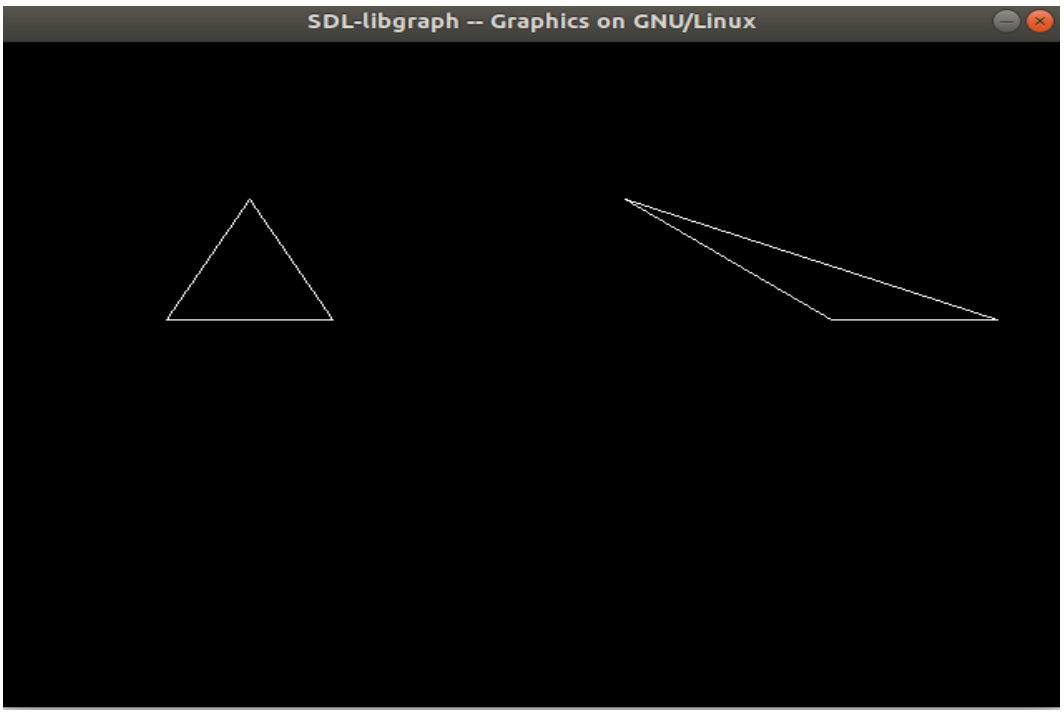
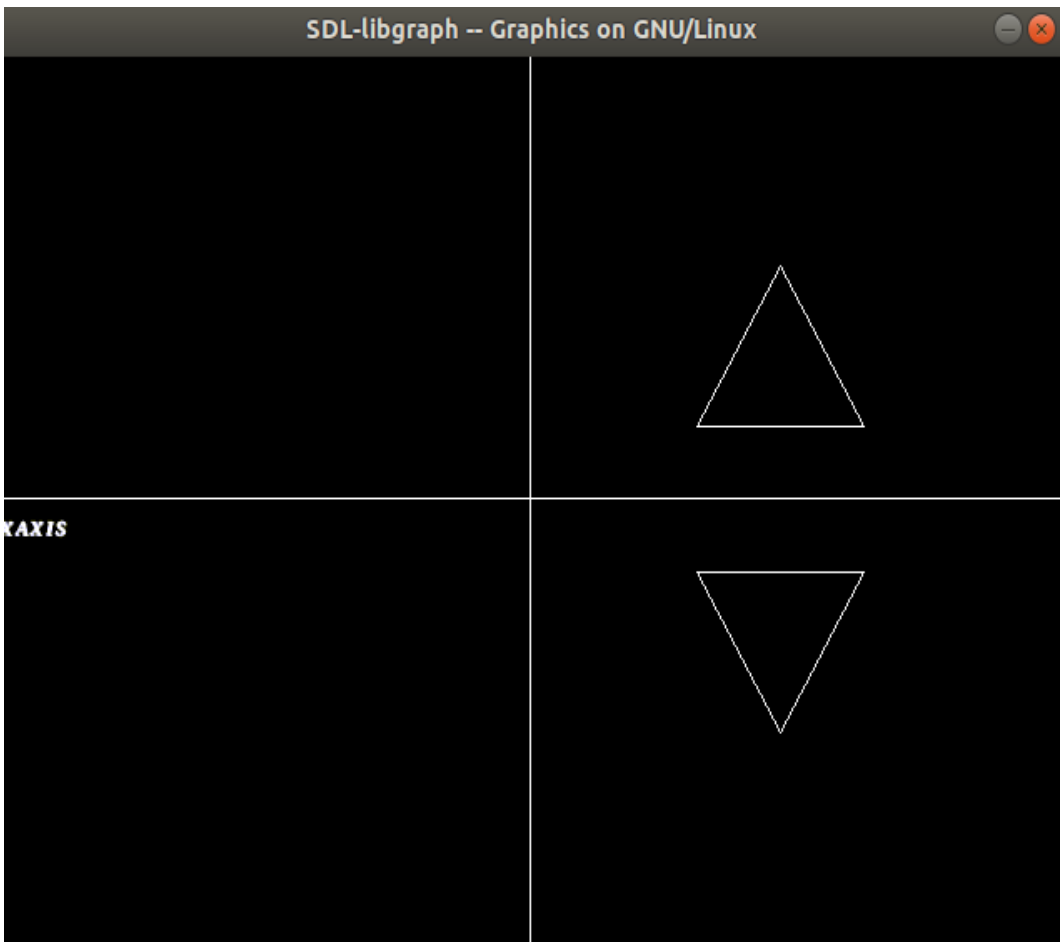
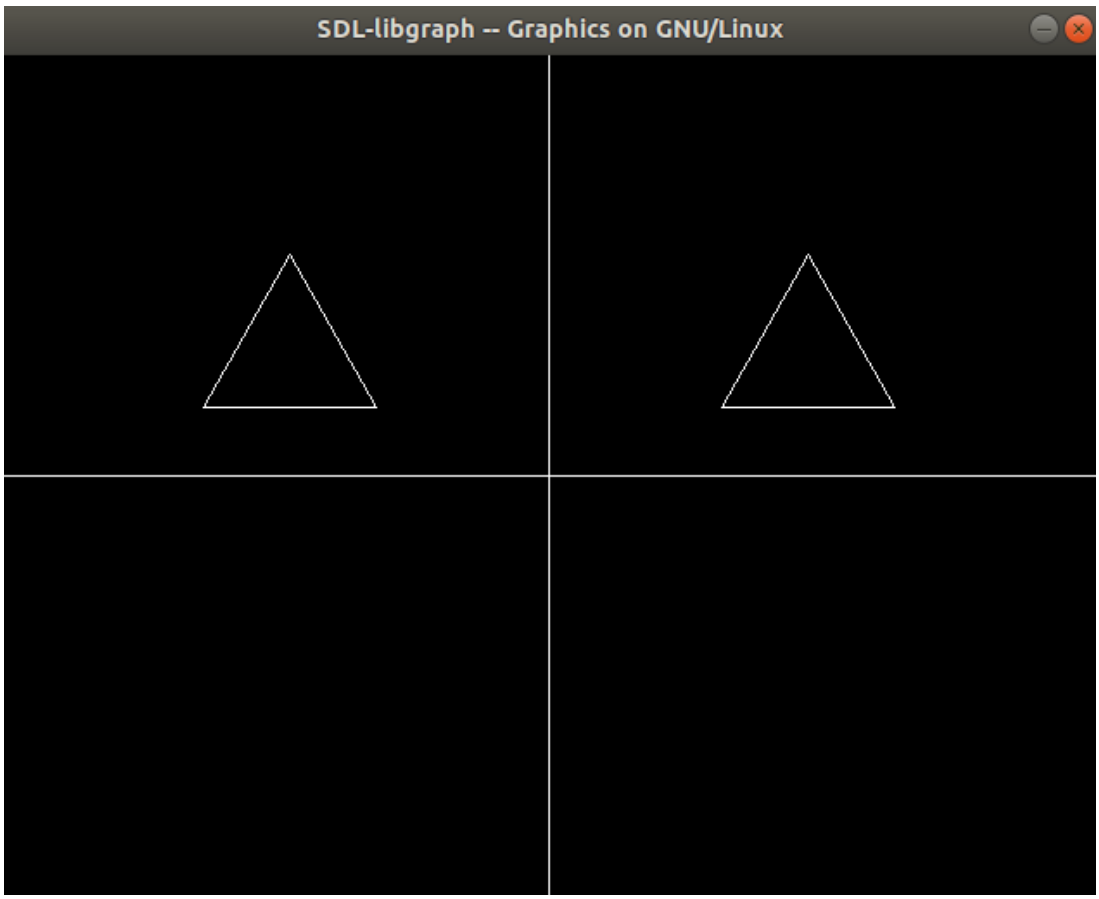
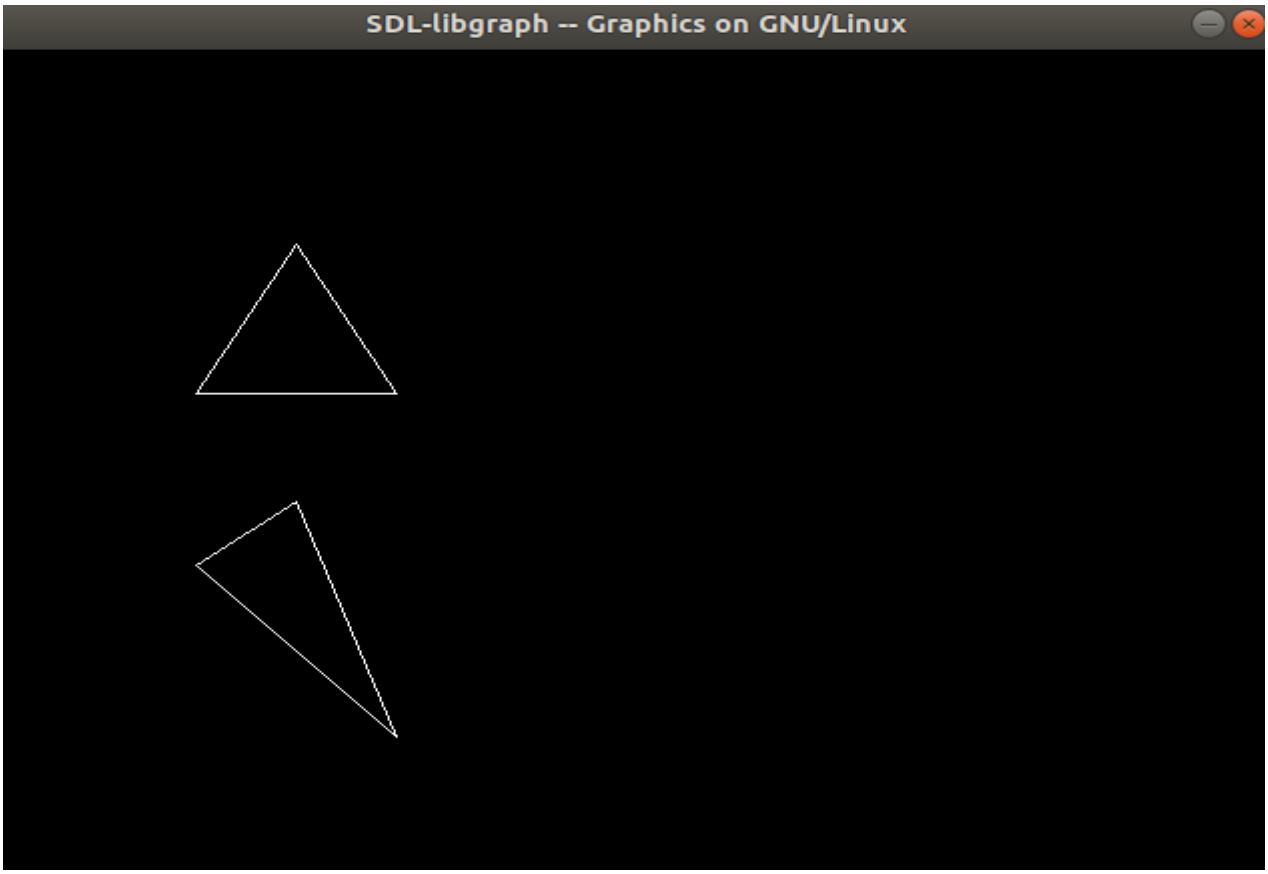
```
#include<iostream>
#include<graphics.h>
#include<stdlib.h>
#include<stdio.h>
#include<math.h>
using namespace std;
int main()
{
int gm;
int gd=DETECT;
int x1,y1,x2,y2,x3,y3,shx,shy,shx1,shy1,shx2,shy2,shx3,shy3,c;

x1=100;
y1=200;
x2=200;
y2=200;
x3=150;
y3=113;
cout<<"\n 1.X-shear\n2.Y-shear\n3.reflection about X axis \n 4.
reflection about Y axis \nEnter your choice:";
cin>>c;

switch(c)
{
case 1:
cout<<"\nEnter the shear factor X:";
cin>>shx;
shx1=abs(x1+shx*y1);
shx2=abs(x2+shx*y2);
shx3=abs(x3+shx*y3);

initgraph(&gd,&gm,NULL);
setcolor(WHITE);

line(x1,y1,x2,y2);
line(x2,y2,x3,y3);
line(x3,y3,x1,y1);

setcolor(WHITE);

line(shx1,y1,shx2,y2);
line(shx2,y2,shx3,y3);
line(shx3,y3,shx1,y1);


delay(50000);

closegraph();
break;

case 2:
cout<<"\nEnter the shear factor Y:";
cin>>shy;

shy1=abs(y1+shy*x1);
shy2=abs(y2+shy*x2);
shy3=abs(y3+shy*x3);

initgraph(&gd,&gm,NULL);
setcolor(WHITE);

line(x1,y1,x2,y2);
line(x2,y2,x3,y3);
line(x3,y3,x1,y1);
```

```
setcolor(WHITE);

line(x1,shy1,x2,shy2);
line(x2,shy2,x3,shy3);
line(x3,shy3,x1,shy1);

delay(5000);
closegraph();
break;

case 3:

initgraph(&gd,&gm,NULL);
int maxx,maxy;
maxx=getmaxx();
maxy=getmaxy();
float midx,midy;
midx=maxx/2;
midy=maxy/2;
line(0,midy,maxx,midy); // to display X axis
outtextxy(maxx,midy,"XAXIS");

line(midx,0,midx,maxy);

line(midx+x1,y1,midx+x2,y2);
line(midx+x2,y2,midx+x3,y3);
line(midx+x3,y3,midx+x1,y1);

line(midx+x1,maxy-y1,midx+x2,maxy-y2);
line(midx+x2,maxy-y2,midx+x3,maxy-y3);
line(midx+x3,maxy-y3,midx+x1,maxy-y1);
delay(5000);
closegraph();
break;
case 4:
initgraph(&gd,&gm,NULL);
int maxx1,maxy1;
maxx1=getmaxx();
maxy1=getmaxy();
float midx1,midy1;
midx1=maxx1/2;
midy1=maxy1/2;
line(0,midy1,maxx1,midy1); // to display X axis

line(midx1,0,midx1,maxy1);
// original traingle drwanig
line(midx1+x1,y1,midx1+x2,y2);
line(midx1+x2,y2,midx1+x3,y3);
line(midx1+x3,y3,midx1+x1,y1);
// refelcted traingle
line(midx1-x1,y1,midx1-x2,y2);
line(midx1-x2,y2,midx1-x3,y3);
line(midx1-x3,y3,midx1-x1,y1);
delay(5000);
closegraph();
break;
default:
cout<<"\nEnter the correct choice:";
}
return 0;
}
```


SDL-libgraph -- Graphics on GNU/Linux


SDL-libgraph -- Graphics on GNU/Linux
XAXIS


SDL-libgraph -- Graphics on GNU/Linux


SDL-libgraph -- Graphics on GNU/Linux