1. Due Date

**Monday, October 26, 2020**11:59 AM

Points Possible

**100**

1. Create a method part2(), in the main you should comment out calling part1, and just call part2 method.

In method part2 you should:  
1) Read 4 points from the file points.txt; (sample you can use for testing: [points.txt](https://fcps.blackboard.com/bbcswebdav/pid-44305444-dt-content-rid-48209376_2/xid-48209376_2) )

2) Then create all possible squares that have the 4 points on its side or the extension of its sides.  
 You may assume the problem is well defined (or you may deal with this situation too if you wish).

3) Create the file output.ppm of size 800x800 in which:

  a) Display the 4 points by creating a circle for each point with radius = 2 and center on each point

  b) Draw the square with the minimum area with all sides extended. (for the sample above, you should obtain: [output.ppm](https://fcps.blackboard.com/bbcswebdav/pid-44305444-dt-content-rid-48209377_2/xid-48209377_2" \t "_blank) )

4) Save in a file called output.txt the coordinates of the 4 points and the coordinates of the 4 vertices for ALL the squares you found.

   (for the sample above, you should obtain: [output.txt](https://fcps.blackboard.com/bbcswebdav/pid-44305444-dt-content-rid-48209378_2/xid-48209378_2) ) 

To find the squares you may use any of the solutions presented at   
        https://www.cut-the-knot.org/Curriculum/Geometry/GeoGebra/SquareFromFourPoints.shtml  
or   
        http://www.hep.princeton.edu/~mcdonald/examples/4point.pdf

Update 10/22/2020:

Submit 2 files:

1) l022.cpp you created

2) a completed document of: [Project 2 Part 2 document.docx](https://fcps.blackboard.com/bbcswebdav/pid-44305444-dt-content-rid-48361438_2/xid-48361438_2)