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#include<GL/glut.h>
#include<iostream>
using namespace std;
int r;
void E_way(int x, int y){
glBegin(GL_POINTS);
glVertex2i(x+320,y+240);
glVertex2i(y+320,x+240);
glVertex2i(y+320, -x+240);
glVertex2i(x+320, -y+240);
glVertex2i(-x+320,-y+240);
glVertex2i(-y+320,-x+240);
glVertex2i(-y+320,x+240);
glVertex2i(-x+320,y+240);
glEnd();
glFlush();
}
void B_circle(){
float d;
d = 3 - 2*r;
int x,y;
x = 0 ;
y = r ;
do{
E_way(x,y);
if(d<0){
d=d+4*x+6;
}
else{
d= d+4*(x-y)+10;
y=y-1;
}
x=x+1;
}while(x<y);
}
void init(){
glClearColor(1,1,1,0);
glColor3f(1,0,0);
gluOrtho2D(0,640,0,480);
glClear(GL_COLOR_BUFFER_BIT);
}
int main(int argc, char **argv){
cout<<"\n Enter Radius \t ";
cin>>r;
glutInit(&argc, argv);
glutInitDisplayMode(GLUT_SINGLE | GLUT_RGB);
glutInitWindowPosition(100,100);
glutInitWindowSize(640,480);
glutCreateWindow("Circle");
init();
glutDisplayFunc(B_circle);
glutMainLoop();
return 0;
}

```

```
digvijay@digvijay-Aspire-A715-51G:~$ cd Desktop
digvijay@digvijay-Aspire-A715-51G:~/Desktop$ g++ CGA3.cpp -lglut -lGL -lGLEW -lGLU -o CGA3
digvijay@digvijay-Aspire-A715-51G:~/Desktop$ ./CGA3
```

Enter Radius      200

