

## JAVA Programming Language Homework VIII: JSP

ID:

Name:

1. In which of the following situations will a session be invalidated? (Select two)

- A. No request is received from the client for longer than the session timeout period.
- B. The client sends a KILL\_SESSION request.
- C. The servlet container decides to invalidate a session due to overload.
- D. The servlet explicitly invalidates the session.
- E. A user closes the active browser window.
- F. A user closes all of the browser windows.

ANS: A, D

只有兩種情形會中止：

1. 當客戶端一直沒有送出請求，且時間超過 session 中止時間的規定
2. 呼叫了 sessioninvalidate() 方法

關閉瀏覽器視窗並不會真正中止它，你只是中斷與 session 的聯繫而已，此 session 仍然在伺服器端存活，servlet 容器會一直等到 session 過期後，才會真正將他抹除。

2. Which of the following correctly defines data integrity?

- A. It guarantees that information is accessible only to certain users.
- B. It guarantees that the information is kept in encrypted form on the server.
- C. It guarantees that unintended parties cannot read the information during transmission between the client and the server.
- D. It guarantees that the information is not altered during transmission between the client and the server.

ANS: D

答案 A 和 C 描述的是授權和資料加密，把伺服器上的資訊加密可能是整個安全計畫的一部份，但它和 servlet 規格沒有關係，無關資料的健全性。

3. Consider the following code and select the correct statement about it from the options below.

```
<html><body>
  <%! int aNum=5 %>
  The value of aNum is <%= aNum %>
</body></html>
```

- A. It will print "The value of aNum is 5" to the output.
- B. It will flag a compile-time error because of an incorrect declaration.
- C. It will throw a runtime exception while executing the expression.
- D. It will not flag any compile-time or runtime errors and will not print anything to the output.

**ANS: B**

因為 `<%! int aNum=5 %>` 此宣告尾巴少了 ; 號，所以將造成編譯錯誤。

4. Which of the following tags can you use to print the value of an expression to the output stream?

- A. `<%@ %>`
- B. `<%! %>`
- C. `<%// %>`
- D. `<%= %>`
- E. `<%-- --%>`

**ANS: D**

選項 D 乃為使用 JSP 呈現標籤來印出值到輸出資料流。

5. What will be the output of the following code?

```
<html><body>
  The value is <%= " "%>
</body></html>
```

- A. Compilation error.
- B. Runtime error
- C. The value is
- D. The value is null

**ANS: C**

上面的呈現式會被轉譯成 `out.print(" ");` 因此答案是 C。

6. Which of the following implicit objects can you use to store attributes that need to be accessed from all the sessions of a web application?

- A. application
- B. session
- C. request
- D. page

**ANS: A**

要讓 web 應用程式中的 session 都可以存取儲存的屬性的話，就必須將屬性放在應用程式的視界，其方法便是使用隱含物件 application。

7. Select the correct statement about the following code.

```
<%@ page language="java" %>
<html><body>
out.print("Hello ");
out.print("World ");
</body></html>
```

- A. It will print Hello World in the output.
- B. It will generate compile-time errors.
- C. It will throw runtime exceptions.
- D. It will only print Hello.
- E. None of the above.

**ANS: E**

`out.print("Hello ");` 和 `out.print("World ");` 都沒有包含在 `scriptlet` 標籤( `<% %>`) 中，所以 JSP 引擎將視它屬於 HTML 模版文字的一部份，而直接印出：  
`out.print("Hello ");out.print("World ");`

8. Select the correct statement about the following code.

```
<%@ page language="java" %>
<html><body>
<%
    response.getOutputStream().print("Hello ");
    out.print("World");
%>
</body></html>
```

- A. It will print Hello World in the output.
- B. It will generate compile-time errors.
- C. It will throw runtime exceptions.
- D. It will only print Hello.
- E. None of above.

**ANS: C**

Response 物件的 `OutputStream` 是用來將二進位資料送到客戶端用的，而 `Writer` 物件則是用來傳送字元資料用的。而我們不能在同一個 response 物件中同時使用他們，因為 JSP 引擎會自動由 response 物件取得 `JspWriter`，以便將 JSP 的內容當作字元資料輸出，所以呼叫 `getOutputStream()` 將會丟出 `java.lang.IllegalStateException`。

9. What is the output of the following code?

```
<html><body>
<% int i = 10 ; %>
<% while(--i >= 0) { %>
    out.print(i);
```

```
<%}%>
</body></html>
```

- A. 9876543210
- B. 9
- C. 0
- D. None of the above.

**ANS: D**

**out.print(i);**並沒有包含在 scriptlet 標籤中，所以上面的 JSP 程式將會印出：**out.print(i); out.print(i); out.print(i); .....** 共十次。

10. Consider the contents of three JSP files:

File 1: one.jsp

```
<html><body><pre>
  <jsp: include page="two.jsp" >
    <jsp: param name="color" value="red" />
  </jsp: include>
</pre></body></html>
```

File 2: two.jsp

```
<jsp: include page="three.jsp" >
  <jsp: param name="color" value="green" />
</jsp: include>
```

File 3: three.jsp

```
<%= request.getParameter("color") %>
```

What will be the output of accessing the one.jsp file via the following URL?

<http://localhost:8080/one.jsp?color=blue>

- A. red
- B. green
- C. blue

D. None of the above

**ANS: B**

輸出是由 three.jsp 所產生的。由於是 two.jsp 去呼叫 three.jsp 且傳送了 green 此值，所以 green 的優先順序會超過傳送給 one.jsp 和 two.jsp 的參數，因此答案為 B。但此值只有對被包含的檔案有效，當程式執行回到原來的檔案時此參數值變會消失，例如 File 1 更改如下：

File 1: one.jsp

```
<html><body><pre>
    <jsp: include page="two.jsp" >
        <jsp: param name="color" value="red" />
    </jsp: include>
    <%= request.getParameter("color") %> //範例 1.
</pre></body></html>
```

則範例 1. 所印出的值是 blue。