Homework Assignment 2 (25 Questions)

(Due 10/30/2019 Wed)

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1. When you change your database from MySQL to Oracle in your Java code using JDBC, other than changing the JDBC drivers name and the database URL, you do not need to change anything else in your programs.

   (a)   true   **(b)   false**

2. Which of the following APIs used in JDBC is for application programmers?

   (a)   JDBC API only   (B)   JDBC drivers API only
   (c)   both JDBC API and JDBC drivers API

3. In a JavaBean, the name of a property must be the same as the name of an instance variable.

   (a)   true   **(b)   false**

4. Variables stored in which of the following scopes have the *highest priority* to get evaluated by the EL engine?

   (a)   page   (b)   request   (c)   session   (d)   application

5. If a JavaBean is not *serializable*, then it cannot be used in any web application.

   (a)   true   **(b)   false**

6. In a *distributed* system, when a set of Java objects created in one JVM are transfered to another JVM, these objects are required to be *serializable* so as to work in the system seamlessly.

   (a)   true   (b)   false

7. If a JavaBean has a property called `username`, then which of the following must be true?

   (a)   The JavaBean has an instance variable called `username`.
   (b)   The JavaBean has a getter called `getUsername`.
   (c)   The JavaBean has a getter called `isUsername`.
   (d)   The JavaBean has a setter called `setUsername`.

8. In any JavaBean, all the *getters* must have a name that starts with `get`, then adds the property name with the first character capitalized.

   (a)   true   **(b)   false**

9. If a getter of a JavaBean returns a `boolean` value, then it *must* use the prefix `is`.

   (a)   true   **(b)   false**

10. Which of the following appears in both the JSP implicit objects and the EL implicit objects?

   (a)   `param`   (b)   `header`   (c)   `session`   **(d)   `pageContext`**

11. There exists a JSP element in which an EL expression can be used.

   (a)   true   (b)   false

12. Every time when a `<jsp:useBean>` tag is processed, a new bean is created.

   (a)   true   **(b)   false**

13. Suppose that `book` is the *name* of a parameter in an HTTP request. Then the expressions `${param.book}` and `${paramValues.book[0]}` always return the same value.

   (a)   true   (b)   false

14. The first named variable in an EL expression can be the name of a *local variable* in a JSP scriptlet.

   (a)   true   **(b)   false**

15. Suppose that a Java class has only one constructor with *two parameters*. Can we use this class as the value of the `class` attribute in the `<jsp:useBean>` tag?

   (a)   yes   (b)   no

16. In a JSP, a *bean* means a JavaBean object that follows the JavaBean specification.

   (a)   true   **(b)   false**

17. Any Java *interface* must contain certain number of methods. If an interface does not have any method declared, then it is *useless*.

    (a)   true   **(b)   false**

18. Suppose that the name of a parameter is `user`, which is passed to a JSP. How to use an EL expression to display the value of this parameter in this JSP?

    Answer: `${param.user}`

19. The Java *generics* are used to reduce errors in Java programs using collection-type objects. Which of the following gives what the Java generics do?

    (a)   converting compile errors to runtime errors
    (b)   converting runtime errors to compile errors

20. In which of the following situations, the EL engine would *complain*?

    (a)   When an EL expression accesses a session attribute by the name, but the attribute object does not exist.
    (b)   When an EL expression access a JavaBean property through its bean reference, but the property does not exist.

21. If you use the data binding feature that copies data from an HTML form to the properties of a JavaBean, you need to make sure that the input field names of the HTML form *exactly match* their corresponding JavaBean property names. Otherwise you can never make the data copy successful.

    (a)   true   (b)   false

22. Suppose the value of a parameter called `chap` is not available. If we use the EL expression `${param.chap}` to access the parameter, which of the following would happen?

    (a)   an empty string   (b)   `null`   (c)   An error message is displayed.

23. Which of the following ways of using an EL expression is legal?

    (a)   `${paramValue.names[0]}`
    (b)   `${cookies.user}`
    (c)   `${headerValues["Accept-Language"][0]}`
    (d)   `${headerValues.Accept-Language[0]}`
    (e)   `${out.println("Done!")}`

24. Suppose that we use the following two lines in a servlet to set values for the book attribute,

```
request.setAttribute("book", "java1");
session.setAttribute("book", "java2");
```

Then when we display the value of the book attribute in the JSP forwarded by this servlet using the EL expression ${book}, what is its result?

(a) **java1** (b) java2 (c) empty string (d) java1, java2
(e) error

25. Suppose that we use the following two lines in a servlet to set values for the `myval` attribute,

```
request.setAttribute("myvar", "value1");
session.setAttribute("myvar", "value2");
```

Then in the JSP forwarded by this servlet, how do we display the value of the attribute `myvar` in the *session scope*?

Ans: ${sessionScope.myvar}