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TOPIC:

Architecture specification

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GROUP:

10B

SUBJECT:

Desarrollo Móvil Integral

TEACHER:

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Architecture Specification: Microservices Architecture

Microservices architecture is a design approach where an application is composed of small, independent services, each responsible for a specific business functionality. These services communicate through lightweight protocols, such as HTTP or messaging queues, making the architecture modular and scalable.

What is Microservices Architecture?

In a **microservices architecture**, the application is broken down into smaller, self-contained units, or services. Each service:

- Is developed, deployed, and scaled independently.
- Has its own database, ensuring loose coupling.
- Communicates with other services through APIs.

Benefits of Microservices Architecture

1. **Scalability**:
    - Services can be scaled individually based on demand, optimizing resource usage.
2. **Flexibility**:
    - Different services can be developed using various technologies, best suited to their specific requirements.
3. **Fault Isolation**:
    - If one service fails, it doesn’t bring down the entire system, enhancing reliability.
4. **Faster Development**:

- Teams can work on different services simultaneously, accelerating development and deployment cycles.

5. **Easier Maintenance**:
    - Smaller codebases make services easier to understand, update, and debug.

Why Choose Microservices?

Selection: Microservices architecture is ideal for projects requiring high scalability, modularity, and flexibility. Its ability to isolate faults and allow independent updates makes it well-suited for complex, growing applications with diverse functionalities. This architecture is particularly advantageous when deploying in cloud-based or distributed environments.