

How I checked the codes ...

I used a test code to test the classes through defining the objects and instantiating them. Then, based on the assignment requirements, the provided methods were checked for proper functioning. The test program is called "UnitTestAssignment2.java" and attached.

The Author of this code can revise the program to resolve the following problems

- 1) The Segment class does not have any default constructor which takes no argument
- 2) In the Segment class, the move () methods only works for vertical and horizontal segments. If the defined segment is inclined, the move () method does not work at all.
- 3) in CreateSegments class, the printFour () works very well, however the static CreateSegments.unitTest () does not meet the assignment requirements and it does not print anything.
- 4) The assignment required test-program which is called "assignment2.java" prints only zero.

```
ehsan@chortkeh:~/ICS/211/LabBBT> java assignment2
0.0
0.0
(0.0,0.0)
```

Test program results

```
ehsan@chortkeh:~/ICS/211/LabBBT> javac UnitTestAssignment2.java
ehsan@chortkeh:~/ICS/211/LabBBT> java UnitTestAssignment2
```

```
Default constructor (): (0.0,0.0)    OK
Constructor with (1.2, 4.5): (1.2,4.5)
Constructor with (3.5, 10.2): (3.5,10.2)
```

Testing toString()

```
A = (1.2,4.5)    OK
B = (3.5,10.2)   OK
```

Testing GetX()

```
Ax = 1.2    OK
Bx = 3.5    OK
```

Testing GetY()

```
Ay = 4.5    OK
```

BBT ... by Ehsan Kourkchi
Assignment #2 (author: Li, Jiajie)

By = 10.2 **OK**

Testing **Distance**: (expected ~ 6.146543744)

A-B distance = 6.146543744251724 **OK**

Defining a segment

NO Default constructor is provided ... ERROR

Defining the A-B segment

A-B **toString** test: ((1.2,4.5)), ((3.5,10.2))

A-B segment ... **length()**: 6.146543744251724 **OK**

A-B segment ... **left()**: (1.2,4.5) **OK**

A-B segment ... **right()**: (3.5,10.2) **OK**

A-B segment ... **upper()**: (3.5,10.2) **OK**

A-B segment ... **lower()**: (1.2,4.5) **OK**

A-B segment ... **isHorizontal()**: false **OK**

A-B segment ... **isVertical()**: false **OK**

A-B segment ... **move(0,0)**: ((1.2,4.5)), ((3.5,10.2)) **ERROR**

A Vertical Segment

C = (1.0,2.0)

D = (1.0,5.0)

Defining the C-D segment

C-D **toString** test: ((1.0,2.0)), ((1.0,5.0)) **OK**

C-D segment ... **length()**: 3.0 **OK**

C-D segment ... **left()**: (1.0,5.0) **OK**

C-D segment ... **right()**: (1.0,2.0) **OK**

C-D segment ... **upper()**: (1.0,5.0) **OK**

C-D segment ... **lower()**: (1.0,2.0) **OK**

C-D segment ... **isHorizontal()**: false **OK**

C-D segment ... **isVertical()**: true **OK**

C-D segment ... **move(0,0)**: ((0.0,0.0)), ((1.0,5.0)) **OK**

A Horizontal Segment

E = (1.5,7.0)

F = (5.5,7.0)

Defining the E-F segment

E-F **toString** test: ((1.5,7.0)), ((5.5,7.0)) **OK**

E-F segment ... **length()**: 4.0 **OK**

E-F segment ... **left()**: (1.5,7.0) **OK**

E-F segment ... **right()**: (5.5,7.0) **OK**

E-F segment ... **upper()**: (1.5,7.0) **OK**

E-F segment ... **lower()**: (5.5,7.0) **OK**

E-F segment ... **isHorizontal()**: true **OK**

E-F segment ... **isVertical()**: false **OK**

BBT ... by Ehsan Kourkchi
Assignment #2 (author: Li, Jiajie)

```
E-F segment ... move(0,0): ((0.0,0.0)), ((5.5,7.0))    OK
*****
```

```
*****
Testing CreateSegments.printFour() ....
```

```
((6.0,2.0)), ((3.0,4.0))    OK
((2.0,1.0)), ((5.0,0.0))    OK
((-1.0,2.0)), ((7.0,-3.0))   OK
((3.0,9.0)), ((1.0,8.0))    OK
```

```
*****
Testing CreateSegments.unitTest() ....    ERROR (Nothing is displayed as the result)
```

End of the test ...

[ehsan@chortkeh](#):~/ICS/211/LabBBT>