

Solutions to Quick Check Questions

11

File Input and Output

11.1 File and FileDialog Objects



Quick Check

1. This question is specific to the Windows platform. Suppose you want to open a file prog1.java inside the directory C:\JavaProjects\Ch11\Step4. What is the actual String value you pass in the constructor for the File class?

The actual string you pass is

`C:\JavaProjects\Ch11\Step4\prog1.java`

***Note:** It is also possible to use the forward slash for all platforms. You can specify the file as*

`C:/JavaProjects/Ch11/Step4/prog1.java`

This designation will work for all platforms.

2. What is wrong with the following statement?

```
FileDialog fD = new FileDialog( "Open" );
```

It has the wrong number of arguments. There are different constructors, but they all need the owner frame object as the first argument.

3. Which method of the FileDialog object do you use to get the filename of the selected file? What is returned from the method if the Cancel button of the FileDialog object is clicked?

The method is getFile. This method returns null if the user clicks the Cancel button.

11.2 Low-Level File I/O



Quick Check

1. What is the method you call at the end of all file I/O operations?

You call the close method so any remaining data in the cache will be saved in the file.

2. What is wrong with the following statements? Assume that outStream is a properly declared and created FileOutputStream object.

```
byte[ ] byteArray = { (byte) 'H', (byte) 'i' };
...
outStream.print( byteArray );
...
outStream.close( );
```

The correct method to use here is write, not print.

3. When do you need to add the terms

```
throws IOException
```

to a method definition?

Whenever the method includes a call to a method of another object that can throw an exception.

11.3 High-Level File I/O



Quick Check

1. Which type of files can be opened and viewed by a text editor?

You can open and view any ASCII file, also called as a textfile, using a text editor, such as Notepad.

2. Which class is used to generate a textfile?

There are different ways, but the most commonly used class is the PrintWriter for textfile output.

3. Assume bufReader is properly declared and created. What is wrong with the following?

```
double d = bufReader.readDouble( );
```

The BufferedReader supports only string input with its readLine method. This class does not support readDouble.

11.4 Handling Exceptions



Quick Check

1. What is the purpose of the try-catch block?

By placing the exception throwing methods inside the try clause, we can provide exception handling routines inside the catch clause. This is an alternative approach to the propagation approach.

2. True or false. If your method calls another method that can throw an exception, then your method must include a try-catch block.

False. You can use the propagation approach.

11.5 Object I/O



Quick Check

1. When do you have to include the clause implements Serializable to a class definition?

Whenever you want to store the instances of the class to a file.

2. True or false. You cannot save the whole array at once. You must save the array elements individually.

False. You can save the whole array in one statement. There is no need to deal the array elements individually.