|  |  |  |  |
| --- | --- | --- | --- |
| **Final Exam** | | | |
|  |  |  |  |
|  | | | |
| 1. | What does "IP" in "IP address" stand for? | | |
|  |  | (a) | International Packet |
|  |  | (b) | Internet Packet |
|  |  | (c) | Internet Protocol |
|  |  | (d) | International Protocol |
|  | | | |
| 2. | What is an IP address? | | |
|  |  | (a) | The address of the packet sent from server to the client |
|  |  | (b) | The address used to identify a particular computer in the internet's network of computers |
|  |  | (c) | The address of the server response |
|  |  | (d) | The memory address of the server's microprocessor |
|  | | | |
| 3. | What is the 'web root directory'? | | |
|  |  | (a) | The folder on the server computer that contains file(s) available for access by an outside client via the internet. |
|  |  | (b) | The home directory on the client computer |
|  |  | (c) | The directory on the client computer where all cookies are stored by default |
|  |  | (d) | The directory on the server computer where files downloaded from the internet are stored |
|  | | | |
| 4. | Where does a web browser run? | | |
|  |  | (a) | On the client computer |
|  |  | (b) | On the server computer |
|  |  | (c) | On the Local Area Network |
|  |  | (d) | On the internet |
|  | | | |
| 5. | What would happen if you try to access CurrentTime.jsp that has the following content?   |  | | --- | | <!-- Begin: CurrentTime.jsp --> <HTML> <BODY> The current time is: <%= out.println(new java.util.Date()); %> </BODY> </HTML> <!-- End: CurrentTime.jsp --> | | | |
|  |  | (a) | It will print the current date and time |
|  |  | (b) | It won't compile; you need to remove the = sign to get it to compile |
|  |  | (c) | If you remove the semi-colon at the end, it will compile |
|  |  | (d) | If you replace 'out.println' with 'System.out.println', it will compile |
|  | | | |
| 6. | Suppose you have a file called MyPage.jsp, and want to insert content from another JSP called MyHeader.jsp. Which of the following would you use in MyPage.jsp? | | |
|  |  | (a) | <jsp:page import="MyHeader.jsp"/> |
|  |  | (b) | <jsp:page include="MyHeader.jsp"/> |
|  |  | (c) | <jsp:include page="MyHeader.jsp"/> |
|  |  | (d) | <jsp:import page="MyHeader.jsp"/> |
|  | | | |
| 7. | What does the ACTION attribute in an HTML <FORM> tag represent? | | |
|  |  | (a) | The last action performed by the user on the HTML form |
|  |  | (b) | The javascript function name that should get invoked once the user submits the HTML form |
|  |  | (c) | The validating script that needs to be called just before submitting the HTML form to the server |
|  |  | (d) | The URL that should be loaded once the user submits the HTML form |
|  | | | |
| 8. | Which of the following is true regarding the METHOD attribute in the <FORM> tag?   |  |  |  | | --- | --- | --- | |  | (i) | It specifies the method (GET or POST) by which the HTML form data needs to be submitted to the server | |  | (ii) | It defaults to METHOD=GET if no METHOD attribute is used in the <FORM> tag | |  | (iii) | GET and POST are two of the most common and important values for the METHOD attribute | |  | (iv) | If METHOD=POST, <INPUT> field values are NOT appended to the URL but instead are sent hidden in the request. | |  | (v) | If METHOD=GET, <INPUT> field name-values pairs from the <FORM> are appended at the end of the form's action URL | | | |
|  |  | (a) | All of the above |
|  |  | (b) | (i) and (ii) only |
|  |  | (c) | (i), (iii) and (iv) only |
|  |  | (d) | (iii) and (iv) only |
|  | | | |
| 9. | What is a JSP 'page import' directive? | | |
|  |  | (a) | It redirects to specified JSP page |
|  |  | (b) | It imports Java classes into your JSP |
|  |  | (c) | It specifies the JSP pages to import |
|  |  | (d) | It specifies the JSP pages to include |
|  | | | |
| 10. | In order for Tomcat to recognize your changes, you must restart it, every time -   |  |  |  | | --- | --- | --- | |  | (i) | you modify server.xml and save it | |  | (ii) | you modify a JSP page and save it | |  | (iii) | you modify and compile a Java source file used by a JSP | |  | (iv) | you move a JSP file's location from one folder to another | | | |
|  |  | (a) | All of the above |
|  |  | (b) | (ii) and (iv) only |
|  |  | (c) | (i), (ii) and (iii) only |
|  |  | (d) | (i) and (iii) only |
|  | | | |
| 11. | What is an implicit object in a JSP? | | |
|  |  | (a) | It is an object you need to declare before using in the JSP |
|  |  | (b) | It is an object you do not need to declare before using in the JSP |
|  |  | (c) | It is an object that handles every exception thrown by the JSP |
|  |  | (d) | It is the object that compiles the JSP behind the scenes |
|  | | | |
| 12. | The Tomcat config file is: | | |
|  |  | (a) | server.xml |
|  |  | (b) | config.xml |
|  |  | (c) | tomcat\_config.xml |
|  |  | (d) | server\_config.xml |
|  | | | |
| 13. | Which of the following is true (select all that apply) ?   |  |  |  | | --- | --- | --- | |  | (i) | A JSP gets compiled into a servlet class that inherits from the HttpJspBase class | |  | (ii) | The scriptlet content goes into the \_jspService() method in the compiled servlet class that represents a JSP | |  | (iii) | Any variables that are declared inside your scriptlet become class member variables of the compiled servlet class | |  | (iv) | Each scriptlet in a JSP gets compiled into its own separate servlet that inherits from the HttpJspBase class.   So if a JSP has multiple scriptlets, you would have multiple servlet subclasses generated. | | | |
|  |  | (a) | All of the above |
|  |  | (b) | (i), (ii) and (iii) only |
|  |  | (c) | (i) and (ii) only |
|  |  | (d) | (ii), (iii) and (iv) only |
|  | | | |
| 14. | What is the most common use of the 'out' implicit object in a JSP? | | |
|  |  | (a) | To exit the JSP if there is an exception |
|  |  | (b) | To "dump" HTML on the response |
|  |  | (c) | To update the <INPUT> field data on an HTML form |
|  |  | (d) | To store the user-entered data in an <INPUT> field and transmit to the web server |
|  | | | |
| 15. | Suppose you have a class called Employee in a file called Employee.java under C:\JSP\Lesson2, which is your web app root directory.  Assume that you also have WEB-INF\classes folders under C:\JSP\Lesson2. The Employee.java file has a package statement as follows:   |  | | --- | | package mycompany.hrdept; |   If you want to use this Java class in your JSP, which of the following javac compile commands would work (assume that you type the command from C:\JSP\Lesson2 folder)? | | |
|  |  | (a) | javac -classpath WEB-INF Employee.java |
|  |  | (b) | javac -classpath WEB-INF\classes Employee.java |
|  |  | (c) | javac -d WEB-INF\classes Employee.java |
|  |  | (d) | javac -d WEB-INF\classes\mycompany\hrdept Employee.java |
|  | | | |
| 16. | In Question 15 above, which of the following 'page import' directives would work, to import the Employee class in your JSP?   |  |  |  | | --- | --- | --- | |  | (i) | <%@ page import="WEB-INF.classes.\*" %> | |  | (ii) | <%@ page import="mycompany.hrdept" %> | |  | (iii) | <%@ page import="mycompany.hrdept.\*" %> | |  | (iv) | <%@ page import="mycompany.hrdept.Employee" %> | |  | (v) | <%@ page import="WEB-INF.classes.mycompany.hrdept.\*" %> | | | |
|  |  | (a) | All of the above |
|  |  | (b) | (iii), (iv) and (v) only |
|  |  | (c) | (i), (iii), (iv) and (v) only |
|  |  | (d) | (iii) and (iv) only |
|  | | | |
| 17. | In order for the getParameter() method call to work, you must: | | |
|  |  | (a) | Send it the "name" attribute (case-sensitive) of the desired <INPUT> field on the HTML form |
|  |  | (b) | Send it the "type" attribute (case-sensitive) of the desired <INPUT> field on the HTML form |
|  |  | (c) | Send it the "value" attribute (case-sensitive) of the desired <INPUT> field on the HTML form |
|  |  | (d) | None of the above |
|  | | | |
| 18. | To get an attribute stored on a session, you would call which method? | | |
|  |  | (a) | getData() |
|  |  | (b) | getSessionData() |
|  |  | (c) | getParameter() |
|  |  | (d) | getAttribute() |
|  | | | |
| 19. | When would you use a session object? | | |
|  |  | (a) | If you need to access a value entered by the user earlier than the immediate previous page |
|  |  | (b) | If you need to catch run-time exceptions in a JSP |
|  |  | (c) | If you need to validate user-entered data on an HTML form |
|  |  | (d) | None of the above |
|  | | | |
| 20. | Which of the following is true regarding a HashMap (select all that apply)?   |  |  |  | | --- | --- | --- | |  | (i) | To get the value corresponding to a key, you call the 'get' method on the HashMap, passing it the key | |  | (ii) | To get the value corresponding to a key, you call the 'get' method on the HashMap, passing it the key-value pair | |  | (iii) | To store a value corresponding to a key, you call the 'put' method on the HashMap, sending it the value only | |  | (iv) | To store a value corresponding to a key, you call the 'put' method on the HashMap, sending it the key-value pair | | | |
|  |  | (a) | All of the above |
|  |  | (b) | (i) and (iii) only |
|  |  | (c) | (ii) and (iv) only |
|  |  | (d) | (i) and (iv) only |
|  | | | |
| 21. | Which of the following is true (select all that apply)?   |  |  |  | | --- | --- | --- | |  | (i) | To create a List type object, you must know the number of elements in it | |  | (ii) | To create an array, you must know the number of elements in it | |  | (iii) | To create an ArrayList, you must know the number of elements in it | |  | (iv) | To create a Map, you must know the number of key-value pairs in it | | | |
|  |  | (a) | All of the above |
|  |  | (b) | (i), (ii) and (iii) only |
|  |  | (c) | (i), (iii) and (iv) only |
|  |  | (d) | (ii) only |
|  | | | |
| 22. | What does a java.sql.ResultSet object represent? | | |
|  |  | (a) | The set of records that are obtained as a result of a SELECT query |
|  |  | (b) | The set of all queries called to the SQL database |
|  |  | (c) | The set of all records from a table |
|  |  | (d) | A set of HashMaps representing all queries, one HashMap per query |
|  | | | |
| 23. | From the following possibilities, select the correct sequence of object instantiation in a database-driven JSP: | | |
|  |  | (a) | Statement -> Connection -> ResultSet |
|  |  | (b) | Connection -> Statement -> ResultSet |
|  |  | (c) | ResultSet -> Connection -> Statement |
|  |  | (d) | ResultSet -> Statement -> Connection |
|  | | | |
| 24. | Assume that a MySQL database name is 'salesdatabase', that has a table called 'customer'. Say that you want to get all records/columns from that table. Which of the following constitutes a correct sequence of calls in a database-driven JSP? | | |
|  |  | (a) | Connection connection = DriverManager.getConnection( "jdbc:mysql://localhost:3306/salesdatabase?user=root&password="); Class.forName("com.mysql.jdbc.Driver").newInstance(); Statement statement = connection.createStatement(); ResultSet rs = statement.executeQuery("select \* from customer"); |
|  |  | (b) | Class.forName("com.mysql.jdbc.Driver").newInstance(); Connection connection = Statement.createConnection( "jdbc:mysql://localhost:3306/salesdatabase?user=root&password="); Statement statement = DriverManager.createStatement(); ResultSet rs = statement.executeQuery("select \* from customer"); |
|  |  | (c) | Connection connection = DriverManager.createConnection( "jdbc:mysql://localhost:3306/salesdatabase?user=root&password="); Statement statement = connection.createStatement(); ResultSet rs = statement.executeQuery("select \* from customer"); Class.forName("com.mysql.jdbc.Driver").newInstance(); |
|  |  | (d) | Class.forName("com.mysql.jdbc.Driver").newInstance(); Connection connection = DriverManager.getConnection( "jdbc:mysql://localhost:3306/salesdatabase?user=root&password="); Statement statement = connection.createStatement(); ResultSet rs = statement.executeQuery("select \* from customer"); |
|  | | | |
| 25. | In question 24 above, say that you are successfully able to create the ResultSet object 'rs'. Also assume that the customer table has columns as follows:  customer\_id (int) first\_name (char) last\_name (char) age (int) order\_value (double(6,2))  Say that you already have declared the following variables:  int customerId; String firtName; String lastName; int age; double orderValue;  Which of the following is a correct set of statements to loop thro the ResultSet object 'rs' ? | | |
|  |  | (a) | while (rs.next()) { customerId = rs.getInt("customer\_id"); firstName = rs.getString("first\_name"); lastName = rs.getString("last\_name"); age = rs.getInt("age"); orderValue = rs.getDouble("order\_value"); } |
|  |  | (b) | while (rs.next()) { customerId = rs.getInt("customer\_id"); firstName = rs.getChar("first\_name"); lastName = rs.getChar("last\_name"); age = rs.getInt("age"); orderValue = rs.getDouble("order\_value"); } |
|  |  | (c) | while (rs.hasNext()) { customerId = rs.getInt("customer\_id"); firstName = rs.getString("first\_name"); lastName = rs.getString("last\_name"); age = rs.getInt("age"); orderValue = rs.getDouble("order\_value", 6, 2); } |
|  |  | (d) | while (rs.hasNext()) { customerId = rs.getInt("customer\_id"); firstName = rs.getString("first\_name"); lastName = rs.getString("last\_name"); age = rs.getInt("age"); orderValue = rs.getDouble("order\_value"); } |