

Pass by Value vs Pass by Reference

```
public class PassByValueReference {
    public static void main(String[] args) {
        DoSomething ds = new DoSomething();
        ds.test();
    }
}

public class DoSomething {
    public void test() {
        Player myPlayer = new Player("Mary");
        myPlayer.setScore(100);
        int myScore = 5;

        System.out.println("In test - before call:");
        System.out.println(myPlayer);
        System.out.println("myScore = " + myScore);

        this.addScore(myPlayer, myScore); // call

        System.out.println("\nIn test - after call:");
        System.out.println(myPlayer);
        System.out.println("myScore = " + myScore);
    }

    public void addScore(Player p, int score) {
        score = 2*score;
        p.addToScore(score);
        System.out.println("\nIn addtoScorePlayer:");
        System.out.println("score = " + score);
        System.out.println(p);
    }
}
```

Output:

```
In test - before call:
Mary has score 100
myScore = 5
```

```
In addtoScorePlayer:
score = 10 // pass by value
Mary has score 110 // pass by reference
```

```
In test - after call:
Mary has score 110 // pass by reference
myScore = 5 // pass by value
```

