

Chapter 2 Introduction to Java Applications

Section 2.2 Your First Program in Java: Printing a Line of Text

2.2 Q1: End-of-line comments that should be ignored by the compiler are denoted using

- a. Two forward slashes (//).
- b. Three forward slashes (///).
- c. A slash and a star (/*).
- d. A slash and two stars (/**).

ANS: a. Two forward slashes (//).

2.2 Q2: Which of the following is *not* a valid Java identifier?

- a. my Value
- b. \$_AAA1
- c. width
- d. m_x

ANS: a. my Value (Identifiers may not contain blanks).

2.2 Q3: Which of the following cannot cause a syntax error to be reported by the Java compiler?

- a. Mismatched { }
- b. Missing */ in a comment that begins with /*
- c. Missing ;
- d. An extra blank line.

ANS: d. An extra blank line.

2.2 Q4: Which of the following does not contain a syntax error?

- a. System.out.println('Hello world!');
 - b. System.out.println("Hello
world!");
 - c. System.out.println("Hello world!");
 - d. System.out.println(Hello world!);
- ANS: c. System.out.println("Hello world!");**

Compiling and Executing Your First Java Application

2.2 Q5: Which command compiles the Java source code file Welcome.java?

- a. cd Welcome.java
- b. javac Welcome.java
- c. java Welcome.java
- d. compile Welcome.java

ANS: b. javac Welcome.java

2.2 Q6: Which command executes the Java class file Welcome.class?

- a. java welcome
- b. java Welcome.class
- c. java Welcome
- d. run Welcome.class

ANS: c. java Welcome (Note that you must use the same capitalization as the class name.)

Section 2.3 Modifying Your First Java Program

Displaying a Single Line of Text with Multiple Statements

2.3 Q1: Which is the output of the following statements?

```
System.out.print( "Hello ");  
System.out.println( "World" );
```

- a. Hello World
- b. HelloWorld
- c. Hello
World
- d. World
Hello

ANS: a. Hello World

Displaying Multiple Lines of Text with a Single Statement

2.3 Q2: Which of the following is the *escape character*?

- a. *
- b. \
- c. \n
- d. "

**ANS: b. **

2.3 Q3: Which of the following statements will print a single line containing "hello there"?

- a. System.out.println("hello");
System.out.println(" there");
- b. System.out.println("hello" , " there");
- c. System.out.println("hello");
System.out.print(" there");
- d. System.out.print("hello");
System.out.println(" there");

**ANS: d. System.out.print("hello");
System.out.println(" there");**

2.3 Q4: Which of the following escape sequences represents a carriage return?

- a. \n.
- b. \r.
- c. \cr.
- d. \c.

ANS: b. \r.

2.3 Q5: Which of the following statements would display the phrase Java is fun?

- a. System.out.println("hellois fun\rJava ");
- b. System.out.println('Java is fun');
- c. System.out.println("\"Java is fun\"");
- d. System.out.println(Java is fun);

ANS: a. System.out.println("hellois fun\rJava ");

Section 2.4 Displaying Text with printf

2.4 Q1: When method `printf` requires multiple arguments, the arguments are separated with _____.

- a. colons (:).
- b. semicolons (;).
- c. commas (,).
- d. periods (.).

ANS: c. commas (,).

2.4 Q2: Which of the following statement displays Hello World?

- a. `System.out.printf("%2s", "Hello " "World");`
 - b. `System.out.printf("%s %s", "Hello", "World");`
 - c. `System.out.printf("%s%s", "Hello, World");`
 - d. `System.out.printf("s% s%", "Hello", "World");`
- ANS: b. `System.out.printf("%s %s", "Hello", "World");`**

Section 2.5 Another Application: Adding Integers

2.5 Q1: Programs remember numbers and other data in the computer's memory and access that data through program elements called

- a. comments.
- b. messages.
- c. integers.
- d. variables.

ANS: d. variables.

Section 2.5.1 import Declarations

2.5.1 Q1: All import declarations *must* be placed

- a. inside the class declaration's body.
- b. before the class declaration.
- c. after the class declaration.
- d. all of the above will work.

ANS: b. before the class declaration.

2.5.1 Q2: Java's predefined classes are grouped into

- a. packets.
- b. declarations.
- c. Galleries.
- d. packages.

ANS: d. packages.

Section 2.5.2 Declaring Class Addition

2.5.2 Q1: The filename for the public class that begins with `public class Addition` must be

- a. `public.java`.
- b. `public.class.java`.
- c. `Addition.java`.
- d. `addition.java`.

ANS: c. `Addition.java`.

2.5.2 Q2 The body of each class declaration begins with _____ and ends with _____.

- e. `(,)`.
- f. `[,]`.
- g. `{, }`.
- h. `/, \`.

ANS: g. `{, }`.

Section 2.5.3 Declaring and Creating a Scanner to Obtain User Input from the Keyboard

2.5.3 Q1: Which of the following is a variable declaration statement?

- a. `int total;`
- b. `import java.util.Scanner;`
- c. `public static void main(String args[])`
- d. `// first string entered by user`

ANS: a. `int total;`

2.5.3 Q2: A(n) _____ enables a program to read data from the user.

- a. `printf.`
- b. `import declaration.`
- c. `Scanner.`
- d. `main.`

ANS: c. `Scanner.`

Section 2.5.4 Declaring Variables to Store Integers

2.5.4 Q1: Which of the following is *not* a Java primitive type?

- a. `char`
- b. `byte`
- c. `real`
- d. `double`

ANS: c. `real`

2.5.4 Q2: Which of the following statements is *false*?

- a. Primitive types are keywords.
- b. Primitive types must appear in all lowercase letters.
- c. Real numbers contain decimal points.
- d. Variable name identifiers must begin with a lowercase letter.

ANS: d. Variable name identifiers must begin with a lowercase letter. This is not required, but it is a convention.

Section 2.5.5 Prompting the User for Input

2.5.5 Q1: Which of the following statements is *true*?

- a. `System.out.print("Enter your age: ");` prompts the user to take action.
- b. Class names typically begin with a capital letter.
- c. Package `java.lang` is imported in every Java program.
- d. All of the above are true.

ANS: d. All of the above are true.

Section 2.5.6 Obtaining an `int` as Input from the User

2.5.6 Q1: Which of the following is a Scanner method for inputting an integer value?

- a. `nextInteger`
- b. `integer`
- c. `nextInt`
- d. `int`

ANS: c. `nextInt`.

2.5.6 Q2: Given the Java statement

```
number1 = input.nextInt();
```

in which `number1` is an `int` and `input` is a `Scanner`, which of the following occurs if the user does not enter a valid `int` value?

- a. A compilation error occurs.
- b. The program continues executing and assigns the value 0 to `number1`.
- c. A runtime logic error occurs.
- d. None of the above.

ANS: c. A runtime logic error occurs.

Section 2.5.7 Prompting for and Inputting a Second int

(no questions; uses the same concepts as Sections 2.5.5 and 2.5.6)

Section 2.5.8 Using Variables in a Calculation

2.5.8 Q1: Portions of statements that contain calculations are called

- a. variables.
- b. constants.
- c. expressions.
- d. None of the above.

ANS: c. expressions.

2.5.8 Q2: Given the Java statement

```
sum = number1 + number2;
```

which of the following statements is *false*?

- a. It's an assignment statement.
- b. It calculates the sum of variables `number1` and `number2`.
- c. The operands of the addition operator are `number1` and `number2`.
- d. It assigns the value of `number1` to `sum`.

ANS: d. It assigns the value of `number1` to `sum`. Actually, it assigns the total of `number1` and `number2` to `sum`.

Section 2.5.9 Displaying the Result of the Calculation

2.5.9 Q1: The format specifier _____ is a placeholder for an `int` value.

- a. `%n`
- b. `%d`
- c. `%int`
- d. `%s`

ANS: b. `%d`

2.5.9 Q2: Optional parentheses in expressions are said to be

- a. redundant.
- b. binary operators.
- c. implied.
- d. declared.

ANS: a. redundant.

Section 2.5.10 Java API Documentation

(none)

Section 2.6 Memory Concepts

2.6 Q1: Which of the following statements does *not* alter the value stored in a memory location?

- a. `int a;`
- b. `number = 12;`
- c. `y = y + 2;`
- d. `width = Integer.parseInt(input);`

ANS: a. `int a;`

Section 2.7 Arithmetic

2.7 Q1: What is the value of `result` after the following Java statements execute (assume all variables are of type `int`)?

- ```
a = 4;
b = 12;
c = 37;
d = 51;
result = d % a * c + a % b + a;
```
- a. 119
  - b. 51
  - c. 127
  - d. 59

ANS: a. 119

2.7 Q2: Which of the following is *not* an arithmetic operator?

- a. `+`
- b. `-`
- c. `.`
- d. `%`

ANS: c. `.`

## Section 2.8 Decision Making: Equality and Relational Operators

2.8 Q1: What will be output after the following Java statements have been executed (assume all variables are of type `int`)?

```
a = 4;
b = 12;
c = 37;
d = 51;

if (a < b)
 System.out.println("a < b");

if (a > b)
 System.out.println("a > b");
```

```

if (d <= c)
 System.out.println("d <= c");

if (c != d)
 System.out.println("c != d");

```

- a.   a < b  
     c != d
- b.   a < b  
     d <= c  
     c != d
- c.   a > b  
     c != d
- d.   a < b  
     c < d  
     a != b

**ANS: a. a < b  
     c != d**

2.8 Q2: Which of the following is *not* a compilation error?

- a.   Neglecting to initialize a local variable in a method before it is used.
- b.   Placing a semicolon at the end of the first line of an `if` statement.
- c.   Omitting the left and right parenthesis for the condition of an `if` statement.
- d.   All are compilation errors.

**ANS: b. Placing a semicolon at the end of the first line of an `if` statement.**

2.8 Q3: Each of the following is a relational or equality operator except:

- a.   <=
- b.   !=
- c.   ==
- d.   >

**ANS: b. !=**