Akash Kale

MCA

SLK Software Java/JEE 2 year

12 + Year of exp

Core Java, Jee (Servlet/JSP/EJB), Hibernate, JSF, Spring, Struts,

HTML5, CSS3, JavaScript, jQuery, Node JS, Angular JS, React JS etc.

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2 RestFull Web Service

2 Node JS

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Web Service :

J2EE or JavaEE or JEE :

Java Enterprise Edition

3 Modules

Servlet :

JSP : Java Server Pages

EJB : Enterprise Java Bean

Spring Framework

20% EJB 80% Spring Framework.

MVC : Model View Controller

View : HTML/CSS/JavaScript + JSP

Presentation Logic

Controller : Servlet / Filter

doGet/doPost

Model : JavaBean + Service Layer (

Business logic) +

Dao Layer(database Logic/JDBC)

Data Access Object.

JavaBean

Property : private (all variables)

And setter /getter methods

public class Login {

private String user;

public void setUser(String user) {

this.user = user;

}

public String getUser() {

return user;

}

}

Login.jsp check.jsp (database logic)

Javabean

Login.jsp/Login.html --🡪 LoginController (Servlet) doGet/doPost --🡪

JavaBean

-🡪 LoginService -----🡪LoginDao --🡪 Database (Oracle/MySQL)

Req(http/https)-🡪 java(req)-🡪

Client HDFC (jee) xml/json HSBC(asp.net/php/)

🡨---Res(http/https) 🡨.net(res)

<https://www.hdfclogin.com> -🡪URL

Java is a pure object oriented, platform independent but language dependent.

Web Service

Customer cc = new Customer();

cc.setCustId(100);

cc.setCustName(“Ravi”);

cc.setAmount(5000);

cc

xml format or json format

Web Service : Giving the Service for web application when both application running using different technologies or same, different platform or same.

Web Service is a platform independent, language independent as well as browser independent.

Web Service is a concept.

MVC is a design pattern.

2 types

1. SOAP Base Web Service or Big Web Service
2. RestFull Web Service

SOAP : Simple Object Access Protocol.

SOAP base web service is base upon SOA

Service Oriented Architecture.

Eclipse, Java 8, Tomcat , JAX\_RS jar files

SOA

SB : Service Broker

Register lookup Service

Search Details

WSDL

SR or SC SP

Service Requester Send req(SOAP Service

Service Consumer Res (SOAP Provider

JEE Asp.net

Method/functions

WSDL : Web Service Description Language : It is a type of XML file which contains services details. Like service url, service name, number of parameter as well as type of parameter and return type of service methods.

This wsdl file they will register in UDDI registry .

Universal Description discovery integration. It is a type of database which hold wsdl file.

Then service consumer or requester search or lookup the wsdl file from uddi registry. Then using wsdl file they call service

SB uddi registry

Wsdl file

SC SOAP Req SP

SOAP Res

JAX\_WS : Java API (Application Programming Interface) XML Web Service

JAX\_WS is a implementation of SOAP Web Service in Java Technologies.

Third party tools or vendor tools which provides set of jar files which help to achieve JAX\_WS

1. Axis 2 tool
2. Metro tool
3. Java 8
4. WAS (WebShere Application Server)
5. Spring framework

JDBC : Java Database Connectivity : mysql connector jar file

Class.forName(“com.mysql.jdbc.Driver”);

SQL server 2018 :

Limitation of SOAP base web service

1. Using SOAP base web service we can consume as

all as data only in the form of XML.

1. XML data is heavy data. In XML we can dtd(document type definition) and xsd (xml schema definition).

Employee emp = new Employee();

emp.setId(100);

emp.setName(“Ravi”);

emp.setSalary(12000);

JAX\_B : Java API for XML Binding : Converting

Java to XML and Vice-versa.

XML Format

<Employee>

<Id>100</Id>

<Id>10ab</Id>

<Name>Raj</Name>

<Salary>12000</Salary<

</Employee>

Html vs xml

RestFull Web Service :

Resource : Servlet / JSP :

Employee

CRUD Operation : Create / Read / Update / Delete

EmployeeController.java (Servlet Programs )

doPost() : Create the Resource

doGet() : Read the resource

doDelete() : Delete the resource

doPut() : Update the resource

RestFull Web Service : it is a concept

JAX\_RS : Java API for XML Restfull WebService.

JAX\_Rs is a implementation of RestFul Web Service in Java Technologies.

JAX\_RS

Vendor tools

1. Jersey
2. Apache wink
3. Spring MVC
4. WAS

<http://localhost:8080/JAX_RS_Demo/rest/Abc>

<http://localhost:8080/JAX_RS_Demo/rest/Xyz>

<http://localhost:8080/JAX_RS_Demo/rest/obj>

HTML Vs XML

1. HTML is use to display the data.

XML is use to describe the data or hold the data or transfer the data.

1. HTML contains lot of pre-defined tags like html, head, body, p, h1, font etc

In XML we can write user-defined tags base upon the application requirements.

1. IN html without tag we can display the output.

But in XML it require at least one tag ie tag is known as root tag or parent tag or document tags.

1. In html it is not mandatory every tag has to close properly. But in xml every tags must be close properly.
2. HTML is not case sensitive but xml is a case sensitive means

If you open the tag with upper case we have to close with upper case only.

<Message>Welcome to XML Data </Message>

<Message>Welcome to XML Data <Message>

<Message>Welcome to XML Data </message>

Welcome to XML Data

<Message><Msg>Welcome to XML Data </Message></Msg>

Passing the value to REST API

1. Query param

URI

<http://localhost:8080/JAX_RS_Demo/rest/obj/queryparam?name=Ravi>

<http://localhost:8080/JAX_RS_Demo/rest/obj/empInfo1?id=100&name=Ajay&salary=12000>

<http://localhost:8080/JAX_RS_Demo/rest/obj/loginInfo?user=Raj&pass=deep>

1. Path param

<http://localhost:8080/JAX_RS_Demo/rest/obj/pathparam/Ravi>

<http://localhost:8080/JAX_RS_Demo/rest/obj/empPath/100/Ajay/14000>

QueryParam Vs PathParam

If the client is sending data through HTML page using method as GET that time you can use queryParam option.

By default every html form method is get consider.

But if the client is command base application like unix that time we can use the path param

@POST

@GET

Client application may be

Brower, form

@POST

Client application may be

Form with method as post, rest client browser plugin,

AJAX, Java,.net,php, python rest client programs.

@DELETE and @PUT

Rest client browser plugin,

AJAX, Java,.net,php, python rest client programs.

If Servlet is a Controller then view must be html or jsp.

But if Restfull Web Service is a Controller then view may be html or jsp or command base application like unix, github or Java Client or .net or php or python or browser plugin or ajax or Angular 7/8 or React js.

Because of RestController the view and controller become loosely coupling.

Employee emp = new Employee();

emp.setId(100);

emp.setName(“Ravi”);

emp.setSalary(12000);

XML format

<employee>

<id>100</id>

<name>Ravi</name>

<salary>12000</salary>

</employee>

JSON : JavaScript Object Notation : Like map in java

{“key1”:value,”key2”:”value”}

{“id”:100,”name”:”Ravi”,”salary”:12000}