

Solutions to Quick Check Questions

2

Java Programming Basics

2.1 The First Java Application

1. Which of the following are invalid identifiers?

- a. one
- b. my Window
- c. 1234
- d. DecafeLattePleaseh.
- e. hello
- f. JAVA
- g. hello, there
- h. acct122

***b** (no space is allowed), **c** (the first character cannot be a digit), and **g** (no comma is allowed)*

2. What's wrong with the following code?

```
JFrame myWindow();  
myWindow.setVisible(true);
```

JFrame object myWindow is not created. The syntax for the object declaration is wrong.

3. Is there anything wrong with the following declarations?

```
mainWindow      MainWindow;  
Account, Customer  account, customer;
```

The correct syntax is a class name followed by object names. In the first declaration, the object name came first. It should be in reverse. In the second declaration, two class names were listed. It can only have one. The correct version is

```
MainWindow  mainWindow;  
Account     account;  
Customer    customer;
```

4. Which of the following statements is valid?

- a. `mainWindow.setVisible("true");`
- b. `mainWindow.setVisible(true);`

b

2.2 Program Components

1. Name three components of a Java program.

Comments, import statements, and class declarations.

2. The main class of the program must have which method.

The main class must have the main method.

- Locate three program components in the FunTime program from Chapter 1.

Comment	<pre>/* Chapter 2 Sample Program: Freehand Drawing File: Ch2FunTime.java The program will allow you to draw a picture by dragging a mouse (move the mouse while holding the left mouse button down; hold the button on Mac). To erase the picture and start over, click the right mouse button (command-click on Mac). */</pre>
import Statement	<pre>import javabook.*;</pre>
Class Declaration	<pre>class Ch2FunTime { public static void main(String[] args) { SketchPad doodleBoard; doodleBoard = new SketchPad(); doodleBoard.setVisible(true); } }</pre>

- Compare Ch2FunTime and Ch2Sample1 and list the similarities and differences.

Structurally, they are identical in that both include a header comment, one import statement, and one class declaration. The main difference is that one program uses a SketchPad object while the other uses a JFrame object.

2.3 Edit–Compile–Run Cycle

No Quick Check Questions.

2.4 Sample Java Standard Classes

2.4.1 JOptionPane for Output

- Write Java statements to display a message dialog with the text I Love Java.

```
JOptionPane.showMessageDialog(null, "I Love Java");
```

2. Write statements to display the following shopping list on a message dialog:

```
Shopping List:
    Apple
    Banana
    Lowfat Milk
```

```
JOptionPane.showMessageDialog(null,
"Shopping List:\n    Apple\n    Banana\nLowfat Milk");
```

2.4.2 String

1. What will be the value of `mystery` when the following code is executed?

```
String text, mystery;

text    = "mocha chai latte";
mystery = text.substring(1,5);
```

Answer: ocha

2. What will be displayed on the message dialog when the following code is executed?

```
String text = "I, Claudius";

JOptionPane.showMessageDialog( null,
                               text.indexOf("I") );
```

Answer: 0

3. What will be displayed on the message dialog when the following code is executed?

```
String text = "Augustus";

JOptionPane.showMessageDialog(null, text.length());
```

Answer: 8

4. What will be the value of `text3` when the following code is executed?

```
String text1 = "a" + "b";
String text2 = "c";

String text3 = text1 + text2 + text1;
```

Answer: "abcab"

2.4.3 Date and SimpleDateFormat

1. Write a code fragment to display today's date in the 07-04-2002 format.

```
SimpleDateFormat sdf;
Date today;

sdf = new SimpleDateFormat("MM-dd-yy");
today = new Date();

JOptionPane.showMessageDialog(null, "Today is " +
                                sdf.format(today));
```

2. What will be displayed on the message dialog when the following code is executed if today is July 4, 1776?

```
Date today;
SimpleDateFormat sdf;

today = new Date();
sdf = new SimpleDateFormat("MMM dd, yyyy");

JOptionPane.showMessageDialog(null, "Today is " +
                                sdf.format(today));
```

Answer:

Today is Jul 04, 1776

2.4.4 JOptionPane for Input

1. Using JOptionPane input dialog, write a statement to input the user's middle initial.

```
String initial;
```

```
initial = JOptionPane.showInputDialog(null,  
    "Enter your middle initial");
```

2. Using JOptionPane input dialog, write a statement to input the name of the user's dormitory.

```
String dorm;  
  
dorm = JOptionPane.showInputDialog(null,  
    "Enter the dorm name");
```

2.5 Sample Program: Printing the Initials

No Quick Check Questions.