Core java - Assessment 3

Question 1

Given that the current directory is empty, and that the user has read and write permissions, and the

following:

1. import java.io.\*;

2. public class DOS {

3. public static void main(String[] args) {

4. File dir = new File("dir");

5. dir.mkdir();

6. File f1 = new File(dir, "f1.txt");

7. try {

8. f1.createNewFile();

9. } catch (IOException e) { ; }

10. File newDir = new File("newDir");

11. dir.renameTo(newDir);

12. }

13.}

Which statement is true?

A. The file system has a new empty directory named dir.

B. The file system has a new empty directory named newDir.

C. The file system has a directory named dir, containing a file f1.txt.

D. The file system has a directory named newDir, containing a file f1.txt.

Question 2

Given:

import java.io.\*;

public class Forest implements Serializable {

private Tree tree = new Tree();

public static void main(String [] args) {

Forest f = new Forest();

try {

FileOutputStream fs = new FileOutputStream("Forest.ser");

ObjectOutputStream os = new ObjectOutputStream(fs);

os.writeObject(f); os.close();

} catch (Exception ex) { ex.printStackTrace(); }

}

}

class Tree { }

What is the result?

A. Compilation fails.

B. An exception is thrown at runtime.

C. An instance of Forest is serialized.

D. An instance of Forest and an instance of Tree are both serialized.

Question 3

Given:

1. public class Score implements Comparable<Score> {

2. private int wins, losses;

3. public Score(int w, int l) { wins = w; losses = l; }

4. public int getWins() { return wins; }

5. public int getLosses() { return losses; }

6. public String toString() {

7. return "<" + wins + "," + losses + ">";

8. }

9. // insert code here

10.}

11.

Which method will complete this class?

A. public int compareTo(Object o){/\*more code here\*/}

B. public int compareTo(Score other){/\*more code here\*/}

C. public int compare(Score s1,Score s2){/\*more code here\*/}

D. public int compare(Object o1,Object o2){/\*more code here\*/}

Question 4

Given:

public class TestOne implements Runnable {

public static void main (String[] args) throws Exception {

Thread t = new Thread(new TestOne());

t.start();

System.out.print("Started");

t.join();

System.out.print("Complete");

}

public void run() {

for (int i = 0; i < 4; i++) {

System.out.print(i);

}

}

}

What can be a result?

A. The code executes and prints "Started0123Complete".

B. An exception is thrown at runtime.

C. The code executes and prints "StartedComplete".

D. The code executes and prints "StartedComplete0123".

QUESTION 5

Given:

static void test() {

try {

String x = null;

System.out.print(x.toString() + " ");

}

finally { System.out.print("finally "); }

}

public static void main(String[] args) {

try { test(); }

catch (Exception ex) { System.out.print("exception "); }

}

What is the result?

A. null

B. finally

C. null finally

D. Compilation fails.

E. finally exception

QUESTION 6

Given:

1. import java.util.\*;

2. public class Example {

3. public static void main(String[] args) {

4. // insert code here

5. set.add(new Integer(2));

6. set.add(new Integer(1));

7. System.*out*.println(set);

8. }

9. }

Which code, inserted at line 4, guarantees that this program will output [2, 1]?

A. Set set = new HashSet();

B. Set set = new SortedSet();

C. List set = new SortedList();

D. Set set = new LinkedHashSet();

QUESTION 7

Given:

1. public class TestOne {

2. public static void main (String[] args) throws Exception {

3. Thread.*sleep*(3000);

4. System.*out*.println("sleep");

5. }

6. }

What is the result?

A. Compilation fails.

B. An exception is thrown at runtime.

C. The code executes normally and prints "sleep".

D. The code executes normally, but nothing is printed

QUESTION 8

Click the Exhibit button.

1. import java.util.\*;

2. public class TestSet{

3. enum Example {*ONE*, *TWO*, *THREE* }

4. public static void main(String[] args) {

5. Collection coll = new ArrayList();

6. coll.add(Example.*THREE*);

7. coll.add(Example.*THREE*);

8. coll.add(Example.*THREE*);

9. coll.add(Example.*TWO*);

10. coll.add(Example.*TWO*);

11. coll.add(Example.*ONE*);

12. Set set = new HashSet(coll);

13. }

14.}

Which statement is true about the set variable on line 12?

A. The set variable contains all six elements from the coll collection, and the order is guaranteed to be

preserved.

B. The set variable contains only three elements from the coll collection, and the order is guaranteed to be

preserved.

C. The set variable contains all six elements from the coll collection, but the order is NOT guaranteed to be

preserved.

D. The set variable contains only three elements from the coll collection, but the order is NOT guaranteed to be preserved.

QUESTION 9

A programmer has an algorithm that requires a java.util.List that provides an efficient implementation of add

(0, object), but does NOT need to support quick random access.

What supports these requirements?

A. java.util.Queue

B. java.util.ArrayList

C. java.util.LinearList

D. java.util.LinkedList

Question 10

Given:

1. public class GC {

2. private Object o;

3. private void doSomethingElse(Object obj) { o = obj; }

4. public void doSomething() {

5. Object o = new Object();

6. doSomethingElse(o);

7. o = new Object();

8. doSomethingElse(null);

9. o = null;

10. }

11.}

When the doSomething method is called, after which line does the Object created in line 5 become

available for garbage collection?

A. Line 5

B. Line 7

C. Line 8

D. Line 9

11.The state of the Object can be serialized by calling Which of the following Method

* 1. writeObject()
  2. readObjecT()
  3. WriteObjectStream()
  4. WriteObjectoutputStream();

12. When a program does not want to handle exception, the\_\_\_\_\_\_\_\_\_\_ clause is used

1. *throw*
2. *throws*
3. *finally*
4. *None of the above*

13.You wish to access the data at random locations and operations are not synchronized. Uniqueness and order is not an issue and the data will remain fairly static Which data structure might be most suitable for this requirement?

1. HashSet
2. ArrayList
3. LinkedList
4. Vector

14.Which statement is true regarding HashSet

Statement A : The add method returns false if you attempt to add an element with a duplicate value

Statement B: duplicates are determined using hashcode() and equals()

a.statement A is true , B is false

b.statement A is true , B is true

c.statement A is false , B is true

d.statement A is false , B is false

15.which methods can be overridden from Object class

a.hashcode() , equals()

b.toString(), finalize()

c.getClass(), notify(), wait()

d.Both a nd B

16. Which of the following is a guaranteed method to Leave the current running Thread out of its running state

a.sleep()

b.join()

c.yield()

d.notify()

QUESTION 17

Choose the interface to be implemented for transfering objects through network

* 1. Serializable
  2. Cloneable
  3. Transferrable
  4. Runnable

Question 18

In your programming, there is a need to create a data structure that will store objects. The program will add or remove elements from random locations of that data structure often. Given these circumstances, which is the best dat structure optimized for performance?

A.LinkedList

B.ArrayList

C.HashSet

D.Vector

19. \_\_\_\_\_\_\_\_ method makes Thread eligible to run.

1. Thread.run()
2. Thread.schedule()
3. thread.start()
4. Thread.resume()

20.Which of the following methods is used by java.util.HashSet to determine duplicates

1. Equals and toString
2. Clone and finalize
3. hashCode and equals
4. hashCode and toString