

1) What is the latest Version of JSP and Servlet ?

Ans

1) Servlet - 5.0

2) JSP - 3.0

2) What is Servlet ?

Ans

Servlet is a Special type of Java class that provide dynamic web contents.

or

Servlet is a Special type of Java class that processes business operations, builds a response and send back to the Web Server.

3) What is JSP ?

Ans

JSP stands for Java Server Page . It provide dynamic web pages .

4) What is Server ?

Ans

Container are responsible to execute , compile and manage life cycle of Server Resource . It is referred as a Server .

5) What is Web application?

Ans A application that is accessed by Web Browser Using http protocol is called web application.

6) What is Servlet life Cycle?

- Ans
- 1) init () .
  - 2) service () .
  - 3) destroy () .

7) what is JSP life cycle?

- Ans
- 1) JspInit () .
  - 2) \_JSPService () .
  - 3) JSPDestroy () .

8) Why do you Use Servlet as a Container?

Ans As per MVC Architecture We Use Servlet as a Controller.

9) Why do you Use JSP as a View?

Ans As per MVC Architecture we Use JSP as a View

Q) Why HTTP is called Stateless protocol?

Ans Because it does not remember the state of a user and every request is considered as a fresh request.

Q) How Many Instances of a Servlet / JSP are Created for handling multiUser Request?

Ans Only One Instance, For each User Request a Separate thread is created and Service Method is executed inside that thread.

Q) Can you define Servlet / static / class attribute / Variables?

Ans Yes

Q) Can you Store a User State in an instance Variable?

Ans Yes, but that is not advisable

It is not advisable because since all user have access on the same object Servlet instance so any user can modify instance variable. Thus, it is not recommended to

store a User State in the instance Variable of a Servlet.

14) What is Main Controller? which design Pattern it follows?

Ans - front controller is called Main Controller, front controller perform session checking and logging operation before calling any other application controller.

- It prevent any user to access an application without login
- It follows front controller design pattern

15) What are the difference between forward and send redirect?

Ans Method forward() of request dispatcher object is used to forward request from one servlet to another servlet where as

Method sendRedirect() of request dispatcher object always generate new request and sent to the another servlet

16) Why RequestDispatcher Used in Servlet?

Ans It is Used for include and forward the request.

- RequestDispatcher rd = request.getRequestDispatcher ("login.jsp");

rd.include (request, response);

rd.forward (request, response);

17) What are the different Scope of an attribute in Servlet/JSP?

Ans 1) Page

2) request

3) Session

4) application

5) Config

18) Difference b/w GET and POST method?

Ans

## GET

## POST

1) Form submitted data is encoded in URL and appended a Query String.	Form submitted data is not a part of URL. It is sent as a message body of HttpRequest
2) Since data is a part of URL So input data size is restricted in Get Request.	Input data is sent as a message body part So there is no restriction of input data size
3) Parameter remains in Browsing history	Parameters are not saved in Browsing history.
4) It is UnSecured	It is Secured.
5) Contains only character.	May Contains Binary Data

14) What are Put and delete methods?

Put is Used for the saving the data Under the Request URI and  
Delete is Used for deleting the data Under the request URI.

20) What are Cookies and where it is stored?

Ans

Cookies is a pair of Key and Value String.  
Server Sends cookies as a part of response header. Browser receives cookies and store in a text file in local file system.

Cookies stored at client Browser and Session stored as Cookies

Creating a Cookie :-

```
Cookie c = new Cookie("city", "indore");
```

```
// Now Add cookie
```

```
response.addCookie(c);
```

21) What is URL Rewriting?

Ans - When Cookies are disabled in a browser that time URL Rewriting is the way to track the Session.

> - It append SessionId with the URL with the help of `response.encodeURL("Login.jsp")` method.

22) which class you need to inherit to make a Servlet ?

Ans HTTP Servlet.

23) What is CGI programming ?

Ans CGI stands for Common Gateway Interface. It is Server Side programming. It can be implemented in PHP, C, C++ etc.

24) What is the advantage of Servlet Over CGI programming ?

Ans

Servlet

CGI

1)

It Support threading

It does not Support threading

2)

It is Platform Independent.

It is Platform dependent

3)

It Creates a thread for new client request. Thread are lightweight and Share resources.

It Creates a process for new client request. process can not share resources.

25) Can A Servlet/JSP Created for FTP or other protocol ?

Ans Yes, Servlet Can be Used for Multiple protocol for example HTTP and FTP.

for HTTP protocol we extended HttpServlet and for FTP Protocol we need to implement FTPServlet Interface

26) What is Container Or Servlet Engine ?

Ans A Web Server that Contains Servlet / JSP and execute them is Called Container or Servlet Engine.

27) What are Implicit Objects ?

Ans Servlet provide some Predefined object to all JSP Pages of an application are called implicit objects

There are nine Implicit object in JSP

1) Request → HttpServletRequest

2) Response → HttpServletResponse

- 3) Session → HttpSession,
- 4) application → ServletContext.
- 5) Config → ServletConfig.
- 6) Page → Current JSP Page.
- 7) Page Context → Page Context.
- 8) Out → JSP Writer
- 9) exception → Throwable

28) What is Single Thread Model ?

Ans Single Thread Model is a Marker Interface which is used to make JSP / Servlet Single threaded. Used to handle One request at a time.

29) How Single thread is Implemented in Servlet and JSP

Ans → JSP Single Threaded :-  
<%@ Page isThreadSafe = "False" %>

→ Servlet Single Threaded :-  
By implementing SingleThreadModel Interface.

30) How Session is Tracked ?

Ans Session is tracked by SessionID

31) Can we Upload a file On a Webpage with the help of Get method ?

Ans No, file Attachment Required Multipart form Submission and Multipart form can be Submitted Only by Post Method.

32) How do you attach and Upload a file Using HTML form ?

Ans Form Enctype attribute is Set to Multipart/ form data to Make it Multipart form and Input type element type "file" is Used to attach file

- By Enctype attribute in Form Tag :-

or <form method="Post" enctype="multipart/form-data">

<input name="doc" type="file" >

</form>

- In Servlet :-

- o Using `@MultipartConfig` annotation.

33) Difference b/w Generic Servlet and HttpServlet ?

	Generic Servlet	HttpServlet
1)	Generic Servlet is a Protocol Independent	HttpServlet is Protocol dependent
2)	Generic Servlet implements Servlet Interface that has a Life Cycle Methods of a Servlet	HttpServlet inherits the GenericServlet class HttpServlet provides Service methods Such as <code>doGet()</code> method and <code>doPost()</code> method for handling Http Specific Services

34) What is Multipart Form ?

Ans HTML Provides Multipart Form to Upload one or More files to a web application Using POST HTTP Request ..

35) Difference b/w listeners and filters and How do you configure it in Web.xml ?

Ans

	Filters	Listeners
1)	Filters are called on every User Request.	An object that observe the event and perform an action is called listeners.
2)	Filter can be attached with Single JSP/Servlet or with Multiple JSP/Servlet using Wild card Mapping.	Listeners are event driven and called on different Server Events.
3)	Filter are configured by <filter> tag in Web.XML	Listeners can be configured by <Listener> tag in Web.XML

36) When Events are generated ?

Ans

Events are generated when :-

1) Servlet Context is Created, destroyed and First Request is Received.

- 2) Attributes are added, changed and removed from ServletContext.
  - 3) Session is Created, invalidate and TimeOut.
  - 4) Attributes are added, changed and removed from Session.
- Ques 27) How do you Create methods in JSP or How you can Create instance Variable in JSP?

Ans We can Create method or instance in JSP with the help of declaration tag

Example :-

<%! int Count = 0;%>

<%! Public int Sum (int a, int b)

{

return a+b ;

%>

Ques 28) What is Servlet Listener?

Ans Servlet Listener is An Object that observes the event and performs an action is called Listener

### 39) Servlet Config VS Servlet Context ?

Ans

	Servlet-Context	Servlet-Config
1)	Servlet-Context is a Single object Created for all Servlet for a Web server	ServletConfig Object is is Created for each Servlet
2)	It can be Retrieved by get.ServletContext () method in a Servlet.	It Can be Retrieved by get.ServletConfig () method in a Servlet
3)	It can be accessed by application implicit obj in JSP	It Can be accessed by Config implicit object in JSP.

### 40) Servlet Context Mapping

Ans

<Context-Param>

<Param-name> Key </Param-name>

<Param-Value> Value </Param-Value>

</Context-Param>

→ We can also set data into Servlet-Context object from Servlet & JSP using `setAttribute()` method.

`Application.setAttribute(key, value);` for set  
`Application.getAttribute(key);` for get.

4) Servlet Config Mapping :- (in Web.xml).

`<Servlet>`

`<Servlet-name> name </Servlet-name>`

`<Servlet-class> class </Servlet-class>`

`<init-param>`

`<Param-name> key </Param-name>`

`<Param-value> Value </Param-value>`

`</init-param>`

`</Servlet>`

By Using `@WebServlet init-params =`

`{  
 @WebInitParam`

`}`

42) How can you fetch initializing Parameters by getInitParameter() of ServletContext and ServletConfig?

Ans Application.getInitParam(key);

Config.getInitParam(key);

43) Why do you use CSS?

Ans Cascading Style Sheet is a Style Sheet language that is used to define the look and feel of of HTML page.

44) How can you include .css file in a ASP or HTML?

Ans By Using <link> tag inside <head> tag

Example :-

<head>

<link rel="Style-Sheet" href="Style-Sheet"  
type="text-file" />

</head>

Ques

Using <Style> tag

Example :-

<Style>

h1 {

Color : white

background-color: black;

}

</Style>

45) Do you Create Custom CSS in your Application?

Ans No, we do not Create Custom CSS in our Application. We Use Bootstrap to our UI. Bootstrap Contains CSS.

46) Why do you Use Filter in your Application?

Ans We Use Filter in Our Application for implementing Front-Controller. Remember, multiple filter can be Mapped With Single Servlet Or One Filter Can

be Mapped with Multiple Servlet Using Wild Card Mapping.

47) What are the life cycle methods of Filter Interface?

Ans 1) init()

2) doFilter()

3) destroy()

→ init() : init(FilterConfig config). The object FilterConfig contains Configuration information of a filter from web.xml or @Webfilter annotation

→ doFilter(ServletRequest req, ServletResponse res, FilterChain chain)

The object of Filter chain Interface is responsible to call the next Configured Filter in the chain and doFilter(req, res) method is Transfer Control to next filter chain.

→ `destroy()` : No Assignment, It just call to destroy a filter. It indicates filter is being taken out of service.

## Q8 Difference b/w Directive Tag and Action Tag ?

	Directive Tag	Action Tag
1)	Include file into JSP AT translation Time	Include file response into JSP response at runtime.
2)	Can not Pass Request Parameters	Can Pass Request Parameters .
3)	Used for static Content like header.jsp and footer.jsp	Used for dynamic Content like Role based menu .
4)	If include file is changed but not the JSP then Changes will not be reflected	changes will always be reflected.

49) What is filter?

Ans Filter performs PreProcessing and Post Processing operation on a Request and Response of a Client.

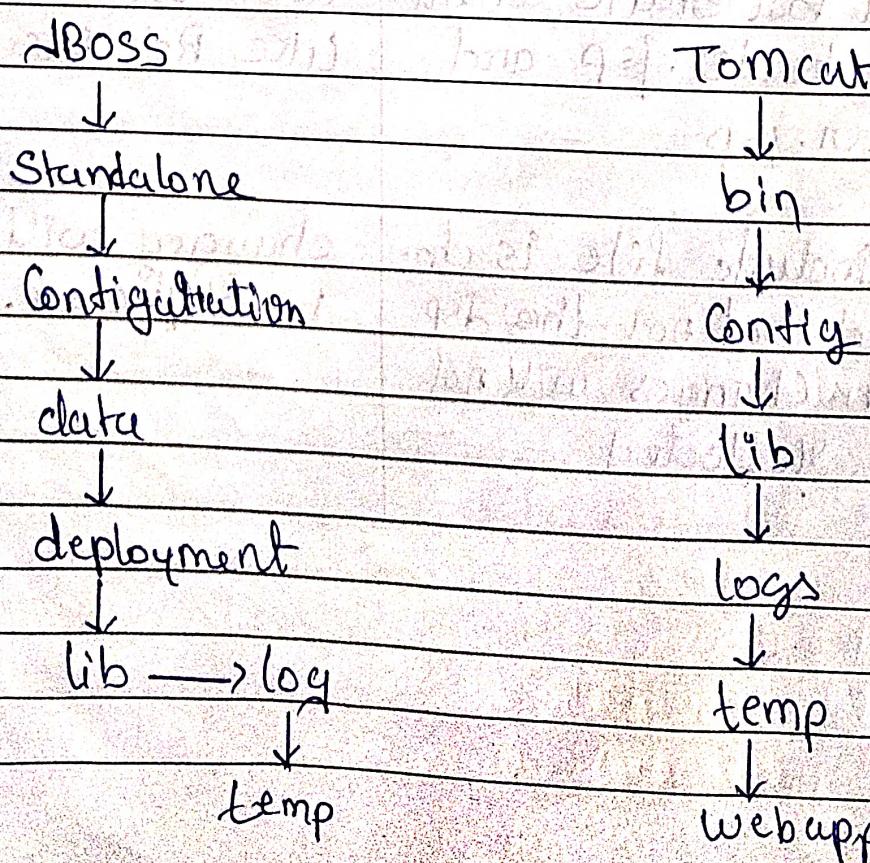
50) What is Deployment Descriptor?

Ans file Web.xml is a Deployment Descriptor of the Web application.

It contains Mapping for Servlet, Welcome-pages, Filter, Session, Time-out etc.

51) Directory Structure of JBoss And Tomcat?

Ans



52) What is the Use of CGI ?

Ans Some languages are not directly communicate with Server. So CGI is used for Intermediator between Server and language.

53) Which Framework are Configured Using Filter and Listener ?

Ans Struts , Spring and Tiles Framework.

54) Servlet 3.0 annotation

Ans 1) @WebServlet

2) @WebFilter

3) @WebListener

4) @WebInitParam

5) @MultipartConfig

6) @HttpConstraint .

55)

Where Will you Use Single Thread Model Servlets in Your Application ?

Ans

We do not use it because it is deprecated now.

56)

How Can you Create Servlet without Using Java Editor or Java Wizard ?

Ans

We can type Servlet Code in Notepad and Compile it.

57)

Why We dont declare a Constructor in Servlet?

Ans

We can not declare Constructor in Servlet because it does not access a ServletConfig Object. init() of Servlet is used to perform Servlet initialization that can use ServletConfig Object.

58)

When Instance of Servlet is Created ?

Ans

Servlet instance is created if we use <load-on-startup> tag.

OR

?)

First Client Request is received that time

55) Where will you use Single Thread Model Servlets in your Application ?

Ans We do not use it because it is deprecated now.

56) How can you Create Servlet without Using java Editor or Java Wizard ?

Ans We can type Servlet Code in Notepad and Compile it.

57) Why we don't declare a Constructor in Servlet?

Ans We can not declare Constructor in Servlet because it does not access a ServletConfig object. init() of Servlet is used to perform Servlet initialization that can use ServletConfig object.

58) When instance of Servlet is Created ?

Ans 1) Servlet instance is Created if we use <load-on-startup> tag.

OR

2) First Client Request is Received that time also Servlet instance is Created.

59) What is the function of <load-on-startup> tag?

Ans It load the Servlet at the time of Server startup.

60) Why do you Pass Integer Value to load-on-startup tag?

Ans It show the loading ordering Order of Servlet at the time of Server Startup.

61) What is HTML?

Ans HTML is a Markup language that Contains Markup tags. It is used to develop Web page.

62) What is Http?

Ans Http is a Application Communication Protocol between Server and Client.

63) What is URI?

URI stands of Uniform Resource Identifier. It is a location of page to be accessed.

Ans 64) What is URL ?

Ans URL Stands for Universal Resource Locator.  
It is used to locate a resource on a Web Server.

65) What is JavaScript ?

Ans JavaScript is a text based Programming language  
Used on Client Side that allows you to make  
Web pages interactive

66) How To Start tomcat Server ? or Stop ?

Ans Start → Tomcat / bin / startup . batch

Stop → Tomcat / bin / shutdown . batch

67) How To start and Stop Jboss Server ?

Ans Start → Jboss / bin / Standalone . batch

Ctrl + C and Press Y to stop server.

68) How To change Port No. in Tomcat Server ?

Ans Tomcat / Config / Server.xml

<Connector port="8080" >

Ques) How to change Port of JBoss Server?

Ans JBoss / Standalone / Configuration / Standalone.xml

<Socket-binding >

Ques) What is Use Case?

Ans One Complete functionality is called UseCase.

Ques) What is Modules?

Ans Set of Related UseCase is called Modules.

Ques) What is POM.XML?

Ans POM Stands for Project Object Model. It is an XML file that contains information about the project and contains configuration details used by Maven to build the project.

Ques 73)

What is MIME?

Ans

MIME Stands for "Multi-purpose Internet Mail Extension". It is used to extend the capabilities of Internet e-mail protocol such as SMTP.

Ques 74)

Write any 5 Web Server and 5 Application Server

Ans

Web-Server :

Application Server

1) Tomcat

1) JBoss

2) Resin

2) Jetty

3) Klon

3) Glassfish

4) Oracle Web-Tier

4) Websphere

5) Jigsaw

5) Weblogics.

Ques 74)

Why we can not override Service() ?

Ans

Because developer can change the default implementation detail & we can not differentiated doGet() & doPost().

Ques 16) What is Selector? How Many types of Selector are there?

Ans  
Selectors are used to apply style to a particular markup. It is normally a HTML elements. Selectors are never starts with number and over contain spaces.

There are Three Types of Selectors :-

1) Tag Selector : It is Used to define existing HTML Tags.

2) ID Selector (#) : It is Used to specify a style for Single Unique element.

3) class Selector (.) : It is Used to Specify a Style for group of element.

Ques 17) What are the Component of front controller?

Ans  
Authentication and Authorization.

Ques 18) Why We Override Service() in project?

Ans

To decide the Generic flow of an application.

7) What are listener triggering event?

Ans

1) HttpServletRequest Event.

2) HttpSession Event.

3) ServletContext Event.

8) what is Single Thread Model Servlet?

Ans

It is used to handle One Request at a time in Other Words Request are processed Sequentially.

9) How to Set Cookies?

Ans

With the help of Cookie. SetMaxAge (time in Sec) method.

10) What happen if we Set Value 0 or -1?

Ans

If we set Value 0 then browser will remember cookie immediately and If we set Value -1 the browser will remove the cookie.

at the time of Browser close.

Q3) What is Session?

Ans Session is a Conversation between Browser & Server.

Q4) What is Event?

Ans When Something Occurs and that changes the State of object is Called Event.

Q5) What is Listener?

Ans Listener is an object that observes the event and perform on action is called Listener.

Q6) Categories of Listener Triggering Event

Two Categories of Triggering Event.

1) Life Cycle Event.

2) Attribute change Event.

87) What is life Cycle Event?

Ans It is raised when Request, Session & Context object are created or destroyed.

88) What is Attribute change event?

Ans It is raised when attribute are added, removed or replaced from Request, Session and Servlet Context object.

89) Life Cycle of Listener Interface?

Ans i) HttpSessionListener

ii) ServletRequestListener

iii) ServletContextListener

90) Attribute Listener Interface

Ans i) HttpSessionAttributeListener

ii) ServletRequestAttributeListener

iii) ServletContextAttributeListener

Q1) What is Servlet Security ?

It provides Role Based Authentication mechanism to protect our Web application resources.

Q2) Key Methods of Cookie class

1) getName()

2) getValue()

3) SetValue(s)

4) getMaxAge()

5) setMaxAge()

Q3) How Many type of Style sheet in CSS ?

A1) There are three type of Style sheet in CSS

1) Inline style sheet.

2) Internal style sheet.

3) External style sheet.

#### 94) Inline Style :-

- CSS is applied in every HTML tag by Inline style.
- For Using Inline style, Style attribute is used in Relevant tag.
- Style attribute can contain any CSS property.

For Example ->

```
<P style = "background : blue">
```

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</P>

#### 95) Internal Style Sheet :-

- Internal style sheet is the basic & easy way to insert style in HTML.
- In Internal style <style></style> tag is used in the <head></head> tag of HTML document.
- Internal style sheet should be used when a single document has a unique style.

## 96) External Style Sheet

- External style sheet is a file that contains only CSS code and is saved with a ".css" file extension.
- This CSS file is then referenced in HTML using the `<link>` tag instead of `<style>` tag.
- External style sheet is applied to many pages.
- External style sheet can change the entire look of website by changing only one file.
- External style sheet keeps the design & content separate.
- We can reuse the CSS code.

For example :-

```
<HTML>
  <head>
    <link rel="stylesheet" type="text/CSS"
          href = "SunMays.css" />
  </head>
</HTML>
```

Q7) What is "rel" and "href" attribute in link tag?

Ans "rel": - The rel attribute defines the "relationship" between the current document and the linked resource.

"href": - It stands for "hypertext REFERENCE". href attribute specifies the location (URL) of the external resource.

Q8) FrameWork of JavaScript

Ans 1) node JS

2) React JS

3) Angular JS

4) DOTO

5) Express.js

6) Next.js

7) Jquery

8) Bootstrap

9) Ruby on Rails

99) Most Popular Java-Script libraries ?

Ans 1) jQuery library

2) React library

3) O3.js library

4) Underscore library

5) lodash library

6) Anime.js library

7) Animate On Scroll library

8) chart.js library

9) cleave.js library

10) choreographer.js library

11) glimmer library

12) Granim.js library

13) fullPage.js library

14) Multiple.js library

15) Popper.js library.

100) What is CSS3

Ans → CSS3 is the latest standard of CSS.

- It contains the old CSS specification
- It splits in Modules
  - 1) Selectors
  - 2) Box Model
  - 3) Back-ground & Border
  - 4) Image Value & Replaced Content.
  - 5) Text-Effect
  - 6) 2D/3D Transformation
  - 7) Animations
  - 8) Multiple Column Layout
  - 9) User Interface (UI).

101) What is AJAX ?

- Ans. → Asynchronous JavaScript and XML.
- HTML pages call a Web page asynchronously (in the background) without impacting existing displaying inner page.
  - HTML pages can send and receive the data with the help of AJAX from the source server asynchronously.
  - Object XMLHttpRequest is used to make asynchronous call.
  - Usually JSON data is fetched by AJAX calls.

102) What is JSON ?

- Ans. → JavaScript Object Notation (JSON) is a Standard text-based format for representing structured data based on JavaScript Object Syntax.
- It is commonly used for transmitting data in Web application. JSON supports the value of type String, Number and Boolean. It does not support Octal and hexadecimal values.

103) What is Input event ?

Ans The Input event trigger every time after a value is modified by the user

104) Types of Input event

Ans 1) Onabort - Loading of an image is interrupted.

2) Onblur - An element loses focus.

3) Onchange - The user changes the content of field.

4) Onclick - Mouse double-click on object.

5) Onerror - An error when loading a document or an image

6) Onfocus - An element get focus.

7) Onkeydown - A Keyboard Key is pressed

8) Onkeypress - A Keyboard Key is pressed or held down

9) Onkeyup - A Keyboard Key is released

10) Onload - A page or Image is finished loading

105)

Key Point of JavaScript ?

Ans 1)

JavaScript functions are written in script tag

o <Script language="text/javascript">...</Script>

2) Tag <Script> can be written anywhere in HTML but <head> tag is preferred to write because head position is first load in browser.

3) Function is always starts with 'function' Key Word.

a) Variable are defined by optional 'Var' Key - word .

106)

Why init() of Servlet Interface Called Only Once?

Ans

for memory Optimization.