```
#include<iostream>
#include<stdlib.h>
#include<math.h>
#include<graphics.h>
using namespace std;
class Coordinate
{
 public:
 int x,y;
 char code[4];
};
class Lineclip
{
 public:
 Coordinate PT;
 void drawwindow();
 void drawline(Coordinate p1,Coordinate p2);
 Coordinate setcode(Coordinate p);
 int visibility(Coordinate p1,Coordinate p2);
 Coordinate resetendpt(Coordinate p1,Coordinate p2);
};
int main()
{
 Lineclip lc;
 int gd = DETECT,v,gm;
 Coordinate p1,p2,p3,p4,ptemp;
 cout<<"\n Enter x1 and y1\n";
 cin>>p1.x>>p1.y;
 cout<<"\n Enter x2 and y2\n";
 cin>>p2.x>>p2.y;
 initgraph(&gd,&gm,"");
```

```
  ptemp.code[1]='1';
 }
 else
 {
  ptemp.code[1]='0';
 }
 if(p.x>450)
 {
  ptemp.code[2]='1';
 }
 else
 {
  ptemp.code[2]='0';
 }
 if(p.x<150)
 {
  ptemp.code[3]='1';
Lineclip:: visibility(Coordinate p1,Coordinate p2)
{
 int i,flag=0;
 for(i=0;i<4;i++)
 {
  if(p1.code[i]!='0' || (p2.code[i]=='1'))
  {
   flag='0';
  }
 }
 if(flag==0)
 {
  return(0);
 }
```

```
 for(i=0;i<4;i++)
 {
  if(p1.code[i]==p2.code[i] && (p2.code[i]=='1'))
  {
    flag='0';
  }
 }
 if(flag==0)
 {
  return(1);
 }
 return(2);
}
Coordinate Lineclip::resetendpt(Coordinate p1,Coordinate p2)
{
  Coordinate temp;
  int x,y,i;
  float m,k;
  if(p1.code[3]=='1')
  {
    x=150;
  }
  if(p1.code[2]=='1')
  {
    x=450;
  }
  if((p1.code[3]=='1') || (p1.code[2])=='1')
  {
    m=(float)(p2.y-p1.y)/(p2.x-p1.x);
    k=(p1.y+(m*(x-p1.x)));
    temp.y=k;
```

```
  temp.x=x;
  for(i=0;i<4;i++)
  {
   temp.code[i]=p1.code[i];
  }
  if(temp.y<=350 && temp.y>=100)
  {
   return (temp);
  }
 }
 if(p1.code[0]=='1')
 {
  y=100;
 }
 if(p1.code[1]=='1')
 {
  y=350;
 }
 if((p1.code[1]=='1') || (p1.code[1]=='1'))
 {
  m=(float)(p2.y-p1.y)/(p2.x-p1.x);
  k=(float)p1.x+(float)(y-p1.y)/m; temp.x=k;
  temp.y=y; for(i=0;i<4;i++) temp.code[i]=p1.code[i];
  return(temp);
 }
 else
 {
  return(p1);
 }
}
```