

Module 3 Questions:

1. Is a function called within a class or is a class called within a function?
2. Explain the concept of method overloading?
3. Why should you use methods?
4. 00101111 convert to decimal
5. Is this a valid scope?

```
Public static void main(String s[])  
{  
    if(1>0){  
        Int a = 2;  
    }  
    System.out.println(a);  
}
```

Module 3 Answers:

1. A function is called within a class. A class can contain multiple functions
2. Overloading allows a class to have multiple methods with the same name but different parameters
3. Methods improve readability, modularity and the reuse of code. So anytime someone reads your code, it is easy to follow along and instead of having to retype a whole function, you can just call the method name instead!
4. 47. Take 2^x (0 or 1) in each place where the right most value is $x=0$ and it increments
5. No, a is defined within the if statement and is then attempted to be referenced outside of the if statement which is out of the scope of its definition.