



IS345-Internet Applications

Lab 4

Agenda

- ▶ Session
- ▶ Cookie

Session

- ▶ We can use an HttpSession object to hold the conversational state across multiple requests. In other words, for an entire *session* with that client.(Store the client actions).
- ▶ For each client, there should be an HttpSession object that hold the specific actions that client did.

Session (Cont'd)

- ▶ 1) Looking up the HttpSession object associated with the current request.
 - ▶ `HttpSession session = request.getSession(true);`
- ▶ 2) Extracting Information from a Session
 - ▶ `getId, isNew, getCreationTime, getLastAccessedTime, getMaxInactiveInterval, getAttribute ... etc.`

Session (Cont'd)

```
HttpSession session = request.getSession(true);
ShoppingCart previousItems =
    (ShoppingCart)session.getAttribute("previousItems");
if (previousItems != null) {
    doSomethingWith(previousItems);
} else {
    previousItems = new ShoppingCart(...);
    doSomethingElseWith(previousItems);
}
```



- ▶ 3) Inserting Information in a Session

- ▶ `session.setAttribute("previousItems", previousItems);`

Session (Cont'd)

▶ Example

Cookie

- ▶ Cookies are small bits of textual information that a Web server sends to a browser and that the browser returns unchanged when visiting the same Web site or domain later
- ▶ By default, a cookie lives only as long as user opening his browser (which called Session), once the client quits his browser (Session closed), the cookie disappears.

Cookie (Cont'd)

▶ 1) Creating Cookies

- ▶ A Cookie is created by calling the Cookie constructor, which takes two strings: the cookie name and the cookie value. Neither the name nor the value should contain whitespace or any of: [] () = , " / ? @ : ;

- ▶ `Cookie cookie = new Cookie("username", name);`

▶ 2) Reading and Specifying Cookie Attributes

- ▶ `getComment/setComment, getDomain/setDomain, getMaxAge/setMaxAge, getName/setName, getPath/setPath ... etc.`

Cookie (Cont'd)

- ▶ 3) Placing Cookies in the Response Headers

```
Cookie userCookie = new Cookie("user", "uid1234");
```

```
response.addCookie(userCookie); //sent cookie to the client
```

Cookie (Cont'd)

► 4) Reading Cookies from the Client

```
Cookie[] cookies = request.getCookies();  
for (int i = 0; i < cookies.length; i++) {  
    Cookie cookie = cookies[i];  
    if (cookie.getName().equals("username")) {  
        String userName = cookie.getValue();  
        out.println("Hello " + userName);  
        break;  
    }  
}
```

Cookie (Cont'd)

▶ Example



Thank you