



Service Oriented Architecture

Ashish Neupane – Third Semester

Start

What is service oriented architecture?

- ❖ A service oriented architecture is essentially a collection of services. These services communicate with each other.
- ❖ The communication can involve either simple data passing or it could involve two or more services coordinating some activity.
- ❖ One Service should know what kind of parameter should be sent to another service and what kind of response to be expected from it.

What is service?

- ❖ A service is a function that is well-defined, self contained and most importantly doesn't depend on states of other services.

Characteristics of SOA

- ❖ Loosely coupled
- ❖ Interoperability (Cross Platform)
- ❖ Abstraction / Encapsulation

Characteristic of SOA

a) Loosely coupled c) Encapsulation b) Interoperability

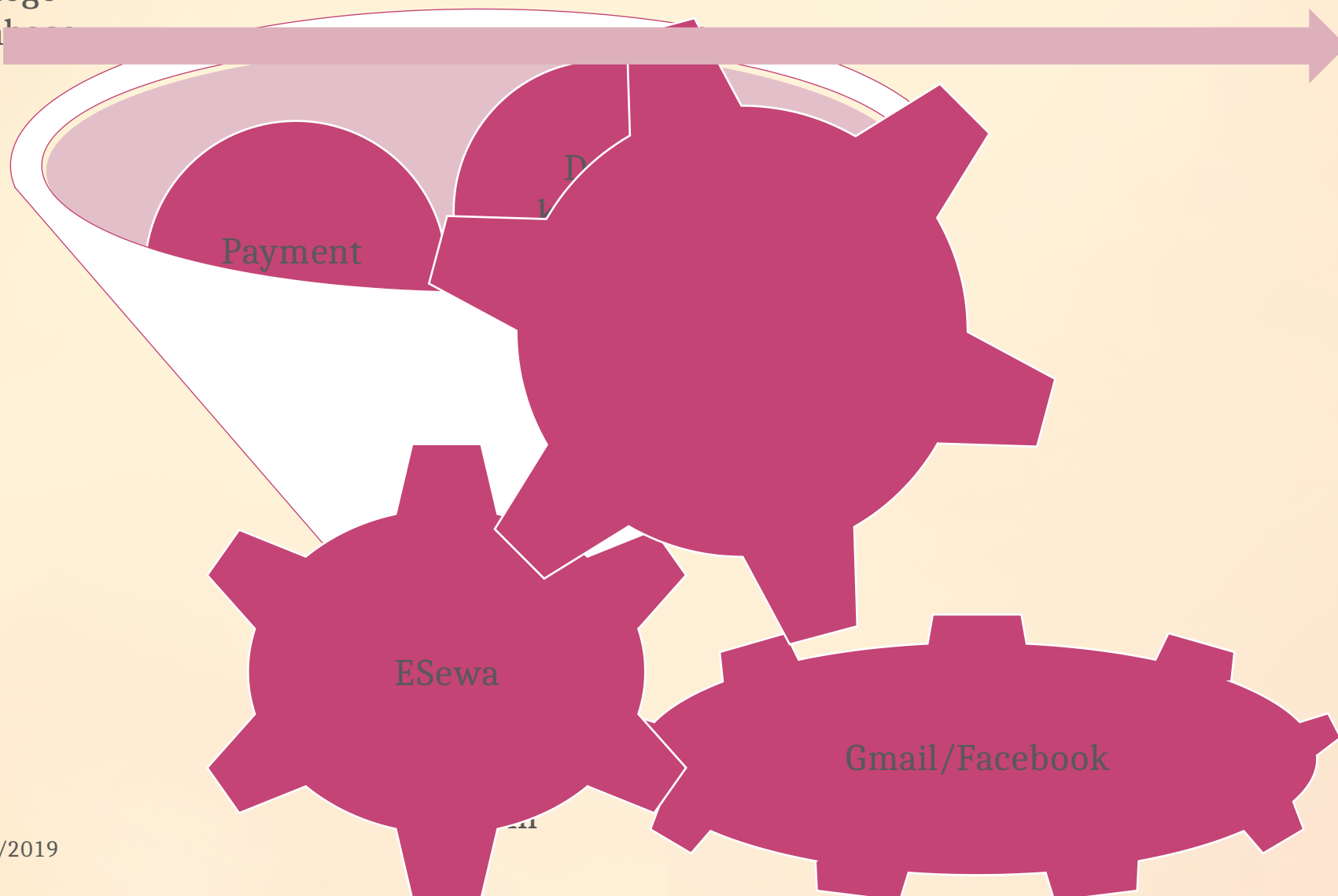
- In a SOA system, even if one service affects another, but in a very small scale. Unlike the tightly coupled coupling, this system can tolerate a failure in a service.
- A service should not reveal its internal functionality to the other services. It may return the corresponding reaction according to the parameters received. But one service should be like a “Black Box” for the other services.
- The services in the system may or may not be in the same type of platform, for example, a website should be in different operating systems like MS and Linux.

Service oriented architecture separates “the what” from “the how”.

- ❖ Users can access the service interface which provided service identification, defines the parameters and convention for returning results to the costumers.

Integrating the Services together...

College
Data



Principles of SOA

- ❖ Service contract
- ❖ Service abstraction
- ❖ Service Discoverability
- ❖ Service Autonomy
- ❖ Service loose Coupling
- ❖ Service Reusability

Why to use Service oriented architecture?

- ❖ Easy maintenance
- ❖ Prevent reinventing the services
- ❖ Reduces the cost
- ❖ Quality code
- ❖ Scalable

Thank you for watching!
Feel free to ask questions...