**Project #2 (100 pts) (please pick 1 out of 2; and there are bonus points, if …)**

1. Please bring up Gordian placer and explain its major components. It needs to be run on Visual Studio. Please prepare your compute environment.
   1. Found this on GitHub

<https://github.com/KangliC/Gordian_Placement>

Its output plot is captured in this

<https://github.com/KangliC/Gordian_Placement/blob/master/Output%20plots.pdf>

Please bring up this placer through Visual Studio, since it needs some packages(.dll.) Explain how to make the executable, an input format for this placer, and result with metrics.

Then, please pick 3 functions to explain what they do. Also welcome to describe how they used the matrices, especially when there are >1M instances. (Basically the breakdown is 50% for bringing up the program; the other 50% is for explaining the program modules.)

* 1. You can also use this package

(i) Download code from <https://github.com/ZhenshenQiu/Gordian-VLSI-Placement>

(ii) Open GORDIAN.sln using Visual studio.

(iii) Check .NET Framework v4.7.2 has been installed.

**Note:** Welcome to try to bring Gordian on Linux machine (i.e., using some mathematical packages in Linux, rather than .dll.) You will be awarded with 60 bonus points (i.e., an increase of 9 points in final grade.)

1. Or bring up RePlace and explain its major components (in similar way of what we go over in class about Gordian). (If this can be brought up, it will be wonderful – hence, 60 bonus points (i.e., 9 points in final grade):
   1. (saw a program in GitHub)

<https://github.com/The-OpenROAD-Project/RePlAce>

How about using this standalone branch?

[GitHub - The-OpenROAD-Project/RePlAce at standalone](https://github.com/The-OpenROAD-Project/RePlAce/tree/standalone)

(Welcome to try to bring up this program)

Please bring up this placer. Explain how to make the executable, an input format for this placer, and results with metrics. Then, please pick 3 functions to explain what they do.

Note: it is ok to fail, when you try to build the above two programs. Please write down what happens, what you do to overcome, what help you need. You still get credits. However, encourage you to talk to other people earlier. Thanks.