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Spring Boot 9AM

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Microservices (using Spring Cloud)

Microservices: It is a design used to develop application by decomposing modules into application and integrate them using webservices.

\*) Microservices is not coding, it is theory/design.  
For this coding is Spring Cloud.

Q) What Cloud computing?

A) Using services over network for rental is called as Cloud computing.

Using Hardwares is called as Infrastructure as a Service  
Using OS is called as Platform as a Service  
Using Applications called as Software as a Service

Q) What are diff cloud computing providers?

A) AWS/Google Cloud/MS-AZURE  
By using this we can run our application.

Q) What is Spring Cloud ? Where it is used?

A) To develop application using Microservices Design  
Spring Cloud is used.

=====Introduction=====

1. Monolithic Application
2. Advantages
3. Limitations
4. Scalings
5. SOA
6. Microservices design
7. Spring Cloud Netflix OSS components

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1. Monolithic Application:-

One application that contains multiple services together and deployed as single unit is called as Monolithic Application

Application = Collection of Services

Project = Collection of Modules

Application/Project

Amazon (<https://www.amazon.in/>)

Register	Login	Search	Cart
Payment	Track	History	HELP
Feedback	Review	Logout	

Source Code (.java) => Compile (.class)

=> Build (.jar/.war) => Deploy (Server)

Q) What is build?

A) Creating final format of a project code

ex: .jar/.war

Use Maven Goals 'Maven Clean Maven Install'

or to automate process using Jenkins with Maven/Gradle

Q) Explain Maven Goals?

A) <https://www.youtube.com/watch?v=iLwuhbnFPqo>

Q) What is Deploy?

A) Place build file inside server and start server

Q) What is server instance / Service Instance?

A) An Application running inside one server is called service instance.

Q) What is the default max capacity of a server?

(or) default max no.of request a server can process?

A) 200 (default)

we can modify even

server.tomcat.threads.max=400

server.jetty.threads.max=400

Q) What is Load, Load Factor?

A)

One server create one request thread when request comes.

One request thread is called as one Load.

Load = Current no.of request under processing

Load Factor = Load / Max Load  
= 20/200 = 0.1

Load Factor always varies in range : 0(min) - 1(max)

Q) What is scaling and how many types we have?

A)

Scaling : It is process of increase resource processing capacity. Thta provides fast/more service.

2 types

a. Horizontal Scaling:

Creating multiple instances

b. Vertical Scaling :

Increase current system hardware configuration  
RAM, PROCESSOR, HardDisk, network..etc

Q) What is LBS ? Why it is?

A) LBS - Load Balacing Sever

it is a mediator server, it is will distribute request equally to multiple instances to execute.

It will allocate an instance which has less Load Factor.  
If all/multiple instances are same, then any one random.