

# Class Constructor

Java  
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# What is a Constructor?

A Constructor is similar to a **Method** but instead it **creates** the object itself.

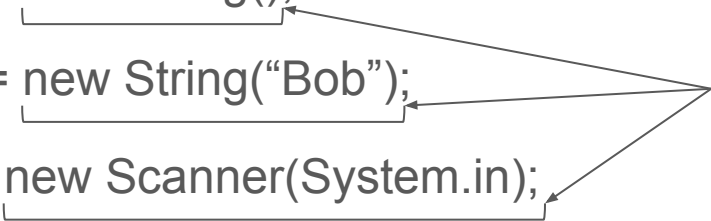
Example of Constructors that we've used.

```
String name = new String();
```

```
String name = new String("Bob");
```

```
Scanner sc = new Scanner(System.in);
```

These are all calling the  
Constructors



# Constructors

Constructors can be empty or they can be filled of parameters.

String name = new String();

Empty Constructor

String name = new String("Bob");

String Constructor

```
class String{  
    public String(){  
    }  
    public String(String a){  
    }  
}
```

Empty Constructor

String Constructor

# Example: Constructors

Constructor's purpose is to create the object.

In this case, it is CREATING the String with or without a String parameter.

```
class String{  
    public String(){  
  
    }  
    public String(String a){  
  
    }  
}
```

Empty Constructor

String Constructor

# Constructors Good Practice

Constructors are great for initializing/declaring values for our global variables!

Value is constructed below, but declared inside the constructor.

```
public class BaseClass {  
    int value;  
  
    public BaseClass() {  
        value = 0;  
    }  
}
```

# Lab - Constructors

1. For our myCharacter class
  - a. **Create an Empty Constructor**
    - i. This assigns the variable role to “No role”
  - b. **Create a String constructor that takes in the “role” of the class**
    - i. Ex: Wizard, Warrior, Rogue, otherwise “No role”
2. Using Review lab, check the input **in your String constructor** and output the correct exclamation.
  - a. Ex: “You chose Rogue! How cunning!”
  - b. If no correct role, tell the user and reset role to “No Role”
3. In starter.java
  - a. **Create two myCharacter class objects**
    - i. One should be **empty**, output role.
    - ii. One should be **defined as the user input** of Wizard, Warrior, Rogue. Then output role.