PROGRAM 12

Aim: Write a program to implement NOT logic functions.

Code:

```
import numpy as np
x=np.array([[0],[1]])
t=np.array([[1],[0]])
w=np.array([0])
theta=1
yin=np.zeros(shape=(2,1))
y=np.zeros(shape=(2,1))
yin=np.dot(x,w)
i=0
found=0
while(found==0):
       i=0
       yin=np.dot(x,w)
       print(yin)
       while(i<2):
       if yin[i]>=theta:
              y[i]=1
              i=i+1
              #if(i==4):
              #break
       else:
              y[i]=0
              i=i+1
       print("y",y)
       print("t",t)
       if (y==t).all():
       print("MODEL IS TRAINED ")
       print("\nOutput : \n",y)
       print("\nweights : ",w,"\n")
       print("theta : ",theta)
       found=1
       else:
       print("MODEL IS NOT TRAINED")
       w=np.zeros(shape=(0,0))
       theta=int(input("Enter New Theta : "))
       for k in range(int(1)):
              w=int(input("Enter Weight : "))
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yin=np.dot(x,w)
 i=0
 found=0
while(found==0):
     i=0
     yin=np.dot(x,w)
     print(yin)
     while(i<2):
          if yin[i]>=theta:
               y[i]=1
               i=i+1
               #if(i==4):
                    #break
          else:
               y[i]=0
               i=i+1
     print("y",y)
print("t",t)
      if (y==t).all():
          print("MODEL IS TRAINED ")
print("\nOutput : \n",y)
print("\nweights : ",w,"\n")
print("theta : ",theta)
          found=1
      else:
          print("MODEL IS NOT TRAINED")
          w=np.zeros(shape=(0,0))
          theta=int(input("Enter New Theta : "))
          for k in range(int(1)):
               w=int(input("Enter Weight : "))
```

Output: