Java™ Late Objects Version
DEITEL®

HOW TO PROGRAM

EIGHTH EDITION

I/O
Types
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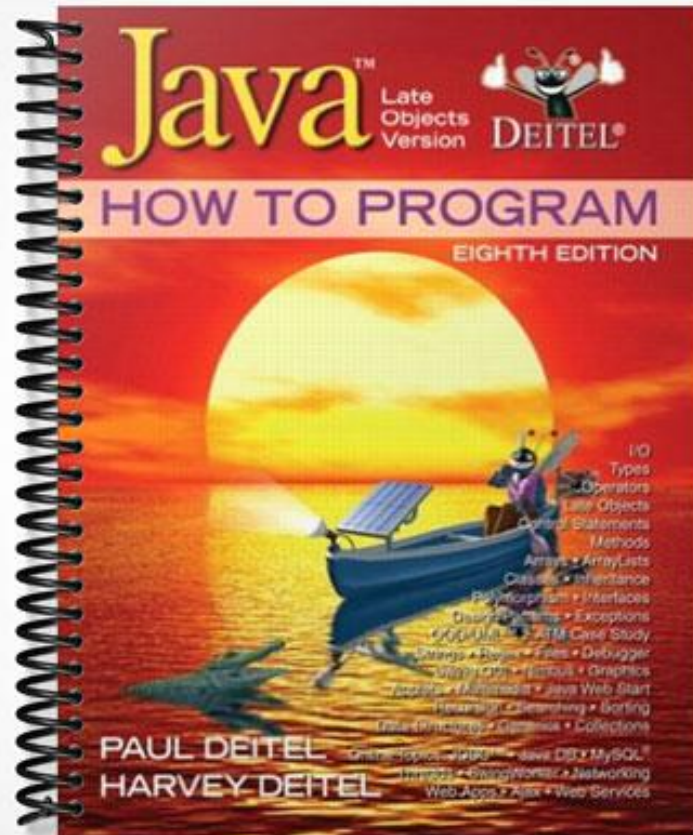   Web Apps • Ajax • Web Services

Chapter 2 Introduction to Java Applications

Section 2.2 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 starts (`/**`).
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. Extra blank lines.
ANS: d. Extra blank lines.

2.2 Q4: Which of the following is not 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 Our 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 characters 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 carriage return?
```
e.  \n.
f.  \r.
g.  \cr.
h.  \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 Java 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 place-holder 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: List the following operators in the order that they will be evaluated: `-`, `*`, `/`, `+`, `%`. Assume that if two operations have the same precedence, the one listed first will be evaluated first.

```
a.  +, -, /, *, %.
b.  -, +, %, *, /.
c.  -, *, %, +, /.
d.  *, /, %, -, +.
```

ANS: d. *, /, %, -, +.

2.7 Q3: 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. `=!`