```
#include<iostream>
#include<graphics.h>
#include<math.h>
using namespace std;
class line 1
{
public:
void drawline(int x1,int y1,int x2, int y2)
line(x1,y1,x2,y2);
}
};
class polygon1:public line_1
int n,i,j,b[10][10],inx[10];
float dx,dy,m[10];
int ymin,ymax,y,temp;
public:
polygon1()
ymin=480;
ymax=0;
for(int i=0;i<10;i++)
m[i]=0;
}
void accept()
cout<<"enter the no. of sides:";</pre>
cin >> n; //n = 7
cout<<"enter the coordinates::";</pre>
for(i=0;i< n;i++)
for(j=0;j<2;j++)
cin>>b[i][j];
if(b[i][1]>ymax)
ymax=b[i][1];
if(b[i][1]<ymin)
ymin=b[i][1];
b[i][0]=b[0][0];
b[i][1]=b[0][1];
}
void find()
```

```
for(i=0;i < n;i++)
line(b[i][0],b[i][1],b[i+1][0],b[i+1][1]);
dx=b[i+1][0]-b[i][0];//X2-X1
dy=b[i+1][1]-b[i][1];//Y2-Y1
if(dx==0)
m[i]=0;
if(dy==0)
m[i]=1;
if(dx!=0 \&\& dy!=0)
m[i]=float(dx/dy);
}
}
void scanline()
for(y=ymax;y>=ymin;y--) // (y=ymin;y<=ymax;y++)
int count =0;
for(int i=0;i<n;i++)
if((b[i][1]>y \&\& b[i+1][1]<=y)||(b[i][1]<=y \&\& b[i+1][1]>y))
inx[count]=b[i][0]+(m[i]*(y-b[i][1]));
count++;
}
for(int k=0;k<count-1;k++)</pre>
for(int i=0;i<count-1;i++)</pre>
if(inx[i]>inx[i+1])
temp=inx[i];
inx[i]=inx[i+1];
inx[i+1]=temp;
}
setcolor(RED);
for(int i=0;i < count-1;i=i+2)
drawline(inx[i],y,inx[i+1],y);
delay(10);
};
int main()
int gd=DETECT,gm;
```

```
polygon1 p;
p.accept();
initgraph(&gd,&gm,NULL);
p.find();
p.scanline();
getch();
closegraph();
return 0;
}
```

```
#include*graphics.h>
#include*graphics or student@student-OptiPlex-3020:~

File Edit View Search Terminal Help
student@student-OptiPlex-3020:~$ g++ a3.cpp -lgraph
student@student-OptiPlex-3020:~$ ./a.out
enter the no. of sides:3
enter the coordinates::100
100
200
200
300
400
[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_sequ
ence_lost' falled.
```