**Project 2 Part 2 (square with min area)**

Name: Vivian Feng Period: 5

Date: 10/3/2022

Is your lab name l022?(lowercase L followed by digits 022) Yes

Did you comment out the call to part1 method? Yes

Did you create a class for a Point? Yes

Did you create a class for a Line? Yes

List all classes you created in this project: IntegerPoint, DoublePoint, Grid, Line, Circle

Did you use the precision for the points like in the sample? Yes

Did you test your file on a school computer using jupyterhub/ssh? Yes

Did your file compile and run on school computer (jupyterhub)? Yes

Paste here **2 sets of clear picture/content** of the points.txt, output.txt and output.ppm you created when running 2 times your lab :

* one of the runs should be on the sample provided by Mr. Jurj;

points.txt:

(0.18161564989165929,0.49650563066499831) , (0.20331431012909329,0.66115298928800315) , (0.45457319864497819,0.36802270577105012) , (0.86330759605700857,0.82033753471480453)

output.txt:

(0.18161564989165929,0.49650563066499831) , (0.20331431012909329,0.66115298928800315) , (0.45457319864497819,0.36802270577105012) , (0.86330759605700857,0.82033753471480453)

(0.34174493950384793,0.28328741002475738) , (0.43467909320732445,0.35308200810630164) , (0.36488449512578019,0.44601616180977821) , (0.27195034142230362,0.37622156372823390) Area = 0.013508042845945699

(0.44965933148143983,0.35848004700834968) , (0.52122072857609092,0.49745124226642923) , (0.66019192383417036,0.42588984517177830) , (0.58863052673951921,0.28691864991369864) Area = 0.024434026665597609

(0.11723405021564341,0.61397476973488152) , (0.27298780221724167,0.69933911128708126) , (0.35835214376944136,0.54358535928548291) , (0.20259839176784311,0.45822101773328328) Area = 0.031546302071215983

(0.21626596678621329,0.65838060894706707) , (0.50356215373881796,0.59688312473948146) , (0.56505963794640368,0.88417931169208608) , (0.27776345099379895,0.94567679589967168) Area = 0.086321039601368235

(0.26976728773113051,0.54851018465181811) , (0.30404636140174307,0.49040457166165108) , (0.36215197439190994,0.52468364533226353) , (0.32787290072129738,0.58278925832243045) Area = 0.0045513171526783518

(0.23229804918860963,0.50597175896598401) , (0.19683240149944259,0.69585764053809251) , (0.38671828307155159,0.73132328822725956) , (0.42218393076071870,0.54143740665515105) Area = 0.037314460186428929

A close-up of some wires

Description automatically generated with low confidence

* the other run on a random set of points.txt your part1 generated!! :

points.txt

(0.51405551727584353,0.64788123716035917) , (0.22405632409456014,0.10568500687632942) , (0.31119268076084211,0.09988953643473310) , (0.90021613561558356,0.39173403866204154)

output.txt

(0.51405551727584353,0.64788123716035917) , (0.22405632409456014,0.10568500687632942) , (0.31119268076084211,0.09988953643473310) , (0.90021613561558356,0.39173403866204154)

(0.51494888990239784,0.10022191499996869) , (0.22406600983501743,0.09974741051867839) , (0.22359150535372713,0.39063029058605891) , (0.51447438542110757,0.39110479506734924) Area = 0.084613075070796753

(0.35631716643610722,0.66057613999504428) , (0.31109533960470553,0.09868004049468793) , (0.87299143910506161,0.05345821366328707) , (0.91821326593646324,0.61535431316364253) Area = 0.31777224025568362

(0.54939765896839277,0.12779330600572292) , (0.31040013863534727,0.11155242879669769) , (0.29415926142632204,0.35054994912974319) , (0.53315678175936743,0.36679082633876836) Area = 0.057383580817863135

(0.37570098201546936,0.68415084024021466) , (0.22823790108063122,0.12163610894076504) , (0.79075263238008042,-0.02582697199407313) , (0.93821571331491860,0.53668775930537649) Area = 0.33816818316768671

(0.62391269165095564,0.54873397935238422) , (0.66985420518353300,0.59963810897521030) , (0.72075833480635920,0.55369659544263272) , (0.67481682127378184,0.50279246581980663) Area = 0.0047018530783214697

(0.46666237992076470,0.66831708257954259) , (0.43407145570019412,0.59273488294788290) , (0.50965365533185392,0.56014395872731226) , (0.54224457955242455,0.63572615835897195) Area = 0.0067748372427110333

Diagram, engineering drawing

Description automatically generated