Assignment 3:

//Program

#include<iostream.h>

#include<conio.h>

#include<graphics.h>

#include<math.h>

class pixel

{

public:

int x1,y1,x2,y2;

};

class line1:public pixel

{

public:

void drawline(int,int,int,int);

void drawline(float,float,float,float);

};

void line1::drawline(int x1,int y1,int x2,int y2)

{

float x,y,xinc,yinc,e,i;

int steps,dx,dy;

dx=abs(x2-x1);

dy=abs(y2-y1);

if(dx>=dy)

steps=dx;

else

steps=dy;

xinc=dx/steps;

yinc=dy/steps;

x=x1;

y=y1;

for(i=1;i<steps;i++)

{

x=x+xinc;

y=x+yinc;

x1=x+0.5;

y1=y+0.5;

putpixel(x,y,15);

}

}

class bre:public pixel

{

public:

void drawline(float,float,float,float);

};

void bre::drawline(float x1,float y1,float x2,float y2)

{

float x,y,xinc,yinc,e,i;

int steps,dx,dy;

dx=abs(x2-x1);

dy=abs(y2-y1);

x=x1;

y=y1;

e=2\*dy-dx;

do

{

putpixel(x,y,15);

if(e>=0)

y=y+1;

e=e-2\*dx;

x=x+1;

e=e+2\*dy;

i++;

}while(i<=dx);

}

int main()

{

pixel p;

line1 l;

bre b;

clrscr();

int gd=DETECT,gm;

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

cout<<"Enter Line Endpoints";

cin>>p.x1>>p.y1>>p.x2>>p.y2;

l.drawline(p.x1,p.y1,p.x2,p.y2);

b.drawline(p.x1,p.y1,p.x2,p.y2);

getch();

closegraph();

return 0;

}

------------OUTPUT-----------------

