PROGRAM 17

AIM: Write a program to implement Linear Separability for XOR function.

CODE:

```
import numpy as np
import matplotlib as plt
x = np.array([0,1])
y = np.array([0,1])
plt.pyplot.scatter(x,y,c='red')
x = np.array([1,0])
y = np.array([0,1])
plt.pyplot.scatter(x,y,c="blue")
plt.pyplot.xlabel('Input 1')
plt.pyplot.ylabel('Input 2')
w=-1
b=1.5
x = np.linspace(0,1.5)
plt.pyplot.plot(x,w*x+b,c='black')
plt.pyplot.show()
```

OUTPUT:

```
In [13]:  import numpy as np
          import matplotlib as plt
          x = np.array([0,1])
          y = np.array([0,1])
          plt.pyplot.scatter(x,y,c='red')
          x = np.array([1,0])
          y = np.array([0,1])
          plt.pyplot.scatter(x,y,c="blue")
          plt.pyplot.xlabel('Input 1')
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          w=-1
          b=1.5
          x = np.linspace(0,1.5)
          plt.pyplot.plot(x,w*x+b,c='black')
          plt.pyplot.show()
```