Dt : 26/10/2024(Day-27)

faq:

define 'request'?

=>The query which is generated by the user through WebBrowser is known as 'request' or 'Http request'

=>This request is categorized into two types:

1.POST request

2.GET request

1.POST request:

=>The request which is generated to send data to server is known as POST request.

=>Through POST request we can send any type of data,which means we can send all types of MultiMedia data(text,audio,video, Image,Animation)

=>Through POST request we can send UnLimited data.

=>The data which we are sending through POST request is more secure,because the data is encapsulated(binded) into the body part of HTTP protocol.

=>we use the following syntax to generate POST request:

```
<form action="" method="POST">
   ....
</form>
```

=>we use doPost()-method from 'HttpServlet' to accept POST request.

Method signature of doPost():

```
protected void doPost(jakarta.servlet.http.HttpServletRequest,
   jakarta.servlet.http.HttpServletResponse) throws
       jakarta.servlet.ServletException, java.io.IOException;
```

2.GET request:

=>The request which is generated to get data from server is known as GET request.

=>Through GET request we can send only text data.

=>Through GET request we can send limited data.
(data upto 4KB or 8KB)

=>The data in GET request is not secure,because the data is added to query-string and displayed in AddressBar.

=>To generate GET request,we use the following syntaxes:

syntax-1: declaring method="GET" in <form> tag

```
<form action="" method="GET">
   ....
</form>
```

syntax-2: Submit <form> tag which out writing 'method' specification.

```
<form action="">
   ....
</form>
```

syntax-3:The request generated through 'hyperlinks' is GET request.

syntax-4: GET request is generated when we use servlet-url-pattern in AddressBar

=>we use doGet()-method from 'HttpServlet' to accept GET request

Method Signature of doGet():

protected void doGet(jakarta.servlet.http.HttpServletRequest, jakarta.servlet.http.HttpServletResponse) throws jakarta.servlet.ServletException, java.io.IOException;

===

**imp*

Session Management:

define 'session'?

=>The time interval b/w user-login to user-logout is known as 'session'.

define Session Mangement?

=>The process of recording the state-of-user and tracking the user in session is known as Session Tracking process or Session Management.

=>we use the following Session Tracking techniques in Servlet programming:

1.Cookie

2.HttpSession

3.URL re-write

4.Hidden Form Fields

Dt : 28/10/2024(Day-28)

**imp*

1.Cookie:

=>The piece of information persisted(stored and available) b/w multiple requests is knonw as ' cookie'

=>'Cookie' is generated by Server-Program,but stored and available in WebBrowser to track the user.

=>Cookies are categorized into two types:

(a)Persistent cookies

(b)NonPersistent cookies

(a)Persistent cookies:

=>The cookies which are stored and available in WebBrowser until user-logout are known as Persistent cookies.

(b)NonPersistent cookies:

=>Cookies which are destroyed automatically,when WebBrowser is closed are known as NonPersistent cookies

Note:

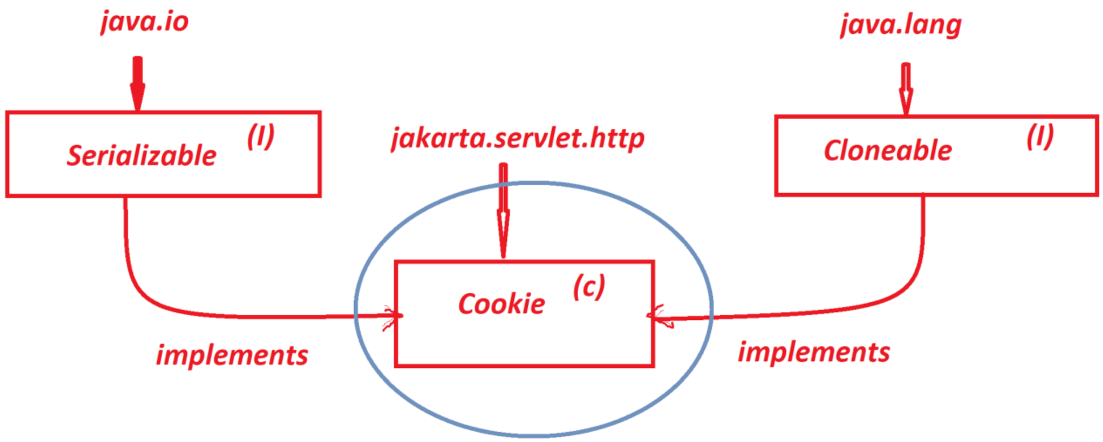
=>we use 'Cookie' class from 'jakarta.servlet.http' package to

construct 'cookie session tracking process'

=>The following are some important methods from 'Cookie' class:

```
public jakarta.servlet.http.Cookie(java.lang.String,
                                   java.lang.String);
public void setMaxAge(int);
public int getMaxAge();
public java.lang.String getName();
public void setValue(java.lang.String);
public java.lang.String getValue();
public void setAttribute(java.lang.String, java.lang.String);
public java.lang.String getAttribute(java.lang.String);
public java.util.Map<java.lang.String, java.lang.String>
                                     getAttributes();
```

Hierarchy of 'Cookie' class:

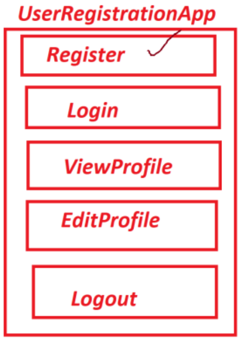


Note:

=>Cookie-Objects are Serializable and Cloneable

Ex:(Demonstrating 'Cookie Session Tracking process')

ProjectName : UserRegistrationApp



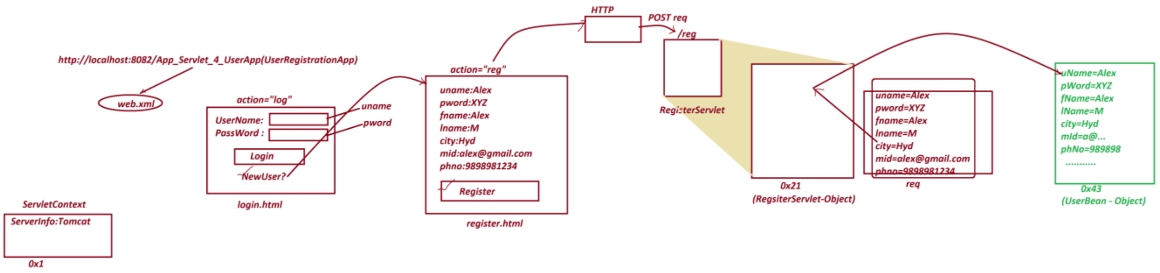
DBTable : UserReg67(

create table UserReg67(uname varchar2(15),pword varchar2(15),

fname varchar2(15),lname varchar2(15),city varchar2(15),

mid varchar2(25),phno number(15),primary key(uname));

Layout:



login.html

```
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<form action="log" method="post">
UserName:<input type="text" name="uname"><br>
Password:<input type="password" name="pword"><br>
<input type="submit" value="Login">
<a href="register.html">NewUser?</a>
</form>
</body>
</html>
```

register.html

```
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<form action="reg" method="post">
UserName:<input type="text" name="uname"><br>
Password:<input type="text" name="pword"><br>
FirstName:<input type="text" name="fname"><br>
LastName:<input type="text" name="lname"><br>
```

```
City:<input type="text" name="city"><br>
MailId:<input type="text" name="mid"><br>
PhoneNo:<input type="text" name="phno"><br>
<input type="submit" value="Register">
</form>
</body>
</html>
```

web.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<web-app>
   <welcome-file-list>
      <welcome-file>login.html</welcome-file>
   </welcome-file-list>
</web-app>
```

UserBean.java

```
package test;
import java.io.*;
@SuppressWarnings("serial")
public class UserBean implements Serializable
{
   private String uName,pWord,fName,lName,city,mId;
   private long phNo;
   public UserBean() {}
public String getuName() {
      return uName;
}
public void setuName(String uName) {
      this.uName = uName;
}
public String getpWord() {
      return pWord;
}
public void setpWord(String pWord) {
      this.pWord = pWord;
}
public String getfName() {
      return fName;
}
public void setfName(String fName) {
      this.fName = fName;
}
public String getlName() {
      return lName;
}
public void setlName(String lName) {
	this.lName = lName;
}
public String getCity() {
	return city;
}
public void setCity(String city) {
	this.city = city;
}
public String getmId() {
	return mId;
}
public void setmId(String mId) {
	this.mId = mId;
}
public long getPhNo() {
	return phNo;
}
public void setPhNo(long phNo) {
	this.phNo = phNo;
}

}
```

RegisterServlet.java

```
package test;

import java.io.*;

import jakarta.servlet.*;

import jakarta.servlet.http.*;

import jakarta.servlet.annotation.*;

@WebServlet("/reg")

public class RegisterServlet extends HttpServlet

{

	@Override

  protected void doPost(HttpServletRequest req,HttpServletResponse res)

  throws ServletException,IOException

  {
```

```
            UserBean ub = new UserBean();//Bean Object


            ub.setuName(req.getParameter("uname"));

            ub.setpWord(req.getParameter("pword"));

            ub.setfName(req.getParameter("fname"));

            ub.setlName(req.getParameter("lname"));

            ub.setCity(req.getParameter("city"));

            ub.setmId(req.getParameter("mid"));

            ub.setPhNo(Long.parseLong(req.getParameter("phno")));



  }

}
--------------------------------------------------------------
```