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Rollno:-1022771(61)

Course:-BSc-IT(6th Sem)
Subject:-INFORMATION SRCURITY

Final Prcatical

1. Write a program to rotate an object by 90 degree in clockwise direction

```
#include<stdio.h>
#include<graphics.h>
#include<math.h>
int main()
{
int gd=DETECT, r, gm, d, x1, y1, x2, y2, xn1, yn1, xn2, yn2;
 float ra, si, co;
 initgraph(&gd, &gm, "");
 printf("Enter the value of X1 and Y1: ");
 scanf("%d %d", &x1, &y1);
 printf("Enter the value of X2 and Y2: ");
 scanf("%d %d", &x2, &y2);
 line(x1, y1, x2, y2);
 printf("Enter the degree of rotation: ");
 scanf("%d", &d);
 xn1 = x1;
 yn1 = y1;
 r = x2-x1;
 ra = 0.0175 * d;
 si = sin(ra);
```

```
 co = cos(ra);

 xn2 = x1 + r*co + 1;

 yn2 = y1 + r*si + 1;

line(xn1, yn1, xn2, yn2);

getch();

closegraph();

}
```

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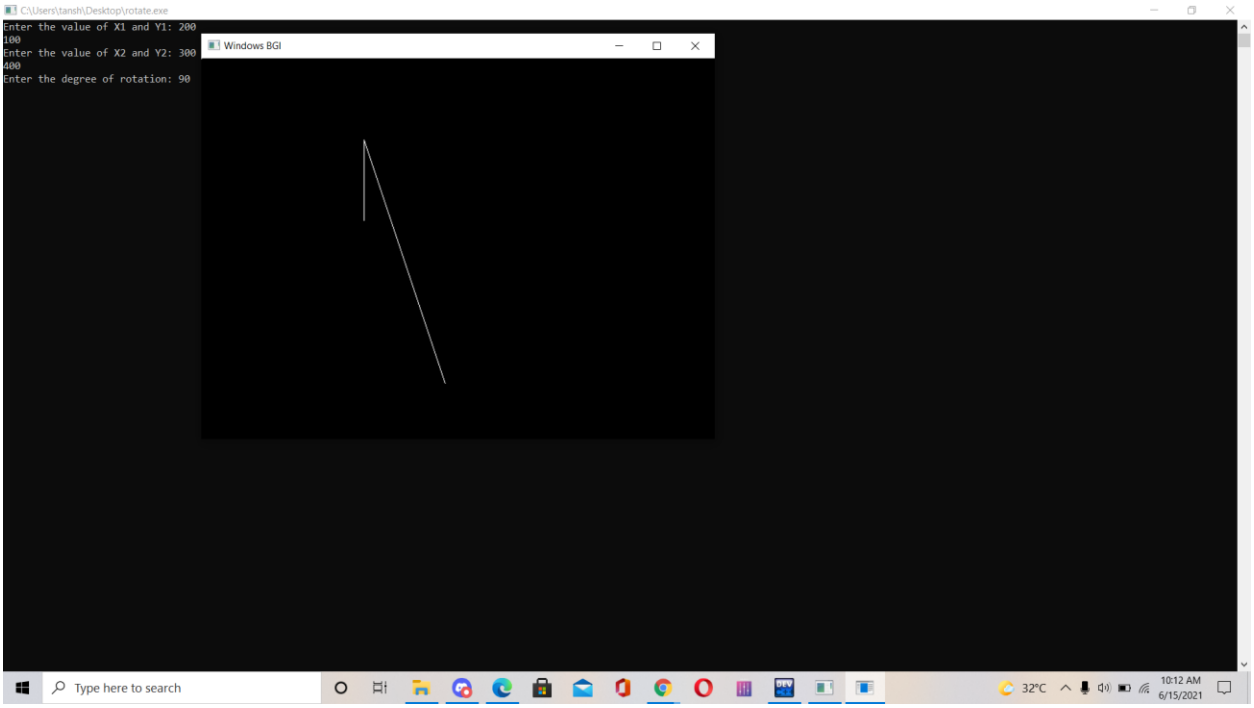

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Write a program to draw a line using Bresenham's line generation algorithm.

```
#include<iostream>
#include<stdio.h>
#include<graphics.h>
#include<math.h>
using namespace std;
int main()
{
int graphdriver=0,graphmode,i;
float x,y,x1,y1,x2,y2,dx,dy,e;
initgraph(&graphdriver,&graphmode,NULL);
cleardevice();
cout<<"Enter the value of x1 ";
cin>>x1;
cout<<"Enter the value of Y1 ";
cin>>y1;
cout<<"Enter the value of x2 ";
cin>>x2;
cout<<"Enter the value of Y2 ";
cin>>y2;
dx=abs(x2-x1);
```

```
dy=abs(y2-y1);

x=x1;

y=y1;

e=2*dy-dx;

i=1;

while(i<=dx)

{

putpixel(x,y,WHITE);

delay(60);

if(e>=0)

{

y=y+1;

e=e-2*dx;

}

else

{

x=x+1;

e=e+2*dy;

i=i+1;

}

}
```

```
getch();

closegraph();

return 0;

}
```

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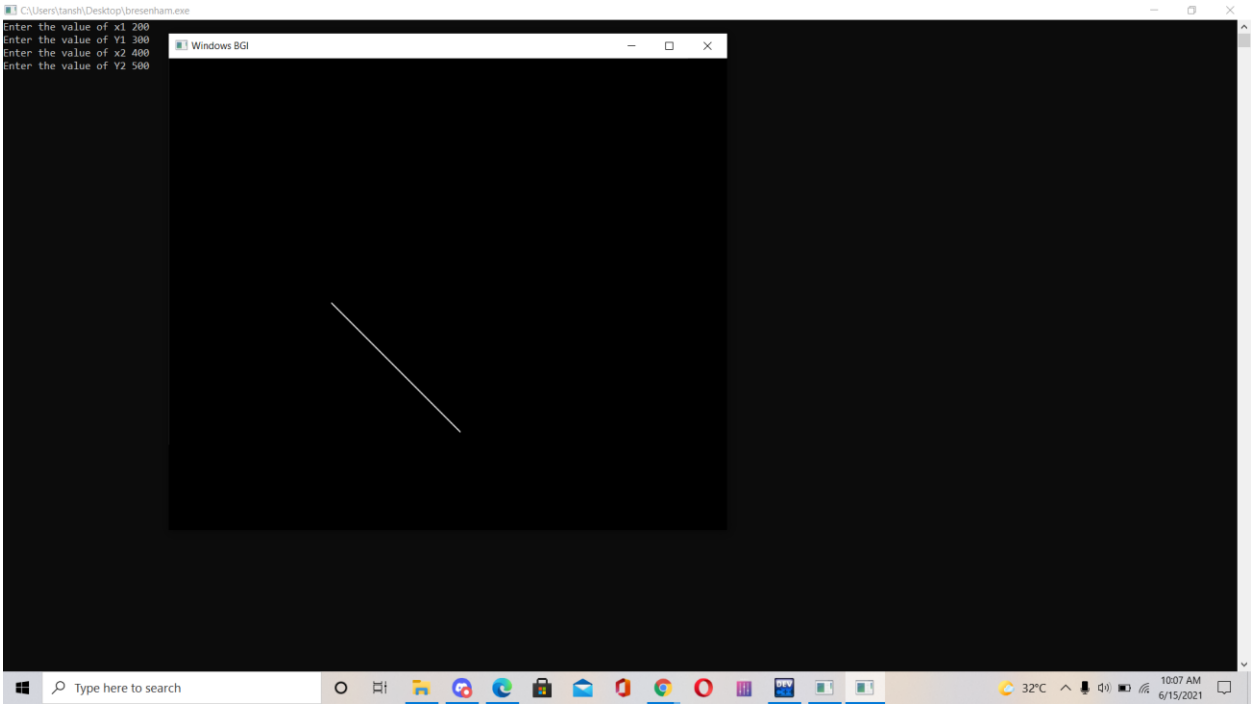

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Write a program to implement Boundary-fill algorithm.

```
#include<graphics.h>
#include<stdio.h>
void boundary_fill(int x, int y, int fill_color, int bound_color)
{
if(getpixel(x,y) != fill_color && getpixel(x,y) != bound_color)
{
putpixel(x,y,fill_color);
delay(1);
boundary_fill(x+1,y,fill_color,bound_color);
boundary_fill(x,y-1,fill_color,bound_color);
boundary_fill(x-1,y,fill_color,bound_color);
boundary_fill(x,y+1,fill_color,bound_color);
boundary_fill(x-1,y-1,fill_color,bound_color);
boundary_fill(x+1,y-1,fill_color,bound_color);
boundary_fill(x-1,y+1,fill_color,bound_color);
boundary_fill(x+1,y+1,fill_color,bound_color);
}
}
int main( )
{
```

```
int gd=DETECT,gm;
initgraph(&gd,&gm,"");
line(100,100,250,100);
line(250,100,250,250);
line(250,250,400,250);
line(400,250,400,400);
line(248,400,400,400);
line(248,250,248,400);
line(100,100,100,250);
line(100,250,248,250);
boundary_fill(150,150,YELLOW,WHITE);
getch( );
closegraph( );
}
```

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