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Practical NO:3

In [1]:
```
import numpy as np j = int(input("Enter a
Number (0-9): ")) step_function = lambda x: 1
if x >= 0 else 0

training_data = [
    {'input': [1, 1, 0, 0, 0, 0], 'label': 1},
    {'input': [1, 1, 0, 0, 0, 1], 'label': 0},
    {'input': [1, 1, 0, 0, 1, 0], 'label': 1},
    {'input': [1, 1, 0, 1, 1, 1], 'label': 0},
    {'input': [1, 1, 0, 1, 0, 0], 'label': 1},
    {'input': [1, 1, 0, 1, 0, 1], 'label': 0},
    {'input': [1, 1, 0, 1, 1, 0], 'label': 1},
    {'input': [1, 1, 0, 1, 1, 1], 'label': 0},
    {'input': [1, 1, 1, 0, 0, 0], 'label': 1},
    {'input': [1, 1, 1, 0, 0, 1], 'label': 0},
] weights = np.array([0, 0, 0, 0, 0,

1])

for data in training_data:     input =
np.array(data['input'])     label = data['label']
output = step_function(np.dot(input, weights))
error = label - output     weights += input * error

input = np.array([int(x) for x in list('{0:06b}'.format(j))]) output =
"odd" if step_function(np.dot(input, weights)) == 0 else "even" print(j,
" is ", output)
```

```
5  is  odd
```

In [ ]: