Input-

```
#include<iostream>

#include<graphics.h>

using namespace std;

int x1,y1,x2,y2;

char a[4],b[4];

void input()

{

        cout<<"Enter the coordinates of line P1(x1,y1) and
P2(x2,y2)"<<endl;

        cout<<"x1:";

        cin>>x1;

        cout<<"\n y1:";

        cin>>y1;

        cout<<"\n x2:";

        cin>>x2;

        cout<<"\n y2:";

        cin>>y2;

}
```

```
void dline()
        {
                line(x1,y1,x2,y2);
        }
void window()
        {
                line(200,150,500,150);
                line(500,150,500,400);
                line(500,400,200,400);
                line(200,400,200,150);
        }
void region_code()
        {
                a[0]=(x1<200)?'1':'0';
                a[1]=(x1>500)?'1':'0';
                a[2]=(y1>400)?'1':'0';
                a[3]=(y1<150)?'1':'0';
                b[0]=(x2<200)?'1':'0';
                b[1]=(x2>500)?'1':'0';
                b[2]=(y2>400)?'1':'0';
                b[3]=(y2<150)?'1':'0';
```

```
        }
void clipping()
        {
                float m;
                int flag=1;
                for(int i=0;i<4;i++)
{
                if(a[i]!='0'&&b[i]!='0')
                        {
                                flag=0;
                                break;
                        }
                if(flag)
                {
                                m=float((y2-y1/(x2-x1)));
                                if(a[0]!='0')
                                {
                                        y1=y1+m*(200-x1);
                                        x1=200;
                }
                else if(a[1]!='0')
```

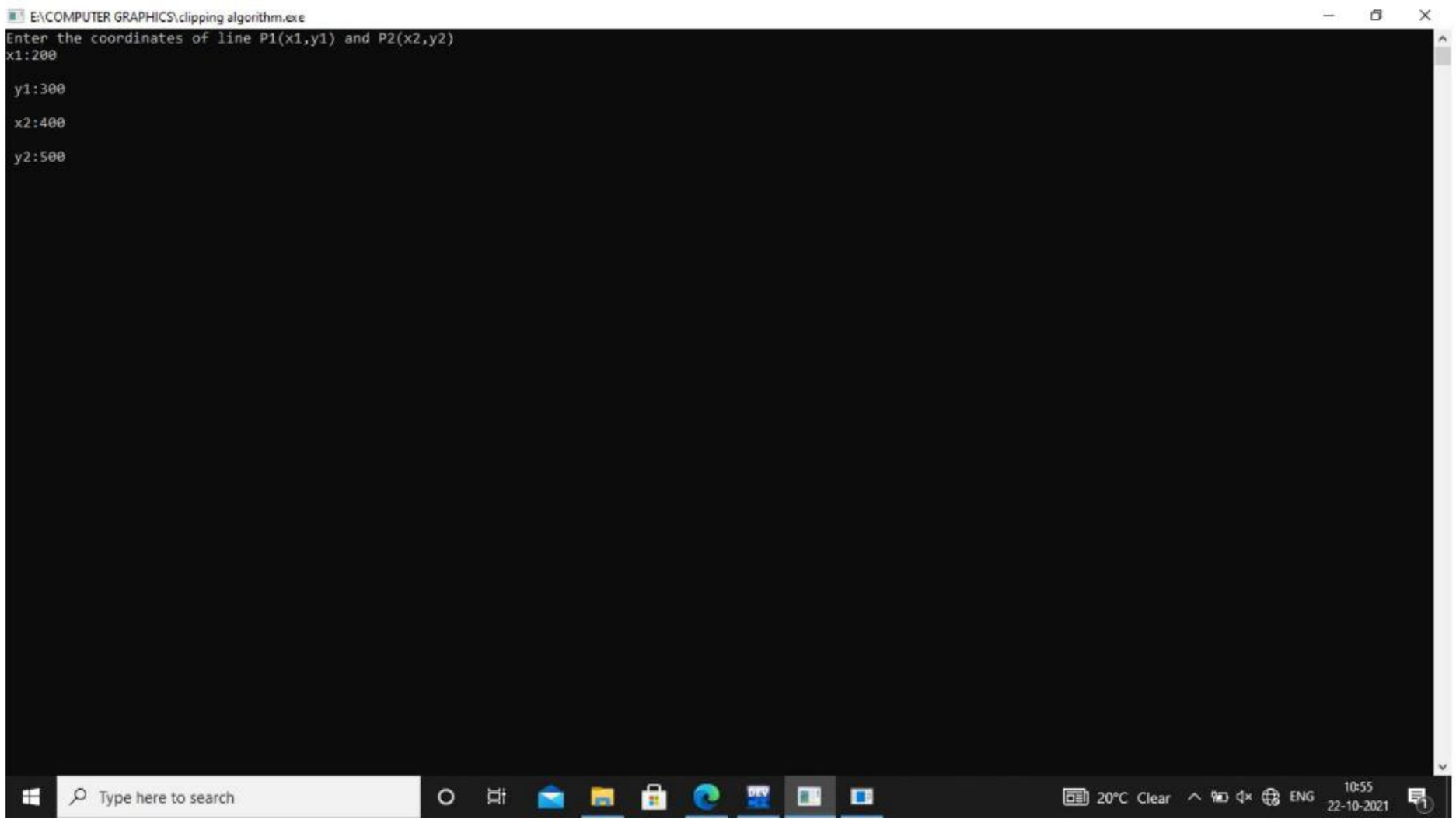
```
{
        y1=y1+m*(500-x1);
        x1=500;
}
else if(a[2]!='0')
{
        x1=x1+((400-y1)/m);
        y1=400;
}
else if(a[3]!='0')
{
        x1=x1+((150-y1)/m);
        y1=150;
}
if(b[0]!='0')
{
        y2=y2+m*(500-x2);
        x2=200;
}
else if(b[1]!='0')
{
```

```
            y2=y2+m*(500-x2);
            x2=500;
        }
        else if(b[2]!='0')
        {
            x2=x2+((400-y2)/m);
            y2=400;
        }
        else if(b[3]!='0')
        {
            x2=x2+((150-y2)/m);
                y2=150;
                }
    }
        if(flag==0)
        outtext("Line lies outside the clipping window");
    }
}
int main()
{
    input();
```

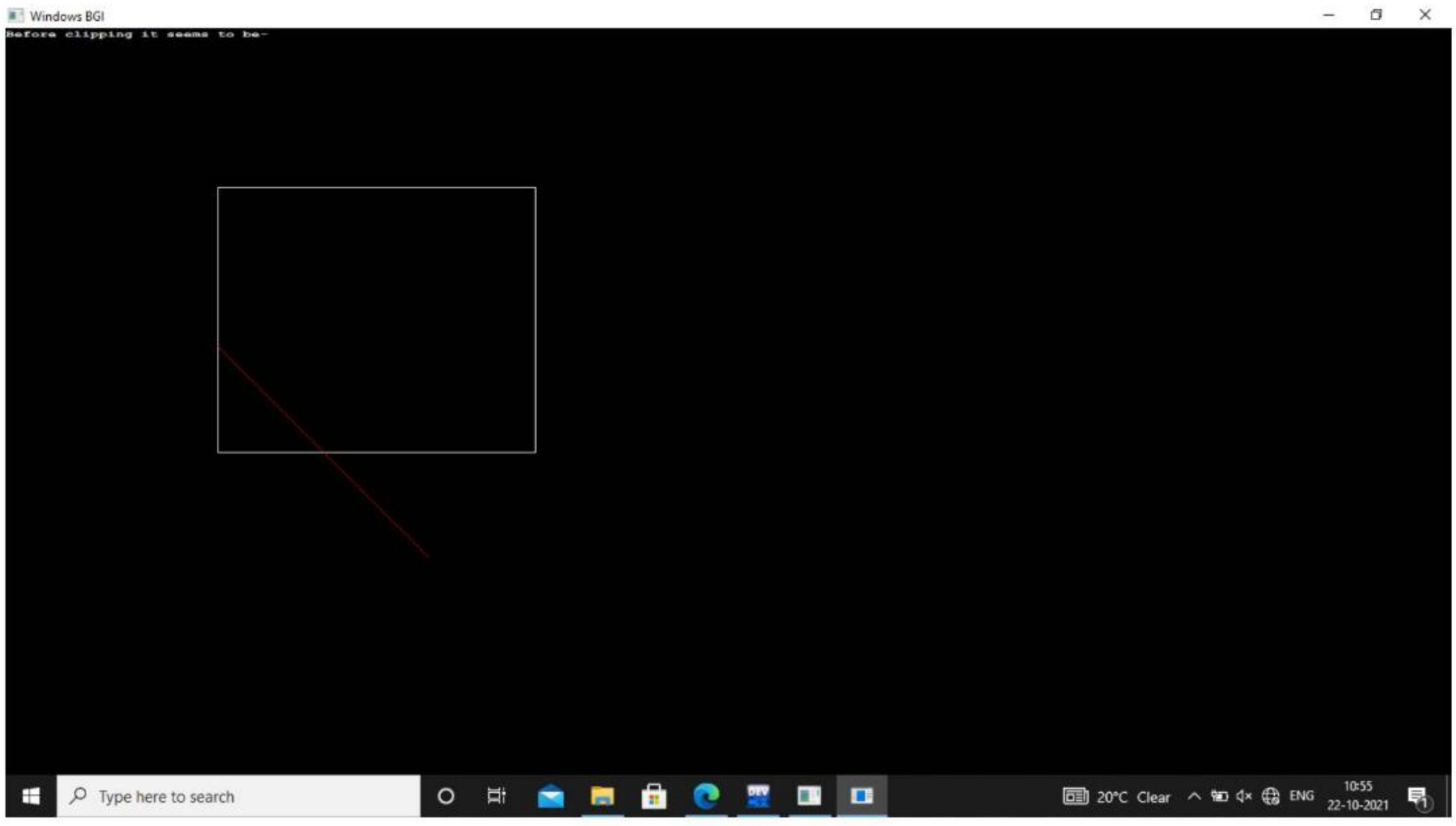
```
initwindow(1300,750);
cleardevice();
outtext("Before clipping it seems to be-");
window();
setcolor(RED);
dline();
getch();
cleardevice();
outtext("After clipping it seems to be-");
region_code();
clipping();
window();
setcolor(GREEN);
dline();
getch();
closegraph();

return 0;
}
```

Output-

- **Entering-**



- **Before clipping-**



- **After clipping-**