

Java passing object as parameter

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Passing Object as Parameter :

```
package com.pritesh.programs;

class Rectangle {
    int length;
    int width;

    Rectangle(int l, int b) {
        length = l;
        width = b;
    }

    void area(Rectangle r1) {
        int areaOfRectangle = r1.length * r1.width;
        System.out.println("Area of Rectangle : "
            + areaOfRectangle);
    }
}

class RectangleDemo {
    public static void main(String args[]) {
        Rectangle r1 = new Rectangle(10, 20);
        r1.area(r1);
    }
}
```

Output of the program :

```
Area of Rectangle : 200
```

Explanation :

1. We can pass Object of any class as parameter to a method in java.
2. We can access the instance variables of the object passed inside the called method.

```
area = r1.length * r1.width
```

3. It is good practice to initialize instance variables of an object before passing object as parameter to method otherwise it will take default initial values.

Different Ways of Passing Object as Parameter :

Way 1 : By directly passing Object Name

```
void area(Rectangle r1) {
    int areaOfRectangle = r1.length * r1.width;
    System.out.println("Area of Rectangle : "
        + areaOfRectangle);
}

class RectangleDemo {
    public static void main(String args[]) {
        Rectangle r1 = new Rectangle(10, 20);
        r1.area(r1);
    }
}
```

Way 2 : By passing Instance Variables one by one

```
package com.pritesh.programs;

class Rectangle {
    int length;
    int width;

    void area(int length, int width) {
        int areaOfRectangle = length * width;
        System.out.println("Area of Rectangle : "
            + areaOfRectangle);
    }
}

class RectangleDemo {
    public static void main(String args[]) {
        Rectangle r1 = new Rectangle();
        Rectangle r2 = new Rectangle();

        r1.length = 20;
        r1.width = 10;

        r2.area(r1.length, r1.width);
    }
}
```

Actually this is not a way to pass the object to method. but this program will explain you how to pass instance variables of particular object to calling method.

Way 3 : We can pass only public data of object to the Method.

Suppose we made width variable of a class private then we cannot update value in a main method since it does not have permission to access it.

```
private int width;
```

after making width private –

```
class RectangleDemo {
    public static void main(String args[]) {
        Rectangle r1 = new Rectangle();
        Rectangle r2 = new Rectangle();

        r1.length = 20;
        r1.width = 10;

        r2.area(r1.length, r1.width);
    }
}
```