**Project 4 Part 3 (Using kd-trees with 2d points) (Updated 2021/01/27!!)**

[Project 4 Part 3 (Using kd-trees with 2d points) (Updated 2021/01/27!!)](https://fcps.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_1516674_1&content_id=_43601203_1&mode=reset)

c) Part 3

Video link to Prof. Sedgewick's  lecture on kd-trees :

https://www.youtube.com/watch?v=BqipVbEE9BM&list=PLRdD1c6QbAqJn0606RlOR6T3yUqFWKwmX&index=49

Create part3() method that :

1) asks the user if it wants to generate points. If the user says yes then 10 points are generated and saved in the file points.txt (Ex:  [points.txt](https://fcps.blackboard.com/bbcswebdav/pid-44700125-dt-content-rid-49653949_2/xid-49653949_2)

 ). Follow the format provided (you may have an empty line at the end of points.txt, but when your code should work whether there is an empty line at the end or not)

2) whether the user asked to generate or not the points now the application will read the points from points.txt (do not hardcode 10!!!!) then creates the kd-tree for the points and creates a diagram similar to the one in the video above.

3) the diagram should be saved as diagram.ppm and should be an 800x800 ppm image of the diagram.

4) Once you complete the part3, also complete the document:  [Project 4 Part 3.docx](https://fcps.blackboard.com/bbcswebdav/pid-44700125-dt-content-rid-49653950_2/xid-49653950_2) [Project 4 Part 3.docx - Alternative Formats](https://fcps.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_1516674_1&content_id=_43601203_1&mode=reset)

5) Submit a cpp file and the completed document

Image of the diagram from the video above:  [kd-trees.pdf](https://fcps.blackboard.com/bbcswebdav/pid-44700125-dt-content-rid-49585026_2/xid-49585026_2) [kd-trees.pdf - Alternative Formats](https://fcps.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_1516674_1&content_id=_43601203_1&mode=reset)

 (you need to create the left part! creates the kd-tree and a ppm (800x800) called diagram.ppm.

Write your code so is scalable easy to more features than 2.