**Practical No: - 2**

**Aim: Write a program to implement backpropagation.**

#include<stdio.h>

#include<conio.h>

#include<math.h>

void main()

{

float d,dw2,err,i,j,D,v0[2],w1[4],w2[2],v2[2],o[2],n,m,fout,finput;

int x;

clrscr();

printf("enter value\n");

for(i=0;i<2;i++)

{

scanf("\n%f",&v0[i]);

}

printf("\nenter weights");

for(i=0;i<=3;i++)

{

scanf("\n%f",&w1[i]);

}

printf("\nenter weight for 2nd layer");

for(i=0;i<2;i++)

{

scanf("\n%f",&w2[i]);

}

printf("\ndesired weight");

scanf("\n%f",&D);

do

{

v2[1]=v0[1]\*w1[1]+v0[2]\*w1[2];

v2[2]=v0[1]\*w1[3]+v0[2]\*w1[4];

o[1]=1/(1+exp(-v2[1]));

o[2]=1/(1+exp(-v2[2]));

finput=o[1]\*w2[1]+o[2]\*w2[2];

fout=1/(1+exp(-finput));

d=D-fout;

err=fout\*(1-fout)\*d;

dw2=err\*fout;

for(i=0;i<2;i++)

{

w2[i]=w2[i]+dw2;

}

printf("\ndiff is %f",d);

printf("\nweight of final layer is");

for(i=0;i<2;i++)

{

printf("\x%f",w2[i]);

}

printf("\ndo u want to continue:\tyes:1 \tno:0");

scanf("\n\x\x\x%d",&x);

}

while(x==1);

for(i=0;i<2;i++)

{

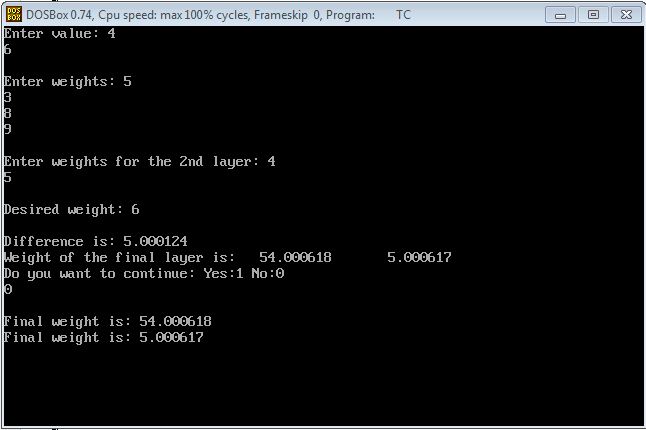
printf("\nfinal weight is %f",w2[i]);

}

getch();

}

**OUTPUT:**

****