

# SSPU SE IT Assignment Help

now i will share you questions provide ans to me as per  
sspu se it student in easy to understand  
language and give normal ans and draw text diagram  
where needed  
give it as per assignment

Sure Bhavesh! Go ahead and share the questions. I'll provide you with **easy-to-understand, normal-level answers** just like it's needed for **SSPU SE IT student assignments** — and I'll include **text-based diagrams or tables** wherever needed. Ready when you are! 😊

Differentiate between Client server architecture & Centralized architecture.

Here's the answer in **easy language** as per **SPPU SE IT assignment format**, along with a **text-based table diagram** for the difference:

## Q. Differentiate between Client-Server Architecture and Centralized Architecture.

### Answer:

Point	Client-Server Architecture	Centralized Architecture
Definition	It has two parts: client and server. Clients request services, and servers provide them.	All processing and control are done on a central system.
Data Storage	Data is stored on the server and accessed by clients.	All data is stored in one central computer.
Dependency	Clients depend on servers for data and processing.	All users depend on one central system.
Scalability	Easily scalable – we can add more clients or servers.	Not easily scalable – central system has limits.

Point	Client-Server Architecture	Centralized Architecture
Performance	Better performance due to load sharing.	May slow down if too many users access at once.
Failure Impact	If one client fails, others continue to work.	If central system fails, entire network stops.
Example	Online banking, web applications.	Mainframe-based old systems.

If you'd like, I can continue formatting other answers like this too. Just send the next question! 😊

What is parallel database? What are key elements of Parallel Database Processing?

Here's the answer in **easy-to-understand language** as per **SPPU SE IT assignment format**, including a clean explanation and a list of key elements.

## Q. What is Parallel Database? What are the key elements of Parallel Database Processing?

**Answer:**

### ✅ What is a Parallel Database?

A **Parallel Database** is a type of database system that uses **multiple processors** and **storage units** to perform operations **at the same time (in parallel)**.

It helps in processing large amounts of data **faster** and improves the **performance** and **speed** of queries.

### ✅ Key Elements of Parallel Database Processing:

## 1. Multiple Processors (CPUs)

- These are used to divide and execute tasks at the same time.

## 2. Data Partitioning

- The data is split into smaller parts and stored across different machines or disks.

## 3. Parallel Query Execution

- A single query is broken into sub-queries that run in parallel.

## 4. Interconnection Network

- A fast communication system that connects all processors and storage units.

## 5. Load Balancing

- Work is distributed equally among processors to avoid overload on a single one.

## 6. High Throughput and Speed

- More data is processed in less time due to parallel operations.

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## Text Diagram: Parallel Database System

pgsql

```
+-----+      +-----+      +-----+
| Processor 1 | <--> | Processor 2 | <--> | Processor 3 |
+-----+      +-----+      +-----+
      |              |              |
+-----+      +-----+      +-----+
| Storage 1  |    | Storage 2  |    | Storage 3  |
+-----+      +-----+      +-----+
```

*All processors and storages are connected and work together in parallel.*

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Let me know your next question! 😊

Explain architecture of Parallel Database.

Sure Bhavesh! Here's the answer in **easy and assignment-friendly format** as per **SPPU SE IT**, along with a **text-based diagram** to explain the architecture.

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## **Q. Explain Architecture of Parallel Database.**

### **Answer:**

The **Parallel Database Architecture** is designed to improve the speed and efficiency of data processing by using **multiple processors** and **storage units** that work **simultaneously (in parallel)**.

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### **Main Components of Parallel Database Architecture:**

1. **User Interface**
    - Allows users to send queries to the database system.
  2. **Parallel Query Processor**
    - Breaks a big query into small parts (sub-queries) and distributes them to different processors.
  3. **Multiple Processors (CPUs)**
    - Execute the sub-queries at the same time.
  4. **Shared or Distributed Storage**
    - Data is stored either in shared disks or distributed disks across the system.
  5. **Interconnection Network**
    - Connects processors and storage units to communicate with each other.
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### **Types of Parallel Architecture:**

1. **Shared Memory Architecture**
  - All processors share the same memory and storage.

## 2. Shared Disk Architecture

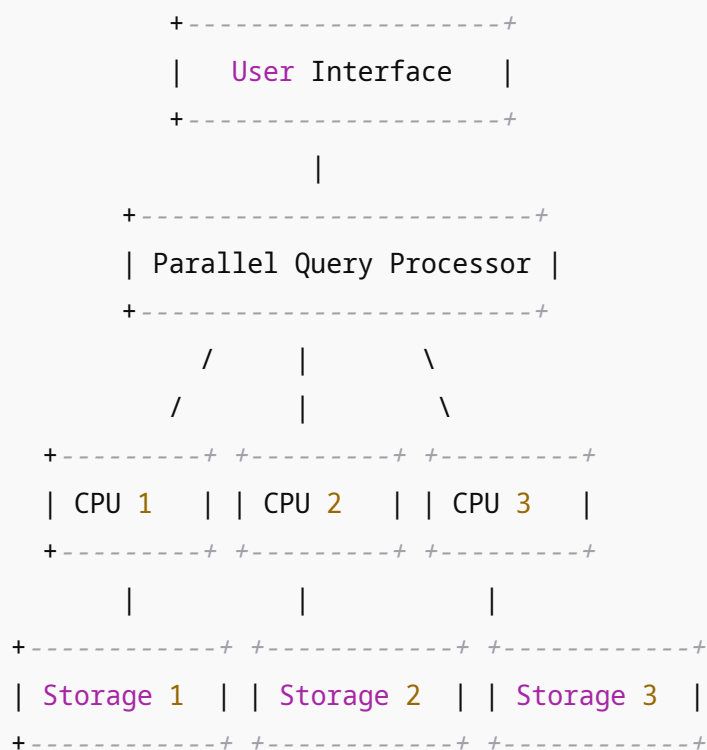
- Each processor has its own memory, but they share the same disk storage.

## 3. Shared Nothing Architecture

- Each processor has its own memory and its own disk. Most scalable type.

### ✓ Text Diagram: Parallel Database Architecture

pgsql



↑ Interconnection between processors and storage units ↑

This architecture helps in faster data processing, high performance, and scalability.

Let me know the next question, Bhavesh! 😊

Write short on:

- a) Mobile Databases
- b) No SQL Databases

Here you go Bhavesh! Here's the **short note** on each topic in **easy language** and in **assignment-friendly format** as per **SSPU SE IT**.

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## Q. Write short notes on:

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### a) Mobile Databases

A **Mobile Database** is a database that can be accessed and used from **mobile devices** like smartphones, tablets, or laptops — **even without a continuous internet connection**.

- Data is stored locally or synchronized with a central database.
  - Useful in applications like mobile banking, e-commerce, etc.
  - Supports **offline access**, and later syncs changes when online.
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### b) NoSQL Databases

NoSQL (Not Only SQL) databases are used for **storing large and unstructured data**. They do not follow traditional table-based (relational) models.

- Support **key-value, document, column, or graph-based** models.
  - Highly **scalable** and handle **big data** efficiently.
  - Example: MongoDB, Cassandra, Redis.
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### c) Internet Databases

**Internet Databases** are accessed over the **Internet** using a **web browser or application**.

- Users can access and update data **remotely**.

- Used in **web-based applications** like online shopping, banking, etc.
  - Require **authentication and security measures**.
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## d) Cloud Databases

A **Cloud Database** is a database that runs on a **cloud computing platform** such as AWS, Google Cloud, or Azure.

- Provides **scalability, high availability, and remote access**.
  - Reduces hardware cost and maintenance.
  - Supports **backup, disaster recovery, and auto-scaling**.
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Let me know if you need diagrams or next questions Bhavesh! 😊📖