Module 5 note

(Service Oriented Architecture, SOA)

Service Oriented Architecture

① introduction   1) Architecture   2) Software Architecture

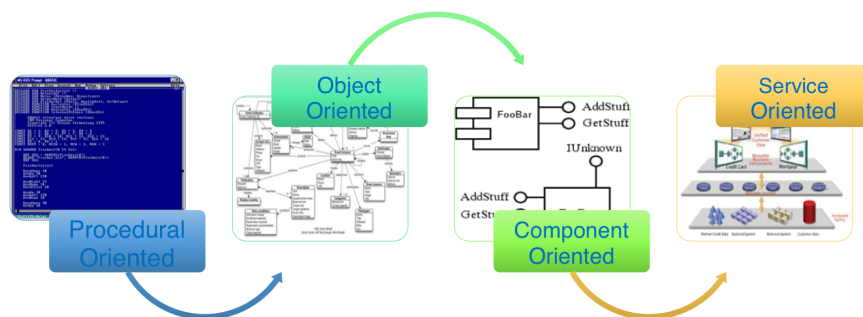② definition (What is SOA?)

design and develop software in the form of interoperable services.

③ SOA Service

1) definition, and point the most important thing : repeatable.

2) Anatomy of an example of service
    剖析

④ How did it come to SOA ?

⑤ Why SOA? Why SOA in Enterprise?

from application centric to service centric environment

So they are the same questions — benefits!

benefits:

1) enable flexible. federated business process
　　　　　　　　　　　　ᐱ联合

2) many business benefits:

　　① decreased cost

　　② increased productivity

　　③ partnership

　　④ agility ᐱ敏捷性

3) many techical benefits:

　　① services scale ᐞ规模

　　② manage complex systems

　　③ platform independent use

　　④ loose coupling allows flexibility

⑥ **Web service implementation of SOA**

SOA 的 web 服务实现

service-oriented architecture can be implemented with web services.

SOA can be implemented using other technologies.

⑦ **Basic components of an SOA**

three components
{
service provider
service consumer
service registry

⑧ **Characteristics of SOA**

特征

Any function can be a service but need not be.

任何功能都可以是服务,但不一定是.

The criteria for whether a function needs to be

标准

a service is based on its reuse potential.

④ Common Service Design Principles

↑
they support and achieve a foundation paradigm 实现基础范式
based upon building of SOA characteristics.

1) standardized service contracts

2) loose coupling

3) abstraction

4) reusability

5) autonomy

6) statelessness

7) discoverability

8) composability

Principles can relate to and affect each other.

1) Reusability can be affected by applying other principles.
(Details in slide)

2) Applying the principles of reusability have impact on other principles.
(Details in slide)

⑩ ESB 略

⑪ where not to use SOA ?

  1) when you have homogenous IT environment
                      ^同质的

  2) when real time performance is critical

  3) when tight coupling is a pro not a con
                         ^优点   ^缺点

  4) when things don't change.