Chapter 6 CRT

2. Method declaration is the first line of a method, which contains the method name, access specifier, return datatype and the parameters. The Method body, alternatively, are statements that implement a method.

3. The access modifiers are used to change the access level of a method in Java.

4. Visibility is another word used to describe the access level.

5. var3, var4 have a local scope in the method1 and are only found and used in that specific method. var1, var2 also have a local scope in the main method and are used in that method itself rather than having been used in all the methods.

6. A. public static int getVowels(String n)
B. public static int extractDigit(int num)
C. public static String insertString(String s, int num)

7. A. The compiler distinguishes methods by the signature of the method's, the number of parameters passed, the type of these parameters and the return datatype of these methods.
B. Two methods in the class can have the same name however there are some conditions that need to be met. The number of parameters or datatype of the parameters or the return type of the method must be different from the other method. This is called method overloading.

8. A. The return statement is used to return a value or objects, pass values back to the calling function and also for terminating the method early.
B. The return statement can send back only one value to the calling statement.
C. When a method returns a certain value of a specific data type, we need to mention that specific data type in the method's signature. However, if the method does not return any values, we use void in the method signature as a reference that we are not returning any value.

9. The error in this code is that when the function is called first time, since the function is returning a value of 5, the value ios being assigned to any variable. To fix this error, we can create another variable that is being assigned the value of the returning value from the function like this:
int num,n;
n= doSomething();
num = doSomething();