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 (`/**`).
e. **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. Extra blank lines.

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. javac Welcome.class
b. java Welcome.class
c. java Welcome
d. run Welcome.class
```

ANS: c. `java Welcome`

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 phase `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: 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 Q2: 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 Q3: A(n) _____ enables a program to read data from the user.

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

ANS: c. `Scanner`.

2.5 Q4: Which of the following is *not* a Java primitive type?

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

ANS: c. `real`

2.5 Q5: The format specifier _____ is a placeholder for an `int` value?

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

ANS: b. `%d`

Section 2.6 Memory Concepts

2.6 Q1: Which of the following statements does *not* alter 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?

```
int a, b, c, d, result;
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?

```
int a, b, c, d;
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. `=!`