#exp2: logic gate for exor

import numpy as np

import matplotlib.pyplot as plt

x=[0,0,1,1]

x\_=[1,1,0,0]

y=[0,1,0,1]

y\_=[1,0,1,0]

xy\_ =[0,0,0,0]

#xy\_=0,0,2,0

x\_y = [0,0,0,0]

#x\_y=0,2,0,0 s0,d1

exor=[0,0,0,0]

for i in range(4):

     if(x[i]+y\_[i]>=2):

        xy\_[i]=1

     else:

        xy\_[i]=0

for i in range(4):

     if(x\_[i]+y[i]>=2):

        x\_y[i]=1

     else:

        x\_y[i]=0

for i in range(4):

     if(xy\_[i]+x\_y[i]>=1):

        exor[i]=1

     else:

        exor[i]=0

print(exor)

plt.scatter(x,y, color='darkblue', marker='o')

x\_1 = np.linspace(0,2,2)

y\_1 = np.linspace(0,2,2)

result1 = np.linspace(0,2,2)

result2 = np.linspace(0,2,2)

x\_2= 1.5-x\_1

result2=0.5-result1

plt.plot(x\_1, x\_2, '-r')

plt.plot(result1, result2, '-r')

output:

[0, 1, 1, 0]

