

## Chapter 6 CRT

2.

**Method declaration** is the first line of the method containing the method name, access specifier, return datatype and the parameters.

**The Method body**, alternatively, are statements that implement a method.

3. **Access modifiers** are used to change a method's access level.

4. Another word for describing the access level of a method would be **visibility**

5. **Var3 and var4** have a **local** scope in method 1, being found and used only in that method. **Var1 and var2** also have a **local** scope in the main method and are used only in the main method.

6.

- a) public static int getVowels(String num)
- b) public static int extractDigit(int num)
- c) public static String insertString(String word, int num)

7.

- a) By looking at the signature of the method, the compiler distinguishes methods. The compiler also looks at the number of parameters passed, the type of these parameters and the return datatype of these methods.
- b) Two methods in the same class can have the same name as long as the number of parameters, the data type of the parameters or the return type of the method is different from those of the other methods. This is known as **method overloading**.

8.

- a) To return a value or object, pass values back to the calling function and the return statement can also be used to terminate the method early.
- b) The return statement is only able to send back 1 value to the calling statement.
- c) In a method that doesn't return a value, in the method's signature we use the word void which tells the method that it won't be returning any value. For a method that returns a value of a specific data type, its important to mention the data type in the method signature, rather than using void.

9.

The problem with the code is that when the function is called for the first time, the function returns a value of 5 and assigns it to any variable. To fix this error, just create a new variable that is assigned to the value of what is being returned like this:

```
int num, x;
```

```
x= doSomething();
```

```
num = doSomething();
```