Assignment No 2

Title : ANDNOT Function using MaCulloch-Pitts Neural Network.

Name : Tavhare Ruchita Sharad

Roll No: 58

In [1]:
```
import numpy as np
```

In [3]:
```
def linear_threshold_gate(dot, T):
    '''Returns the binary threshold output'''
    if dot >= T:
        return 1
    else:
        return 0
```

In [5]:
```
input_table = np.array([
[0,0], # both no
[0,1],
[1,0],
[1,1]
])
print(f'input table:\n{input_table}')
```

```
input table:
[[0 0]
 [0 1]
 [1 0]
 [1 1]]
```

In [7]:
```
weights = np.array([1,-1])
dot_products = input_table @ weights
T = 1
for i in range(0,4):
    activation = linear_threshold_gate(dot_products[i], T)
    print(f'Activation: {activation}')
```

```
Activation: 0
Activation: 0
Activation: 1
Activation: 0
```

In [ ]: