01

Given a method that must ensure that its parameter is not null:

11. public void someMethod(Object value) {

12. // check for null value

...

20. System.out.println(value.getClass());

21. }

What, inserted at line 12, is the appropriate way to handle a null value?

A. assert value == null;

B. assert value != null, "value is null";

C. if (value == null) {

throw new AssertionException("value is null");

}

D. if (value == null) {

throw new IllegalArgumentException("value is null");

}

02

Given two files:

1. class One {

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

3. int assert = 0;

4. }

5. }

1. class Two {

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

3. assert(false);

4. }

5. }

And the four command-line invocations:

javac -source 1.3 One.java

javac -source 1.4 One.java

javac -source 1.3 Two.java

javac -source 1.4 Two.java

What is the result? (Choose all that apply.)

A. Only one compilation will succeed.

B. Exactly two compilations will succeed.

C. Exactly three compilations will succeed.

D. All four compilations will succeed.

E. No compiler warnings will be produced.

F. At least one compiler warning will be produced.

03

11. static void test() throws Error {  
12. if (true) throw new AssertionError();  
13. System.out.print("test ");  
14. }  
15. public static void main(String[] args) {  
16. try { test(); }  
17. catch (Exception ex) { System.out.print("exception "); }  
18. System.out.print("end ");  
19. }

What is the result?

A. end  
B. Compilation fails.  
C. exception end  
D. exception test end  
E. A Throwable is thrown by main.   
F. An Exception is thrown by main.

04

11. Float pi = new Float(3.14f);  
12. if (pi > 3) {  
13. System.out.print("pi is bigger than 3. ");  
14. }  
15. else {  
16. System.out.print("pi is not bigger than 3. ");  
17. }  
18. finally {  
19. System.out.println("Have a nice day.");  
20. }

What is the result?

A. Compilation fails.  
B. pi is bigger than 3.  
C. An exception occurs at runtime.  
D. pi is bigger than 3. Have a nice day.  
E. pi is not bigger than 3. Have a nice day.

05

11. public static void main(String[] args) {  
12. try {  
13. args = null;  
14. args[0] = "test";  
15. System.out.println(args[0]);  
16. } catch (Exception ex) {  
17. System.out.println("Exception");  
18. } catch (NullPointerException npe) {  
19. System.out.println("NullPointerException");  
20. }  
21. }

What is the result?

A. test  
B. Exception  
C. Compilation fails.  
D. NullPointerException

06

33. try {  
34. // some code here  
35. } catch (NullPointerException e1) {  
36. System.out.print("a");  
37. } catch (RuntimeException e2) {  
38. System.out.print("b");  
39. } finally {  
40. System.out.print("c");  
41. }

What is the result if a NullPointerException occurs on line 34?

A. c  
B. a  
C. ab  
D. ac  
E. bc  
F. abc

07

10. public class Foo {  
11. static int[] a;  
12. static { a[0]=2; }  
13. public static void main( String[] args ) {}  
14. }

Which exception or error will be thrown when a programmer attempts to run this code?

A. java.lang.StackOverflowError  
B. java.lang.IllegalStateException  
C. java.lang.ExceptionInInitializerError  
D. java.lang.ArrayIndexOutOfBoundsException

08

11.classA *{*  
12. public void process() *{* System.out.print(”A “); *} }*  
13. class B extends A *{*  
14. public void process() throws RuntimeException *{*  
15. super.process();  
16. if (true) throw new RuntimeException();  
17. System.out.print(“B”); *}}*  
18. public static void main(String[] args) *{*  
19. try *{* ((A)new B()).process(); *}*  
20. catch (Exception e) *{* System.out.print(”Exception “); *}*  
21. *}*

What is the result?

A. Exception  
B. A Exception  
C. A Exception B  
D. A B Exception  
E. Compilation fails because of an error in line 14.  
F. Compilation fails because of an error in line 19.

09

class Plane {  
static String s = "-";  
public static void main(String[] args) {  
new Plane().s1();  
System.out.println(s);  
}  
void s1() {  
try { s2(); }  
catch (Exception e) { s += "c"; }  
}  
void s2() throws Exception {  
s3(); s += "2";  
s3(); s += "2b";  
}  
void s3() throws Exception {  
throw new Exception();  
} }

What is the result?

A. -  
B. -c  
C. -c2  
D. -2c  
E. -c22b  
F. -2c2b  
G. -2c2bc  
H. Compilation fails.

10

try { int x = Integer.parseInt("two"); }

Which could be used to create an appropriate catch block? (Choose all that apply.)

A. ClassCastException  
B. IllegalStateException  
C. NumberFormatException  
D. IllegalArgumentException  
E. ExceptionInInitializerError  
F. ArrayIndexOutOfBoundsException

11

class Emu {  
static String s = "-";  
public static void main(String[] args) {  
try {  
throw new Exception();  
} catch (Exception e) {  
try {  
try { throw new Exception();  
} catch (Exception ex) { s += "ic "; }  
throw new Exception(); }  
catch (Exception x) { s += "mc "; }  
finally { s += "mf "; }  
} finally { s += "of "; }  
System.out.println(s);  
} }

What is the result?

A. -ic of  
B. -mf of  
C. -mc mf  
D. -ic mf of  
E. -ic mc mf of  
F. -ic mc of mf  
G. Compilation fails.

12

Which two are true? (Choose two.)

A. A finalizer may NOT be invoked explicitly.  
B. The finalize method declared in class Object takes no action.  
C. super.finalize() is called implicitly by any overriding finalize method.  
D. The finalize method for a given object will be called no more than  
once by the garbage collector.  
E. The order in which finalize will be called on two objects is based on  
the order in which the two objects became finalizable.

13

Which is true? (Choose all that apply.)

A. The invocation of an object’s finalize() method is always the last thing that happens before an object is garbage collected (GCed).  
B. When a stack variable goes out of scope it is eligible for GC.  
C. Some reference variables live on the stack, and some live on the heap.  
D. Only objects that have no reference variables referring to them can be eligible for GC.  
E. It’s possible to request the GC via methods in either java.lang.Runtime or  
java.lang.System classes.

14

1. class Eco {  
2. public static void main(String[] args) {  
3. Eco e1 = new Eco();  
4. Eco e2 = new Eco();  
5. Eco e3 = new Eco();  
6. e3.e = e2;  
7. e1.e = e3;  
8. e2 = null;  
9. e3 = null;  
10. e2.e = e1;  
11. e1 = null;  
12. }  
13. Eco e;  
14. }

At what point is only a single object eligible for GC?

A. After line 8 runs.  
B. After line 9 runs.  
C. After line 10 runs.  
D. After line 11 runs.  
E. Compilation fails.  
F. Never in this program.  
G. An exception is thrown at runtime.

15

class Dec26 {

public static void main(String[] args) {

short a1 = 6;

new Dec26().go(a1);

new Dec26().go(new Integer(7));

}

void go(Short x) { System.*out*.print("S "); }

void go(Long x) { System.*out*.print("L "); }

void go(int x) { System.*out*.print("i "); }

void go(Number n) { System.*out*.print("N "); }

}

What is the result?

a) S N

b) S i

c) i N

16

class Boxing3{

static void m(Integer i){System.*out*.println("Integer");}

static void m(Integer... i){System.*out*.println("Integer...");}

public static void main(String args[]){

int a=30;

*m*(a);

}

}

What is the result?

a) Integer

b) Integer...

17

Given:

10. public class Foo implements java.io.Serializable {

11. private int x;

12. public int getX() { return x; }

12.publicFoo(int x){this.x=x; }

13. private void writeObject( ObjectOutputStream s)

14. throws IOException {

15. // insert code here

16. }

17. }

Which code fragment, inserted at line 15, will allow Foo objects to be

correctly serialized and deserialized?

A. s.writeInt(x);

B. s.serialize(x);

C. s.writeObject(x);

D. s.defaultWriteObject();

18

Given:

import java.io.\*;

class Player {

Player() { System.out.print("p"); }

}

class CardPlayer extends Player implements Serializable {

CardPlayer() { System.out.print("c"); }

public static void main(String[] args) {

CardPlayer c1 = new CardPlayer();

try {

FileOutputStream fos = new FileOutputStream("play.txt");

ObjectOutputStream os = new ObjectOutputStream(fos);

os.writeObject(c1);

os.close();

FileInputStream fis = new FileInputStream("play.txt");

ObjectInputStream is = new ObjectInputStream(fis);

CardPlayer c2 = (CardPlayer) is.readObject();

is.close();

} catch (Exception x ) { }

}

}

What is the result?

A. pc B. pcc

C. pcp D. pcpc

E. Compilation fails. F. An exception is thrown at runtime.

19

Given:

import java.io.\*;

class Keyboard { }

public class Computer implements Serializable {

private Keyboard k = new Keyboard();

public static void main(String[] args) {

Computer c = new Computer();

c.storeIt(c);

}

void storeIt(Computer c) {

try {

ObjectOutputStream os = new ObjectOutputStream(

new FileOutputStream("myFile"));

os.writeObject(c);

os.close();

System.out.println("done");

} catch (Exception x) {System.out.println("exc"); }

}

}

What is the result? (Choose all that apply.)

A. exc

B. done

C. Compilation fails.

D. Exactly one object is serialized.

E. Exactly two objects are serialized.

20

Given:

import java.io.\*;

public class TestSer {

public static void main(String[] args) {

SpecialSerial s = new SpecialSerial();

try {

ObjectOutputStream os = new ObjectOutputStream(

new FileOutputStream("myFile"));

os.writeObject(s); os.close();

System.out.print(++s.z + " ");

ObjectInputStream is = new ObjectInputStream(

new FileInputStream("myFile"));

SpecialSerial s2 = (SpecialSerial)is.readObject();

is.close();

System.out.println(s2.y + " " + s2.z);

} catch (Exception x) {System.out.println("exc"); }

}

}

class SpecialSerial implements Serializable {

transient int y = 7;

static int z = 9;

}

Which are true? (Choose all that apply.)

A. Compilation fails. B. The output is 10 0 9

C. The output is 10 0 10 D. The output is 10 7 9

E. The output is 10 7 10

F. In order to alter the standard deserialization process you would override the readObject() method in SpecialSerial.

G. In order to alter the standard deserialization process you would override the

defaultReadObject() method in SpecialSerial.

21

Which class is used to read streams of characters from a file? (1 correct answer)

1. FileReader
2. FileWriter
3. FileInputStream
4. FileOutputStream

22

What happens when this code is compiled and executed? (1 correct answer)

void test() {

FileWriter writer = new FileWriter("fun.log");

writer.write("Hello!");

writer.close();

}

1. A file fun.log is created with the content “Hello!”.
2. A file fun.log is created but it’s empty, because flush() was not called.
3. A runtime exception is thrown because flush() was not called.
4. Compilation fails.

23

Consider a file fun.log whose first line is “Hello!”. What happens when this code is compiled and executed? (1 correct answer)

void test() throws IOException {

File file = new File("C:/fun.log");

BufferedReader reader = new BufferedReader(file);

System.out.println(reader.readLine());

}

1. A runtime exception is thrown because the file already exists.
2. It prints “Hello!”.
3. It prints “null”.
4. Compilation fails.

24

The file fun.log has already some content. We want to keep the content of the file and add a new line at the end. Which statement can achieve this? (1 correct answer)

void test() throws IOException {

PrintWriter writer = new PrintWriter("C:/fun.log");

// insert statement here

writer.flush();

writer.close();

}

1. writer.println(“this is a new line”);
2. writer.append(“this a new line”);
3. writer.append(“\nthis is a new line”);
4. None of the above.

25

What happens when this code is compiled and executed? (1 correct answer)

void test() throws IOException {

for (int index = 1; index <= 2; index++) {

PrintWriter writer = new PrintWriter("/apa");

writer.print("apa");

writer.close();

}

}

1. A file apa is created with content “apa”.
2. A file apa is created with content “apaapa”.
3. Two files are created.
4. An exception is thrown at runtime.