Java

Core java

JavaSE JavaEE Java ME

JSE (Java Standard Edition) JEE (Java Enterprise Edition) JME

(Java Micro Edition)

OOPs

Exception Handling

Multi threading

Lot of packages

AWT or Swing or JavaFX

GUI

JDBC

MySQL Or oracle

Using JSE or J2SE

We can create standalone

Or Desktop application

JavaEE : Which help to create Web Application.

<http://www.google.com> ---🡪 URL

request (http/https)-------🡪

Client Server

🡨------Response (http/http) HTML

CSS

JavaScript (Client Side JS file)

Java -🡪JEE(Servlet/JSP/EJB)

Asp.net

Php

Python with Django

Node JS (Server Java Script)

JEE (Servlet/JSP/EJB)

Struts Framework

JSF Framework

Spring Framework and Spring boot

Server : Application point of view. Server are mainly divided into 2 types.

Web Server: Tomcat (Apache )

Application Server: Web Logic, JBoss, Glash fish, WAS etc.

Servlet : Servlet is normal Java program which help to create dynamic web page on server.

Types of Servlet : Servlet interface, class GenericServlet and HttpServlet

Life cycle servlet methods are init, service and destroy

Http Protocol methods are doGet, doPost, doPut, doDelete

class MyServlet extends HttpServlet {

public void doGet(request,response){

}

}

**MVC :**

Model View Controller : It is a design pattern or architecture which help to develop enterprise level application.

Standalone web application

View --🡪 Console --------------🡪 Browser ------🡪 HTML (Static) / JSP (Dynamic )

Controller 🡪 Main class provide 🡪 Servlet

(intermediate between view and model)

Menu option

Model----🡪 JavaBean map to table -🡪 Service class contains business logic -🡪 Dao class contains database logic -🡪 resource class provide resource information like database details or any other information base upon project requirement.

Limitation of Servlet and JSP in MVC project.

1. By Default Servlet is multi threading. We are not creating servlet and JSP object using new keyword. object creation of servlet and jsp is taken care by web container part of tomcat server.
2. Web container doesn’t maintain the life of model layer.
3. To improve model layer EJB came in picture. (Enterprise Java Bean).
4. To run the EJB we need application server which contains EJB container.

Framework : Framework provided set of classes and interface which internally interact with each other to perform specific task. Every Framework internally follow standard. Design pattern (best practise). The implementation of all design pattern is taken care by framework. Framework is like a protocol or template but not final product. If we develop any enterprise level application using any framework 70 to 80% task take care by framework we need to write 20 to 30% code to make final product.

Angular framework

Python with Django framework

Asp.net framework

Spring framework and spring boot

JSF framework

Struts framework

Node JS Express JS Framework

Struts Framework : Struts is an open source framework provided by Apache. Which internally follow MVC. Provided lot of API to improve view layer, model layer and controller. Struts is known as controller centric framework.

JSF Framework :JSF is an open source framework provided by oracle. Which internally follow MVC. Provided lot of API to improve view, controller and model layer. JSF (Java Server Faces) improve view layer (View centric framework)

Spring Framework: Spring is an open source layer architecture or onion architecture framework.

Spring framework provided n number of layer or module to improve all types of application.

Spring modules

1. Spring core
2. Spring context
3. Spring mvc : spring MVC model centric framework
4. Spring rest api
5. Spring dao
6. Spring orm
7. Spring aop
8. Spring micro service
9. Spring cloud
10. Spring security
11. Spring testing
12. Spring boot
13. Spring integration

Etc