**Methods Overview**

Below is a good video on youtube for beginning methods:

<https://www.youtube.com/watch?v=cCgOESMQe44>

**Method key points:**

1. A method is a way to break apart a larger program into smaller pieces.
2. Methods are pieces of code, and combined make up the entire program
3. A method contains regular code, just like what you have been doing do far
4. Each method, (piece of code) will have certain tasks to do, depending on what the programmer needs done. These tasks are defined by the programmer.
5. Each method is separate and (**for now**), they do not know about what is going on in the other methods. Therefore they do NOT know anything about variables that are defined in other methods.
6. For now, the method code is typed in between the last 2 braces in your code
7. If one method needs data (variables) from another method to do it’s tasks, that data must be passed to the method that needs the data. The data to be received will be defined in the method header
8. Executing a method in the code means to “Call” the method code
9. If the method is passing back a value to the code from where it was called, you will see the type of data in front of the method name. (int, double, string etc…)
10. If the method is passing back a value to the code from where it was called, you will have the return statement at the end of the method code followed by the data that is being passed back
11. If nothing is being passed back to the code from where it was called, you will see the word “void” in front of the method name and there will be NO return statement
12. Method code has a beginning and ending brace around the code

The next page has a simple example of all of the above issues and should be used to help with the current method assignment

**package** simple\_method;

**import** javax.swing.JOptionPane;

**public** **class** simple\_method

{

**public** **static** **void** main(String[] args)

{

**int** number1,number2,result,large;

String value;

value=JOptionPane.*showInputDialog*(**null**,"Enter a number", "",JOptionPane.***QUESTION\_MESSAGE***);

number1=Integer.*parseInt*(value);

value=JOptionPane.*showInputDialog*(**null**,"Enter a number", "",JOptionPane.***QUESTION\_MESSAGE***);

Call multiplyit and pass number1 and number2

number2=Integer.*parseInt*(value);

result=*multiplyit*(number1,number2);

Call largest and pass number1 and number2 to it and receive back large

large=*largest*(number1,number2);

*printall*(number1,number2,result,large);

System.*exit*(0);

Call printall and pass number1, number2, result and large to it to be printed

}

**public** **static** **int** multiplyit(**int** number1,**int** number2)

{

Receive number1and number2 and pass back final\_result

**int** final\_value;

final\_value=number1\*number2;

**return** final\_value;

}

**public** **static** **int** largest(**int** number1,**int** number2)

{

**int** large\_number=0;

Receive number1and number2 and pass back large\_number

**if**(number1>number2)

large\_number=number1;

**else**

large\_number=number2;

**return** large\_number;

}

**public** **static** **void** printall(**int** number1,**int** number2,**int** result,**int** large)

{

System.***out***.println("first number read :"+number1);

System.***out***.println("second number read :"+number2);

System.***out***.println("numbers multiplied :"+result);

System.***out***.println("Largest number :"+large);

}

Receive number1, number2 , result and large for printing

}