**ML2**

import pandas as pd

cur\_x = 2

rate = 0.01

precision = 0.0000001

previous\_step\_size = 1

max\_iters = 10000

iters = 0

df = lambda x: (2 \* (x + 3))

while previous\_step\_size > precision and iters < max\_iters:

prev\_x = cur\_x

cur\_x = cur\_x - rate \* df(prev\_x)

previous\_step\_size = abs(cur\_x - prev\_x)

iters = iters + 1

print(f'Iteration {iters} \n value is {cur\_x} ')

print(f'The local minima occurs at {cur\_x}')

import matplotlib.pyplot as plt

plt.show()