

Course Number	CSci 120
Descriptive Title	Object-oriented Programming
Programming Language	Java

Problem Set Number	3
Problem Number	1
Activity Title	Investigate Reference Assignment

Objective

In this exercise you will investigate Java reference variables; object creation and reference variable assignment.

Directions

Using the `MyPoint` class, which has been supplied for you, create a `TestMyPoint` program that does the following:

1. Declare two variables of type `MyPoint` called: `start` and `end`. Assign both of these variables a new `MyPoint` object.
2. Set the x and y values of `start` to 10. Set the x value of `end` to 20 and the y value to 30.
3. Print out both point variables. Use code similar to:
`System.out.println ("Start point is " + start);`
4. Compile and run `TestMyPoint`.
5. Declare a new variable of type `MyPoint` and call it `stray`.
Assign `stray` the reference value of the existing variable `end`.
6. Print out `stray` and `end`.
7. Assign new values to the x and y members of the variable `stray`.
Print out `stray`, `end` and `start`.
8. Compile and run `TestMyPoint`. The values reported by `end` reflect the change made in `stray`, indicating that both variables refer to the same `MyPoint` object. However, `start` has not changed which indicates that it is independent of the other two variables.

The output should look like this:

```
Start point is [10,10]
End point is [20,30]
Stray point is [20,30]
End point is [20,30]
Stray point is [47,30]
End point is [47,30]
Start point is [10,10]
```