Total session 9

Day 7

Web Service: Giving the service for web application when two or more than one web application running using different technologies.

Amazon or online shopping --->

	Java req		
Java or Spring boot	payment		
Asp.net	java res	phone pay	java
Php		google pay	.net
Python		paypal	python
Node JS		net banking	php
		Credit cart	

Java pure object platform independent but language dependent language.

Web service is help to give the service for any web application. So it is language independent, browser independent and platform independent.

Java req

HDFC   XML/JSON   HSBC

Java   .net res   .net

Here XML or JSON is a format which help to share the data between two application when two application running using different technologies.

XML : eXtensible markup language

JSON : Java Script Object Notation

Custom c = new Customer();

c.setId(100);

c.setName("Ravi");

c.setAge(21);

XML format of Customer object is

<Customer>

      <Id>100</Id>

      <Name>Ravi</Name>

      <Age>21</Age>

</Customer>

JSON form of customer object is

{"id":100,"name":"Ravi","age":21}

Web Service

Type of web service

1. SOAP base web service : Simple Object access protocol : it was one of the very import web service we use more. SOAP web service is base upon SOA (Service Oriented Architecture).
Limitation : We can consume and produce data only in the form of XML. SOAP web service follow their own message structure.
SOAP web service more complex while sending simple message.
2. Restful web service Representation state transfer : Restful web service is not base upon any Architecture. It is style to expose our serverside resource ie servlet, jsp or spring controller as web service in any format base upon client requirement. Like json, xml, plain text, html, mediate type etc.

Consumer   :   we are ready to receive the data
Producer   :   we are exposing data to another technologies
                              Format can be xml, text, json etc.

In Rest full web service we are not using view as html or jsp.

View -→ JSP or html

Controller → Servlet or Spring controller

Our view must be frontend technologies ie angular or react js.

If we use html or jsp we view then controller must be servlet or spring controller

If our view as angular or react js technologies then controller can be restful controller develop in any language.

If we make rest controller then any other technologies can consume are data. So View can be angular or react or asp.net or php or any other technologies.

Loosing coupling.

In Rest full web service

1. Get methods :   retrieve the resources like Employee, Customer, Manager, Order, Products in xml or json format.
   a. Retrieve string in plain text format
   b. Retrieve string in html format
   c. Retrieve string in xml format
   d. Retrieve object in json format
   e. Retrieve list of object in json format.

   While calling get method if view technologies want to pass value.

   1. Query param
      a. ==URL?key=value==   single value pass
      b. ==URL?key=value&key=value&key=value== multiple value pass
         This technique by default all html form with Get method internally use.

      Rest client is html form we can use query param with get method

   2. Path param
      a. ==URL/value==   single value pass
      b. ==URL/value1/value2==   multiple value pass

      If rest client is angular or react or other technologies we can use path param.

Select * from employee   all records

Those value we can receive using query param or path param.

Select * from employee where clause

2 . post method :   create resource like Employee, Customer, Order or Product

   Insert into tableName values(v1,v2,v3);

   Rest client need to pass the value in <mark>json or xml</mark> format. Spring boot rest api consume that data and pass to database.

3. Put or patch method : update the resource
   Update table set with conditions

4. Delete method : delete the resource
   Delete from table with where clause and those value which we can retrieve using path param or query param.

Get for retrieve purpose

Post for create purpose

Put or patch for update purpose

Delete for delete purpose