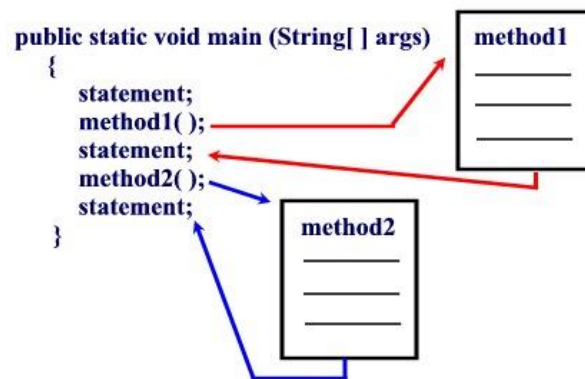


ICS4U – Java Methods

A method is a set of code which is referred to by name and can be called (invoked) at any point in a program simply by utilizing the method's name. Think of a method as a subprogram that acts on data and often returns a value.

In java subroutines are called Methods. In python these are called Functions.

Each method has its own name. When that name is encountered in a program, the execution of the program branches to the body of that method. When the method is finished, execution returns to the area of the program code from which it was called, and the program continues on to the next line of code.



- the “main” function or method is the one that is run when the program is launched. All other methods must be called in order for them to run
- a method can return data but it can only return one piece of data
- the return data type must be identified
- use “void” if the method does not return any data
- data received by methods are called arguments or parameters and must be identified by type

The use of methods is the first step in the direction of modular programming.

Modular programming allows many programmers to work independently on several concepts which can be assembled at a later date to create the entire project.

Here is an example of a method that accepts two integers, calculates the average of the two numbers, and returns the average as a double.

```
public class ExampleMethod {  
  
    public static void main (String[] args) {  
        getAverage(5,8);  
    }  
  
    public double getAverage (int a, int b) {  
        double avg = (a+b)/2;  
        return avg;  
    }  
}
```

The declaration of the variable “avg” can be avoided (to save memory):

```
public double getAverage (int a, int b) {  
    return = (a+b)/2;  
}
```