Java Methods

**Creating Java Methods**

1. Assume that a **class** named **Arithmetic** has been defined with three variables of type **int** named **num1**, **num2**, and **answer**. Write the method header and body for a method named **sum** that will add *num1* and *num2* together and store the result of the calculation in the variable *answer*.
2. A main method has been defined below for the Arithmetic class described above. Complete the main method by writing a line of code that will call (execute) the sum method.

public class Arithmetic  
{  
 public static void main(String[] args)  
 {  
 Arithmetic app = new Arithmetic();

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

}

}

1. What is problem decomposition?
2. In Java, problem decomposition is achieved through the constructing of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. A stub program is used to form the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of a program.
2. What is a variable’s scope?

**Variable Scope**

1. Look at the following code segment.

public class MyClass  
{  
 private int num1;  
  
 public void myMethod()  
 {  
 int num2 = 0;  
 }

}

Does the variable num1 have local scope or global scope?

Does the variable num2 have local scope or global scope?

1. Why will the following method cause a compiling error?

public void doSomething()  
{  
 int num;

num += 25;  
 System.out.println(num);  
}

1. Why do **instance variables** not have to be initialized?
2. Declare a String variable named **str1** and initialize it with a string’s default value.