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Inheritance and constructors in Java

In Java, constructor of base class with no argument gets automatically called in derived class constructor. For example, output of following program is:

Base Class Constructor Called

Derived Class Constructor Called

```
// filename: Main.java
class Base {
    Base() {
        System.out.println("Base Class Constructor Called ");
    }
}

class Derived extends Base {
    Derived() {
        System.out.println("Derived Class Constructor Called ");
    }
}

public class Main {
    public static void main(String[] args) {
        Derived d = new Derived();
    }
}
```

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But, if we want to call parameterized constructor of base class, then we can call it using `super()`. The point to note is **base class constructor call must be the first line in derived class constructor**. For example, in the following program, `super(_x)` is first line derived class constructor.

```
// filename: Main.java
class Base {
    int x;
    Base(int _x) {
        x = _x;
    }
}

class Derived extends Base {
    int y;
    Derived(int _x, int _y) {
        super(_x);
        y = _y;
    }
}
```



```
void Display() {  
    System.out.println("x = "+x+", y = "+y);  
}  
  
public class Main {  
    public static void main(String[] args) {  
        Derived d = new Derived(10, 20);  
        d.Display();  
    }  
}
```

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Output:

x = 10, y = 20

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