**End Term Practical Exam**

**Soft Computing Laboratory CS 14.451**

**Q1. AIM:** Write a program to implement linear separability for AND function.

**CODE:**

import numpy as np

import matplotlib.pyplot as plt

x = np.array([0,1,0])

y = np.array([0,0,1])

plt.scatter(x,y,c='red')

plt.scatter(1,1,c="blue")

plt.xlabel('Input 1')

plt.ylabel('Input 2')

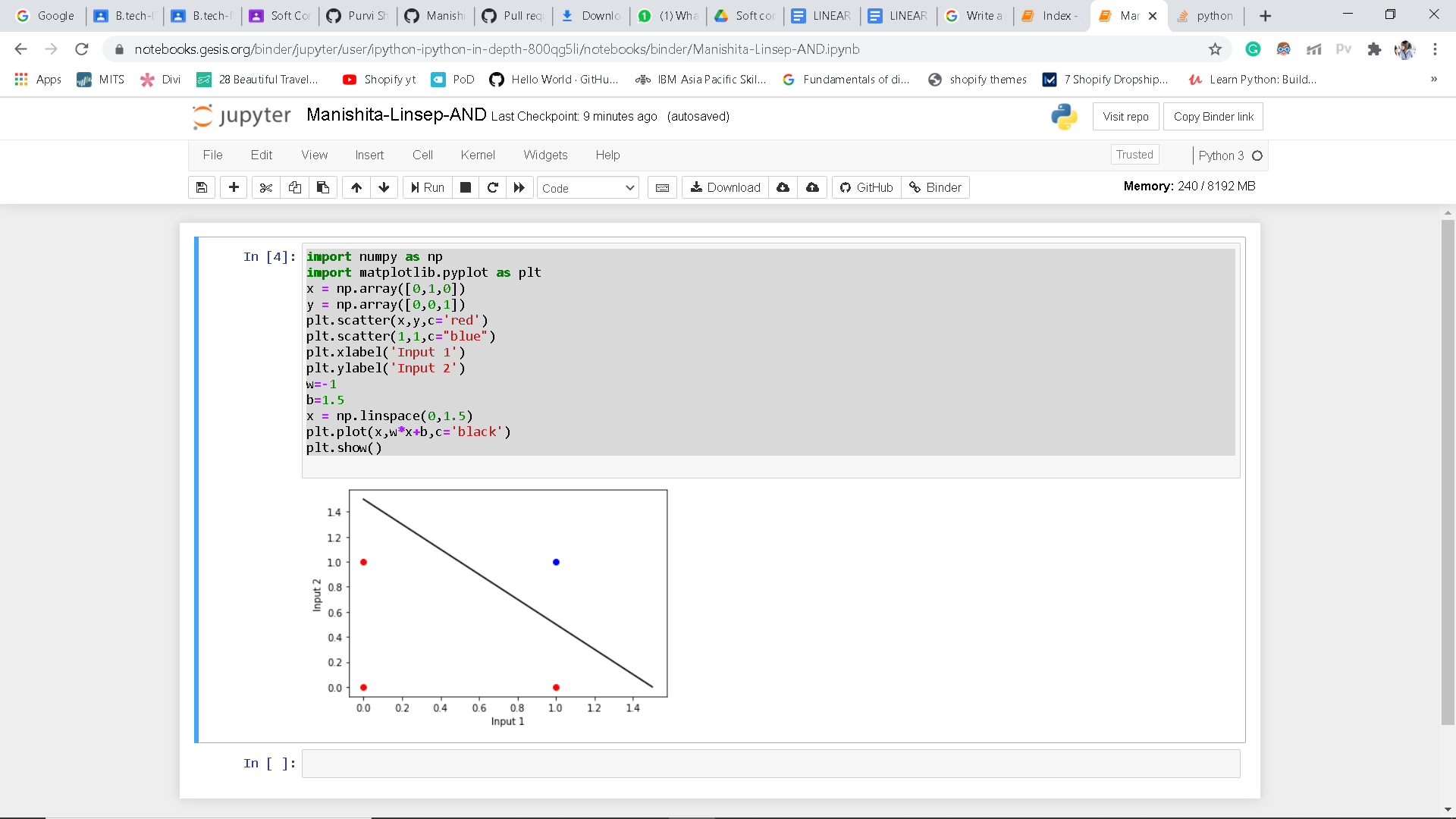
w=-1

b=1.5

x = np.linspace(0,1.5)

plt.plot(x,w\*x+b,c='black')

plt.show()

**OUTPUT:**  
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**Q2. AIM:** Write a program to implement linear separability for OR function.

**CODE:**

import numpy as np

import matplotlib.pyplot as plt

x = np.array([0,1])

y = np.array([0,1])

plt.scatter(x,y,c='red')

x = np.array([1,0])

y = np.array([0,1])

plt.scatter(x,y,c="blue")

plt.xlabel('Input 1')

plt.ylabel('Input 2')

w=-1

b=1.5

x = np.linspace(0,1.5)

plt.plot(x,w\*x+b,c='black')

plt.show()

**OUTPUT:**

