

## Assignment-01

### 1. What is Microservices?

Microservices - also known as the microservice architecture - is an architectural style that structures an application as a collection of services that are

- Highly maintainable and testable
- Loosely coupled
- Independently deployable
- Organized around business capabilities
- Owned by a small team

The microservice architecture enables the rapid, frequent and reliable delivery of large, complex applications. It also enables an organization to evolve its technology stack.

### 2. Challenges with monolithic oriented architecture

- Difficult to scale.
- Long Build/Test/Release Cycles Engage your Audience.
- Operations are a nightmare.
- New releases take weeks or months.

### 3. Any three advantage and disadvantage of microservices

#### Advantages of Microservice:

- Faster development cycles (easier deployment and debugging)
- Better scalability
- Isolated services have better fault tolerance
- Greater agility

#### Disadvantages of Microservice:

- Needs more collaboration (each team has to cover the whole microservice lifecycle)
- Harder to test and monitor because of the complexity of the architecture.
- Poorer performance, as microservices need to communicate (network latency, message processing, etc.)