DEA1 tutorial1

1.Servlet is a technology used to create web applications. It is an API that provides many interfaces and classes including documentation. Servlet is a class that extends the capabilities of the servers and responds to the incoming requests. It can respond to any type of request. Servlet is a web component that is developed on the server to create dynamic web page.

2. Static Websites:

Content remains fixed and does not change unless manually updated by a developer. Limited interactivity and functionality. Quicker to develop and generally less expensive. Suitable for simpler, information-centric websites with infrequent updates.

Dynamic Websites:

Content can change dynamically based on user interactions or real-time data.

More interactive and feature rich. Requires server-side processing and a database to generate content on the fly. Well-suited for complex applications, e-commerce, and sites with frequent content updates.

Differences:

**Content Update:**

Static: Manual updates by developers.

Dynamic: Automatic updates based on user interactions or real-time data.

**Interactivity:**

Static: Limited interactivity.

Dynamic: More interactive and dynamic content.

**Development Time:**

Static: Quick to develop.

Dynamic: Generally, takes more time due to server-side processing and database integration.

**Cost:**

Static: Less expensive.

Dynamic: Can be more costly, especially for complex applications.

**Suitability:**

Static: Suitable for simple, information-centric websites.

Dynamic: Ideal for complex applications, e-commerce, and sites with frequent content updates.

3. **GET Request:**

Parameters are passed in the URL.

Limited data sent in the request.

Visible to users in the URL.

Idempotent (repeating the request has the same effect).

Less reliable method.

**POST Request:**

Parameters are included in the request body.

Can send large amounts of data.

Not visible in the URL.

Not idempotent (repeating the request may have different effects).

Most reliable method.

5) The web.xml file in a servlet-based web application is a deployment descriptor. It provides configuration information to the web container (like Tomcat or Glassfish) about how to deploy and configure servlets and other components within your application.

**<web-app>**

**<servlet>**

**<servlet-name>HelloServlet</servlet-name>**

**<servlet-class>tutorial.HelloServlet</servlet-class>**

**</servlet>**

**<servlet-mapping>**

**<servlet-name>HelloServlet</servlet-name>**

**<url-pattern>/HelloServlet</url-pattern>**

**</servlet-mapping>**

**<session-config>**

**<session-timeout>**

**30**

**</session-timeout>**

**</session-config>**

**</web-app>**

6) package tutorial;

import java.io.IOException;

import java.io.PrintWriter;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

public class HelloServlet extends HttpServlet {

@Override

protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

response.setContentType("text/html;charset=UTF-8");

response.getWriter().println("Hello, World!");

}

}

7)

protected void doPost(HttpServletRequest request, HttpServletResponse response)

throws ServletException, IOException {

response.setContentType("text/html;charset=UTF-8");

response.getWriter().println("Hello, POST!");

}

8) <html>

<head>

<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">

<title>JSP Page</title>

</head>

<body>

<form action="HelloServlet" method="post">

<input type="submit" value="Click me to POST">

</form>

</body>

</html>