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/*
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*/
#include<graphics.h>
#include<iostream>
using namespace std;
class Rectangle
{
    double x1,y1,x2,y2;
public:
    double mid(double , double);
    void drawLine(double ,double ,double , double);
};
double Rectangle::mid(double x, double y)
{
    return ((x+y)/2);
}
void Rectangle::drawLine(double x1,double y1,double x2,double y2)
{
    double step,xinc,yinc,x,y,dx,dy;
    dx=x2-x1;
    dy=y2-y1;
    if(abs(dx)>abs(dy))
    {
        step=abs(dx);
    }
    else
    {
        step=abs(dy);
    }
    xinc=dx/step;
    yinc=dy/step;
    x=x1;
    y=y1;
    for(int i=0;i<step;i++)
    {
        putpixel(round(x),round(y),WHITE);
        x=x+xinc;
        y=y+yinc;
        delay(5);
    }
}
int main()
{
    int gd = DETECT,gm;
    initgraph(&gd,&gm,NULL);
    Rectangle r;
    double x1,y1,x2,y2,xm,ym,xq,yq,xp,yp;
    cout<<"\nEnter the Co-ordinates for Upper Left Corner of Rectangle:
";
    cin>>x1>>y1;
    cout<<"\nEnter the Co-ordinates for Lower Right Corner of
Rectangle: ";
    cin>>x2>>y2;

    //Outer Rectangle
    r.drawLine(x1,y1,x2,y1); //outer top
    r.drawLine(x1,y1,x1,y2); // outer left
    r.drawLine(x1,y2,x2,y2); // outer bottom
    r.drawLine(x2,y1,x2,y2); //outer right

    // inner 1 rectangle
    ym=(y1+y2)/2;
    xm=(x1+x2)/2;
    r.drawLine(xm,y1,x2,ym); //upper right

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r.drawLine(x2,ym,xm,y2); // right lower
  r.drawLine(xm,y2,x1,ym); // left lower
r.drawLine(x1,ym,xm,y1); //left upper

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//inner 2
xq=r.mid(x1,xm);
yq=r.mid(ym,y1);
xp=r.mid(xm,x2);
yp=r.mid(ym,y2);
r.drawLine(xq,yq,xq,yp); //left
r.drawLine(xq,yp,xp,yp); //bottom
r.drawLine(xp,yq,xp,yp); //right
r.drawLine(xq,yq,xp,yq); //top
delay(5000);
closegraph();
return 0;

```

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}
/*

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Output:

Enter the Co-ordinates for Upper Left Corner of Rectangle: [xcb] Unknown sequence number while processing queue

[xcb] Most likely this is a multi-threaded client and XInitThreads has not been called

[xcb] Aborting, sorry about that.

a.out: ../../src/xcb\_io.c:259: poll\_for\_event: Assertion `!

xcb\_xlib\_threads\_sequence\_lost' failed.

100

50

Enter the Co-ordinates for Lower Right Corner of Rectangle: 300

250

\*/

