Student Name: Xinxi Zhang
NetID: XZ657
RUID: 219004759

MATH FOUND DS (16:198:501)

Homework 2: Optimization

READ ME

Due to a large amount of experiment, I will only upload **codes of functions**. Otherwise it will become unnecessarily messy.

For different descent algorithms, all the related functions are integrated in **"Descent.py"**. You can easily play with different optimization methods by changing the parameters of the Descent Function.

And all the plot related functions are integrated in **"plot_functions.py"**. Some plot functions are built to plot comparisons between different method. The only thing you need to do is to set $subplot = True$ and input the subplot object into the functions.

For the Branch and Bound problem, all the code is integrated in **"Branch and Bound.py"**. The code is annotated and it follows all the ideas of what I discuss in the homework, so it should be easy to go through. However, it takes time to run because I traverse all the possibilities from 0 to the upperbound. Surely I have pruned lots of the branches which fall below the lowerbound, but I have not tried to improve it by dichotomy.