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**C curve**

**Code :**

#include<windows.h>

#include<GL/glut.h>

#include<bits/stdc++.h>

using namespace std;

float x, y, len, alpha;

int n;

void line (float x1, float y1, float x2, float y2)

{

glVertex2f(x1,y1);

glVertex2f(x2,y2);

}

void c\_curve (float x, float y, float len, float alpha, int n)

{

if(n > 0){

len = len / sqrt(2.0);

c\_curve(x, y, len, alpha+45, n-1);

x += len\*cos(alpha+45);

y += len\*sin(alpha+45);

c\_curve(x, y, len, alpha-45, n-1);

}

else{

line(x, y, x+len\*cos(alpha), y+len\*sin(alpha));

}

}

void myDisplay(void)

{

glClear(GL\_COLOR\_BUFFER\_BIT);

glColor3f (1.0, 0.0, 0.0);

glPointSize(1);

glBegin(GL\_LINES);

c\_curve(x, y, len, alpha, n);

glEnd();

glFlush ();

}

void init (void)

{

glClear(GL\_COLOR\_BUFFER\_BIT);

glClearColor(0.7,0.7,0.7,0.7);

glMatrixMode(GL\_PROJECTION);

glLoadIdentity();

gluOrtho2D(-200,500,-200,500);

}

int main(int argc, char\*\* argv)

{

cout<<"Co-ordinate of C(x,y): ";

cin>>x>>y;

cout<<"\nLength: ";

cin>>len;

cout<<"\nAngle: ";

cin>>alpha;

cout<<"\nValue of n: ";

cin>>n;

glutInit(&argc, argv);

glutInitDisplayMode(GLUT\_SINGLE | GLUT\_RGB);

glutInitWindowSize(850, 600);

glutInitWindowPosition(100, 50);

glutCreateWindow("C CURVE");

init();

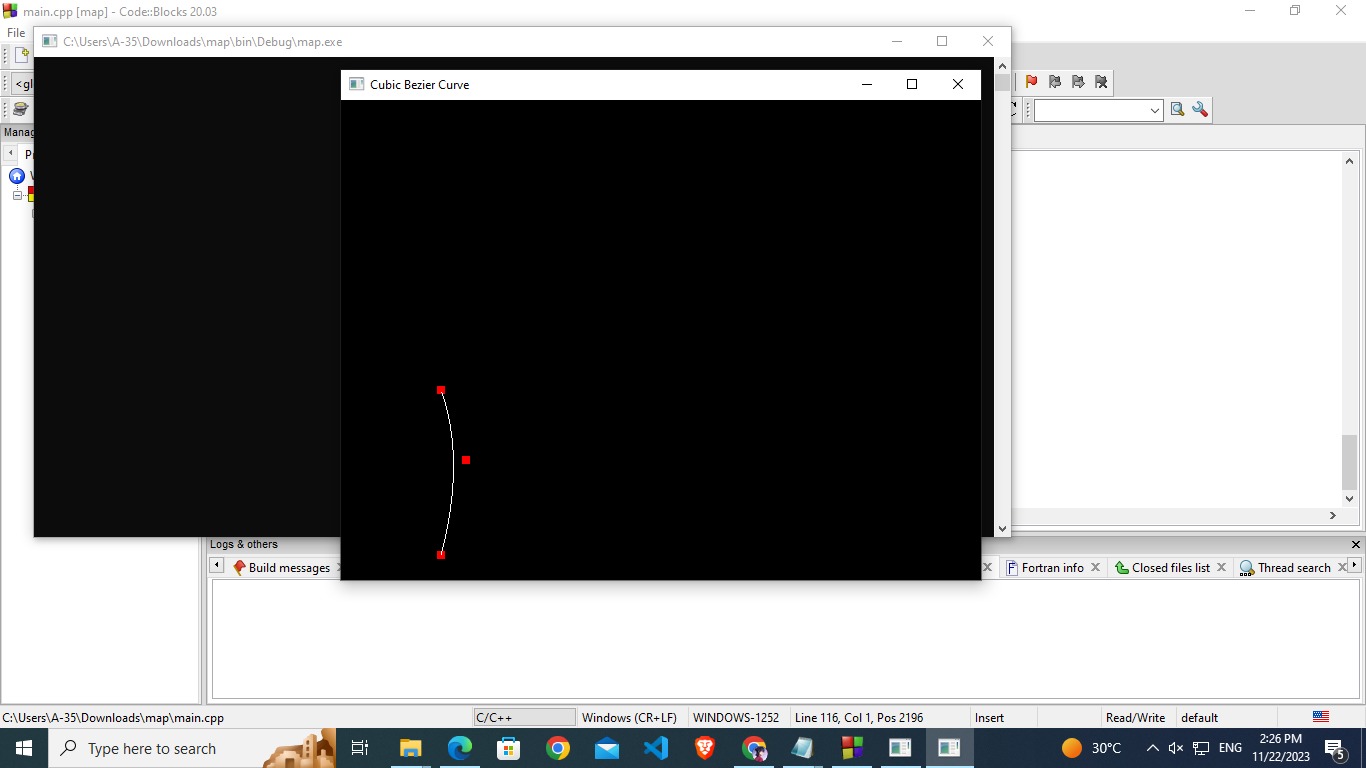
glutDisplayFunc(myDisplay);

glutMainLoop();

return 0;

}

**Output :**

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