Chapter- 3

**3.1 Fill in the blanks in each of the following**:

a) Each class declaration that begins with keyword **class** must be stored in a file that

has exactly the same name as the class and ends with the .java file-name extension.

b) Keyword **class** in a class declaration is followed immediately by the class’s name.

c) Keyword **new** requests memory from the system to store an object, then calls the

corresponding class’s constructor to initialize the object.

d) Each parameter must specify both a(n) **type** and a(n) **name** .

e) By default , classes that are compiled in the same directory are considered to be in the

same package, known as the **default package** .

f) When each object of a class maintains its own copy of an attribute, the field that represents

the attribute is also known as a(n) **instance variable**.

g) Java provides two primitive types for storing floating-point numbers in memory: **float**

and **double**.

h) Variables of type double represent **double-precision** floating-point numbers.

i) Scanner method **nextDouble** returns a double value.

j) Keyword public is an access **modifier** .

k) Return type **void** indicates that a method will not return a value.

l) Scanner method **nextLine** reads characters until it encounters a newline character,

then returns those characters as a String.

m) Class String is in package **java.lang** .

n) A(n) **import declaration** is not required if you always refer to a class with its fully qualified class

name.

o) A(n) **floating-point number** is a number with a decimal point, such as 7.33, 0.0975 or 1000.12345.

p) Variables of type float represent **single-precision** floating-point numbers.

q) The format **%f** specifier is used to output values of type float or double.

r) Types in Java are divided into two categories— types **primitive** and types **reference**.

**3.2 State whether each of the following is *true* or *false*. If *false*, explain why**.

a) By convention, method names begin with an uppercase first letter, and all subsequent

words in the name begin with a capital first letter.

**False. By convention, method names begin with a lowercase first letter and all subsequent**

**words in the name beginwith a capital first letter**.

b) An import declaration is not required when one class in a package uses another in the

same package.

**True**.

c) Empty parentheses following a method name in a method declaration indicate that the

method does not require any parameters to perform its task.

**True**.

d) Variables or methods declared with access modifier private are accessible only to methods

of the class in which they’re declared.

**True**

e) A primitive-type variable can be used to invoke a method.

**False. A prim itive-type variable cannot be used to invoke a method—a reference to an object is required to invoke the object’s methods**.

f) Variables declared in the body of a particular method are known as instance variables

and can be used in all methods of the class.

**False. Such variables are called local variables and can be used only in the**

**method in which they’re declared**.

g) Every method’s body is delimited by left and right braces ({ and }).

**True**

h) Primitive-type local variables are initialized by default.

**False. Primitive-type instance variables are initialized**

**by default. Each local variable must explicitly be assigned a value**.

1. Reference-type instance variables are initialized by default to the value null.

**True**

j) Any class that contains public static void main( String[] args ) can be used to execute

an application.

**True**

k) The number of arguments in the method call must match the number of parameters in

the method declaration’s parameter list.

**True**

l) Floating-point values that appear in source code are known as floating-point literals and

are type float by default.

**False. Such literals are of type double by default**.