Assignment 12

Due 9 December 7:59am

1 Problem 1

Structured Points

This week's problem is:

- define a *struct* for 2-dimensional points, call it Point
- create an array of Points, fill it with values from the file points2d.txt
- write a function `double distance(struct Point p0,struct Point p1);` that computes the distance between two points.
- test your function with 3 sets of points from your array. `cout` the result for all 3 distance calculations as shown below. Choose any 3 sets of points you wish.

```
Distance between (2.22, 0.26) and (2.53, 1.06) is 0.85
Distance between (2.22, 4.50) and (2.53, 1.57) is 2.62
Distance between (2.22, 0.93) and (2.53, 1.71) is 1.94
```

The formula for the Euclidean distance between two points is

$$\sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

2 Bonus: 10pts

Higher Dimensions Do the assignment again, this time for 4-dimensional points.