What is the default url pattern of a servlet ?

Ans : servlet class name itself

Hidden comment : jsp comment;not seen on browser

Other comment is html comment ; seen on browser

In for each step="-2" ; step value cannot be -ve

<%  
methodX();//allowed ; this is method call   
public void methodX() //not ok. This is method declaration   
{  
      out.println("Hello ");  
}  
%>

Method cannot be declared inside scriptlet ; that is the error

It can only b declared within declariaton tag

<%!

%>

int MAX\_AGE;   
Cookie cookie = new Cookie("user", user);  //cookie name , cookie value   
cookie.setMaxAge(MAX\_AGE);  //deciding what is the life of cookie; how long cookie shldbe alive  
response.addCookie(cookie); //adding cookie to the client side /browser

request.getCookies() //for eading cookies from client

Cookie is a class which stores information about a single user

Eg. When was the last time the user visited the web site

Can be done using cookies

'Function is called as a part of an expression.

result:=functionname(parameter)

Procedure is called as a statement in PL/SQL.

Procedurename(parameter);

select date\_of\_joining,count(\*)

2 from employees

Where deptno=10

3 group by date\_of\_joining

Having count(\*)=1

4 order by date\_of\_joining;

ELECT ename,sal,job FROM employee WHERE sal>ALL

(SELECT min(sal) FROM employee GROUP BY job);

CREATE TABLE department\_master AS SELECT \* FROM dept WHERE 1=2;

Cerate new table department\_master having same columns as table dept

But with no rows coz where condition is not true

Ans : INSERT INTO department\_master SELECT \* FROM dept; ( in this special insert case, values keyword should not be used here )

ANSI SQL syntax

Join

SELECT emp\_code, emp\_name, project\_code,project\_name

FROM employee\_master

JOIN project\_master

USING (project\_code, project\_code);

Oracle syntax

Select emp\_code,emp\_name,project.project\_code,project\_name

From employee\_master, project\_master

Wejre employee.project\_code= project.project\_code;

Non configuration item : means least important item

'Exception section must be present in all the sub-programs : no

It is optional section

SELECT INITCAP(SUBSTR(LPAD('Company',10,'a'),3,7)) FROM DUAL;

Select count(\*),count(comm) from emp;

|  |  |
| --- | --- |
| SQL>DELETE EMP WHERE deptno = 20; | SQL>DELETE FROM Emp WHERE deptno =20; |

These two are right. Anything else is wrong

'SELECT COUNT(subject) FROM nobel

WHERE subject = 'Chemistry'

AND yr BETWEEN 1950 and 1960

Create procedure proc1 (num1 number(20) ) can tspecify size

Create procedure proc1 (num1 number) //valid

'The mode of each of the parameters need not be specified . yes. default is IN

<http://localhost:8080/Test/MyServlet>

Test is the web site name

MyServlet is the url pattern

The above line will call which method of the MyServlet ? above is to call servlet directly

What type of join is needed when you wish to include rows that do not have matching values? : outer join

<a href=” MyServlet”>call servlet </a>

Ans : doGet

Clicking on a link always calls the doget method

<http://localhost:8080/Test/capgemini>

I still want MyServlet to get called. Only change is the url pattern

A servlet can have many url patterns

Find out the syntax for the same

Who creates object of the servlet class ? ans : wildfly

How do u know that servlet object got created ? proof ?

Ans ; Constructor got called

Can servlet have a main method in it ?

Yes. But it wont get called

Public void doGET(){\\”

No error coz for the compiler, it is a new method of the class

If u want the functionality of a particular class

Either u

1. Create an object of the class and call its methods or
2. U extend from the class

Why did u extend from HttpServlet class . ans : because we want to override certain methods

Which is possible only when inheritance is present

Why did u not create an object of HttpServlet class . find out whether this is possible

How many objects are created ? only one

If the constructor statement gets printed once, it means one object got created

Server follows singleton pattern

Is it that one object is created every time the servlet is requested ? ans : no

For every request, only the get/post gets called

What does eclipse do when u right click the project and choose “run as run on server “?

Ans : eclipse creates a war file of my project and saves it in a special folder inside wildfly

C:\Users\kaviaror\OneDrive - Capgemini\softwares\WildFly8.1.0\standalone\deployments

Test.war

Can the servlet name and the servlet class name be different ?

Yes. How .. I will let u know

Can the url pattern of a servlet be changed ? yes

Can a servlet have more than one url pattern ? yes

How to create war file by ourselves

Eclipse 🡪 export 🡪web-> war

Service method

How to call post method of a servlet

Ans :

can I call post method when I click link to call servlet ? no

clicking on link always calls doget

then ho wto call dopost

ans : only thru html form by specifying method=”post”

find out whether url pattern is case sensitive or not

the servlet class has 3 methods now

service

doGet

doPost

earlier I told u that clicking on link always calls doget

but now u see that code within service got printed

point to remember : the service method always get preference over do get/do post

a protected method can be made public .. i.e the visibility of the method can be increased

but not decreased

public

protected

default

private

u shld know other methods of HttpRequest

getParameter();

getParameterValues() ? when to use

ans : when there are checkboxes in the form . try out

getParameterNames() : what is the return type of this method : find out

getCookies() : refer to cookiedemo

what is a session ? why shld v maintain a session ?

http is a stateless protocol

think of a mall as a web server and each shop as a web site

if u visit a shop many times, what are the chances of the shop person remembering u

unless u have done something that he remembers u the chances are negligible

similarly there are many clients visiting a web site

how will the web site remember u is the question

why shld the web site remember me u will ask

banking sites

you last visited the site on “date and time “ ; this is the meaning of web site remembering u

session : from the time the user logs in to a web site and till then time he logs out, all the activities performed by him is termed as a session

when should the session be created ? once the user logs in to the web site and he has been authenticated

how to do that

getSession() // what is assumed in this case true or false ? find out

getSession(true) : if the session does not exist then create it, if the session exists then reuse it

getSession(false) : if the session does not exist then DON’T create it, if the session exists then reuse it

how to add values to the session ?

session.setAttribute(“key”,”value”) : user goes to whichever page, the variables kept in the session wil be available to that page . variables kept here are user specific . eg shopping cart items

there are other two methods

request.setAttribute() : ; data can be passed on from one servlet to another jsp/ another servlet

context.setAttribute() : variables kept in this scope are visible to all the users of the web site

eg. Web site name; copyright and other information

can I add employee objects to the session : yes

can I add array to a session : yes

obtaining value from request/session/context

request.getAttribute(“”)

how to pass on the client request to another page ?

how to call another servlet / jsp from within one servlet

ans :RequestDispatcher

rd can be obtained in two ways

RD rd request.getrequestdispatcher();

Context.getRequestDispatcher() : /slash is allowed

Does the url change during a forward/include ? no

Rd.forward() : the resource name mentioned has to be within the same web application

Rd.include()

Difference :

The output of first servlet plus the output of second servlet is seen in case of include

In case of forward : only the output of the second servlet is seen

Hostname : either localhost/ ip address/ machine name

Context name means web site name/ eclipse project name

Servlet 1

PrintWRiter pw = response.getWriter();

Pw.println(“output of first servlet”);

Rd-=servelt2

Rd.forward()

Servlet 2

PrintWRiter pw = response.getWriter();

Pw.println(“output of second servlet”);

Which statement is seen on the browser ? if forward, then only otupt of 2nd servlet wil be shown

Ans :

Response.sendRedirect() . does url change? Yes

Redirect : the resource name mentioned can b within the same web application

Or Can be another web application also

Servlet 1

Request.setAttribute(“ione”,””);

Forward(servlet2)

Servlet 2

Request.getAttirbute()

Wil I get the value which was put by the first servlet ?

Ans : yes

Another scenario

Servlet 1

Request.setAttribute(“ione”,””);

Redirecte to servlet2)

Servlet 2

Request.getAttirbute()

Wil I get the value which was put by the first servlet ?

Ans : no

Because redirecting is always a new request. The values in the old request are lost

It also creates a round trip. Hence it is not network friendly as it involves going from server to browser /client and back to server

RequestDispatcher rd = request.getRequestDispatcher()

If servlet 1 puts values into session scope and redirects to servlet 2, will servlet 2 be able to fetch the values put by servlet 1 ?

Are session values available in case of redirect : ans yes

Deployment descriptor is the “web.xml” file

Session timeout : if the user is idle for “some time”, the session will get destroyed and user will be shown the login page

Where can we specify the time period ?

1. Either inweb.xml ( minutes)
2. Thru the program (seconds)

for(Cookie cook:request.getCookies()){

out.println(cook.getName()+"="+cook.getValue());

sesion.invalidate()

mention in web.xml the inactive time period

mention in code inactive time period using setMaxInactiveInterval

Consider, following code snippet in a servlet- Servlet1:

HttpSession session=request.getSession(true);

Another servlet Servlet 2 with following code snippet:

HttpSession session=request.getSession(false); out.print("Is it new session?" + session.isNew()) ;

If you use "forward" from Servlet 1 to Servlet 2 then what will it result into?

Jsp:

'A bean Greeting is defined in package com.cg, with property 'msg ' having default constructor

and getter/setter methods. Using Greeting bean following JSP code is written:

<%@ page import="com.cg.Greeting" %> //Line 1

<jsp:setProperty property="msg" name="obj" value="Good Morning"/> //Line 2

<%=obj.getMsg() %> //Line 3

Before using setProperty u have to give this line

<jsp:usBean id=”obj” class=”com.cg.Greeting”/> is this present in ppt ?

Otherwise Error

Injsp, there is a concept of common error page which can be used for runtime exceptions

Jsp 1

<%@ page errorPage=”myError.jsp” %>

<%

Int age=23/0; // at runtime this line will generate ArithmeticException

We can instruct that whenever excpeiton occurs, the control shldbe passed ot the error page

%>

In the “myERror.jsp” we can write the following

<%@ page isErrorPage=”true” %>

The meaning of the above line is that the jsp is saying I am the error page

<%

<%= exception %>

This special object exception cannto be used in any jsp page

Only in that page which has isErrorPage=”true”

%>

'<%= Math.random() ;%> //valid without semicolon

This is called as expression

Semicolon cannot be used in expression

Similar ot saying syso(Math.random())

Correct syntax

<c:forEach var="lot" items="${lots}">

<c:out value="${lot}" /><br>

</c:forEach>

Math.random() always generates a number between 0.5 nad 1.5

Try this out

'<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>

<c:set var="age" value="20" />

<c:if test="${age <= 20}" var="result"> // true ; try with ${var instead of age ; blank page since there is not variable called var

<c:out value="${result}" />

</c:if>

${paramValues.language[0]}

'<jsp:include page="UploadFile.jsp">

<jsp:param name="filetype" value="xlsx"/>

</jsp:include>

Concept of include

When the jsp is requested, the contents of abc.txt are included into the jsp file

<%@ include file=”abc.txt” %> static include

The above syntax is directive

But when the abc.txt file is changed, will the changed contents be included in jsp ?

The abc.txt file will be read only when the jsp itself changes; not when the abc.txt file changes

Inclusion happens at jsp translation time; jsp is translated into servlet when it is request for the first time and then on whenever jsp changes

<jsp:include page=”abc.txt” %> dynamic include

This syntax is of jsp action

The abc.txt file will be read only whenever the file itself changes; this is the meaning of dynamic include

Request time inclusion

<jsp:useBean id=”obj” class=”com.cg.Bean” scope=”session”/>

The above line will create object of the class and put it in session scope

Jsp

<%@ page isELIgnored=”false” />

${name}

Short cut for writing request.getAttribute(“name”)

Pls try the following right now

<%! public String sample()

{

return "Testing method sample()";

}

%>

<%=sample()%>

Find out

What is the max size of one cookie ?

There are some implicity ( predefined ) objects availabel to jsp page by default

Request

Session

Application

Page

Out : datatype of this is JspWriter

Exception

Following steps are important

1. JSP translated to servlet / happens for the first time and then whenever jsp changes

2. servlet compiled

3. servlet loaded into memory

4. jspinit() is called

5. \_jspService() is called

The servlet context object is created one for every web application

The servlet config object is created one per servlet

Every jsp is converted into a servlet

public class Test {

public static void main(String args[]) {

for(int i = 0; i < 2; i++) {

for(int j = 2; j>= 0; j--) {

if(i == j) break;

System.out.println("i=" + i + " j="+j);

}

}

}

}

**public** **class** Test {

**private** **static** String *REGEX* = "cha";

**private** **static** String *INPUT* = "charminar\*chakor\*china";

**private** **static** String *REPLACE* = "car";

**public** **static** **void** main(String[] args) {

Pattern p = Pattern.*compile*(*REGEX*);

// get a matcher object

Matcher m = p.matcher(*INPUT*);

StringBuffer sb = **new** StringBuffer();

**while**(m.find()){

m.appendReplacement(sb,*REPLACE*);

}

m.appendTail(sb);

System.***out***.println(sb.toString());

}

}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| All are true staetmnets  Stream provides an interface to a sequenced set of values of a specific element type | Streams don't actually store elements,they are computed on demand | Streams can consume data from array | Streams support SQL-like operations and common operations from functional programming languages |  |  |

finding the number of characters in each employee name present in employee table ?

If this has to be done in sql, what will your ans be ?

Select length(ename) from emp;

Map: the stream method which works on every value in the stream

TreeMap works on sorting on the basis of keys

tm.put(e1, "first");

since e1 is the key here, the employee class has to implement the comparable interface otherwise classcastexception will be thrown

new HashSet() ;// its obviously a class

do u write new Set(); //u don’t becoz it is an interface