Experiment Number: 05

**Problem Statement: Perceptron Learning rule Implementation.**

**NAME: Priti Patil ROLLNO: 80**

# CLASS: TY(IT) BATCH: 3

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**Code-**

import numpy as np

array = [[1,-2,1.5,0],[1,-0.5,-2,-1.5],[0,1,-1,-1.5]]

desired=[1,-1,1]

x = np.array(array)

weight = [1,-1,0,0.5]

output = []

c = 1

p = 0

while(desired!=output):

output=[]

for i in range(3):

y = 0

for j in range(len(x[i])):

y = y + x[i][j]\*weight[j]

if(y>0):

y=1

elif(y<0):

y=-1

output.append(y)

weight = weight + c\*(desired[i]-y)\*x[i]

print("List Output",weight,output)

p=p+1

print("{} epoch {}".format(p,output))

**Output-**

