

Global Variables & Methods

Java
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What would happen here?


```
int x = 5;  
int y = 6;  
  
if(x < y){  
    int sum = x + y;  
    System.out.print("x is smaller than y");  
}  
System.out.println(sum);
```

What would happen here?

It won't compile!

Variables constructed within brackets (squigglys)
are only usable within the same brackets

Since sum is constructed within the **if** statement, sum can't be accessed outside.




```
int x = 5;
int y = 6;

if(x < y){
    int sum = x + y;
    System.out.print("x is smaller than y");
}
System.out.println(sum);
```

What would happen here?

Construct sum outside of the if statement and access it within.
This is an example of variables being used “globally”



```
int x = 5;  
int y = 6;  
int sum = 0;  
  
if(x < y){  
    sum = x + y;  
    System.out.print("x is smaller than y");  
}  
System.out.println(sum);
```

Let's apply this to Classes/Methods!

Would this compile?

```
class BaseClass{
    public BaseClass(){
        int x = 0;
    }
    public void toString(){
        System.out.println(x);
    }
}

class starter {
    public static void main(String args[]) {
        // Your code goes below here
        BaseClass test = new BaseClass();
        test.toString();
    }
}
```

Let's apply this to Classes/Methods!

It wouldn't!

`int x` is constructed in the **constructor**, the `toString` method can't access `x`.

To fix this,
`int x` will be a global variable!

```
class BaseClass{
    public BaseClass(){
        int x = 0;
    }
    public void toString(){
        System.out.println(x);
    }
}

class starter {
    public static void main(String args[]) {
        // Your code goes below here
        BaseClass test = new BaseClass();
        test.toString();
    }
}
```

Let's apply this to Classes/Methods!

`int x` is now a global variable!

`int x` is constructed in the class
But declared in the constructor.

This means `toString`
can now use `x`.

```
class BaseClass{
    int x;
    public BaseClass(){
        x = 0;
    }
    public void toString(){
        System.out.println(x);
    }
}

class starter {
    public static void main(String args[]) {
        // Your code goes below here
        BaseClass test = new BaseClass();
        test.toString();
    }
}
```

Lab - Global Variables & Methods

We've sort of already created and used Global variables, if you haven't create the following global variables.

- **String role, int strength, int dexterity, int intelligence, int constitution, int charisma.**
- Now create a new Method called **“myToString”** in your **“myCharacter”** class.
 - This returns nothing
 - This should **print out the role and all stats** easily for us! Example below.
 - Call this instead of printing in your starter.java

```
Your role is rogue  
Your strength trait is 0  
Your dexterity trait is 0  
Your intelligence trait is 0  
Your constitution trait is 0  
Your charisma trait is 0
```