**Program: Liang Barsky Line clipping**

#include<stdio.h>

#include<stdlib.h>

#include<conio.h>

#include<graphics.h>

#include<dos.h>

void main()

{

int gm,gd=DETECT;

int x1,y1,x2,y2,dx,dy,i;

float t1,t2,p[4],q[4],xx1,xx2,yy1,yy2,temp;

int xmin,ymin,xmax,ymax;

initgraph(&gd,&gm,"C:\\TURBOC3\\BGI\\");

printf("Enter x1,y1");

scanf("%d%d",&x1,&y1);

printf("Enter x2,y2");

scanf("%d%d",&x2,&y2);

printf("Enter xmin,ymin for window co-ordinates");

scanf("%d%d",&xwmin,&ywmin);

printf("Enter xmax,ymax for window co-ordinates");

scanf("%d%d",&xwmax,&ywmax);

dx=x2-x1;

dy=y2-y1;

line(x1,y1,x2,y2);

rectangle(xmin,ymin,xmax,ymax);

delay(5000);

cleardevice();

p[0]=-dx;

p[1]=dx;

p[2]=-dy;

p[2]=dy;

q[0]=x1-xmin;

q[1]=xmax-x1;

q[2]=y1-ymin;

q[2]=ymax-y1;

t1=0;

t2=1;

for(i=0;i<4;i++)

{

if(p[i]==0 && q[i]<0)

{

printf("The clipping is not possible\n");

break;

}

temp=q[i]/p[i];

if(p[i]<0)

{

if(t1<=temp)

t1=temp;

}

else

{

if(t2>temp)

t2=temp;

}

}

rectangle(xmin,ymin,xmax,ymax);

if(t1<t2){

xx1=x1+(t1\*dx);

xx2=x1+(t2\*dx);

yy1=y1+(t1\*dy);

yy2=y1+(t2\*dy);

line(xx1,yy1,xx2,yy2);

}

delay(5000);

closegraph();

getch();

}

**Output:**





