria for evaluating a good idea) is known prior to the session.

There are many other techniques as well. Most important thing is you have to decide which technique is most suitable for your team

You can use brainstorming throughout any design or work process, of course, to generate ideas for design solutions, but also any time you are trying to generate ideas, such as planning where to do empathy work, or thinking about product and services related to your project.

Brain storming: It is a creative technique to find a solution or to understand the need or requirement by a group of people. As a BA, by using brainstorming, we can gather the ideas and can creative solutions for problems in short time.

The steps involved in brainstorming

1. Prepare for brainstorming: start a clear and concise objective for the session. Generate as many ideas as possible and don't limit the creative ideas instead limit the time for session. Decide who all are going to include in session and their role like participant or facilitator.
2. Conduct brainstorming session: Share new ideas without any discussion, criticism or evaluation. Record or note down all ideas.

Wrap up the brainstorming: once the time limit is reached create a list of ideas and eliminate the duplicates. Rate the ideas and prioritize the ideas using voting and distribute the final list of ideas.

Question 16: What reports Accounts Departments will generate.

Reports generated by account department **loan approval report** - list of the no of loan applications received by employee get approved **loan rejection report**- list of loan applications rejected due to some reasons **salary report**- monthly disbursed salary report prepared by account department **employment report**- report that contains the various details of new recruited staffs

loan repayment schedule report- The Loan Repayment Schedule reports contain the payment schedule which specifies the payment instalments of the Loan repayment and Interest as well as other payments that must be made by the Borrower under the Loan Agreement by employees

employee loan disbursement report- The disbursement report provides information about funds that collected and disbursed to employee accounts since the previous disbursement

Question 17: What is the structure of the message/mail communicated from the HR department to the employee in case the Loan is rejected?

Subject: Notification Regarding Your Loan Application

Dear Andrew,

We appreciate your patience while we reviewed your loan application submitted on 30/01/25. After careful consideration, we regret to inform you that your request for a loan of 15 Lakh has not been approved due to Low CIBIL score.

We understand that this may be disappointing news, and we encourage you to reach out if you have any questions regarding the decision. You may also explore alternative options, and we would be happy to guide you on any available financial assistance programs, if applicable.

If you wish to discuss this matter further, please feel free to contact HR Department at hrsupport@tts.com.

Thank you for your understanding.

Question 18: What is the structure of the message/mail communicated from the HR department to the employee in case the Loan is approved?

Subject: Loan Application Approval

Dear John,

We are pleased to inform you that your loan application submitted on 30/01/25 has been approved for an amount of 1 Lakh. The loan will be processed as per company policy, and the necessary formalities will be communicated to you shortly.

For any further queries or next steps, please feel free to reach out to HR Department at hrsupport@tts.com.

Question 19: Design a sample report on the Loans applications Received by the accounts Department.

Ans: - **Loan application report** **Date: DD/MM/YY**

Loan application ID	Applicant Name	Loan amount	Status
PL01	John	1,00,000	Approved
HL02	Smith	5,00,000	Pending
EL03	Andrew	15,00,000	Rejected

Notes:

- Approved applications have met the loan approval criteria and are eligible for loan disbursement.
- Rejected applications do not meet the loan approval criteria and have been declined.
- Pending applications are currently under review and a decision will be communicated soon.
- For any inquiries or further information, please contact the Accounts Department.

Question 20: Which reporting Tools we will use for generating reports.

The choice of reporting tool depends on factors such as the nature of data, reporting requirements, user skill level, budget, and integration capabilities. Some of the popular reporting tools commonly used for generating reports:

Microsoft Excel

Excel provides an assortment of useful tools for creating visual representation of data, such as scatter charts, radar charts, and stock charts. The various options for data visualization so that they can select the chart or graph type most suited for displaying the data.

Power BI

Power BI is a business analytics service provided by Microsoft that can analyze and visualize data, extract insights, and share it across various departments within your organization. Power BI is a collection of software services, apps, and connectors that work together to turn unrelated sources of data into coherent, visually immersive, and interactive insights. Data may be input by reading directly from a database, webpage, or structured files such as spreadsheets.

Tableau

Tableau is a Business Intelligence tool for visually analyzing the data. Users can create and distribute an interactive and shareable dashboard, which depict the trends, variations, and density of the data in the form of graphs and charts. Tableau can connect to files, relational and Big Data sources to acquire and process data. The software allows data blending and real-time collaboration, which makes it very unique. It is used by businesses, academic researchers, and many government organizations for visual data analysis.