```
% Aditya Agre
% SYCOA06
% hebb learning Rule
clear all
```

```
% Consider bipolar and function with bias
x=[1 1; 1 -1; -1 1; -1 -1]
```

```
x = 4×2
     1     1
     1    -1
    -1     1
    -1    -1
```

```
% target output
t = [1 -1 -1 -1]
```

```
t = 1×4
     1    -1    -1    -1
```

```
w = [rand(1, 2)]   % Initial weights are randomly assigned
```

```
w = 1×2
    0.8154    0.8790
```

```
b = rand()       % Bias also randomly assigned
```

```
b = 0.9889
```

```
for i = 1: 4
    for j = 1:2
        w(j) = w(j) + t(1,i) * x(i, j);
        % w new
    end
    b = b + t(i);
end
"Updated weights and bias"
```

```
ans =
"Updated weights and bias"
```

```
w
```

```
w = 1×2
    2.8154    2.8790
```

```
b
```

```
b = -1.0111
```