```
#include<iostream>
#include<math.h>
#include<gl/glut.h>

using namespace std;
float f, g, r, x1[4], yc[4];
int flag = 0;
void myInit() {

        glClearColor(1, 1, 1, 1);
        glColor3f(1, 1, 1);
        glPointSize(5);
        gluOrtho2D(0, 500, 0, 500);
}

void drawPixel(float x, float y) {
        glBegin(GL_POINTS);
        glVertex2f(x, y);
        glEnd();
}

void display() {

        glClear(GL_COLOR_BUFFER_BIT);
        int i;
        double t;
        glColor3f(0, 0, 0);
        glBegin(GL_POINTS);
        for (t = 0; t < 1; t = t + 0.005) {
                double xt = pow(1 - t, 3) * x1[0] + 3 * t * pow(1 - t,
2) * x1[1] + 3 * pow(t, 2) * (1 - t) * x1[2] + pow(t, 3) * x1[3];
                double yt = pow(1 - t, 3) * yc[0] + 3 * t * pow(1 - t,
2) * yc[1] + 3 * pow(t, 2) * (1 - t) * yc[2] + pow(t, 3) * yc[3];
                glVertex2f(xt, yt);

        }
        glColor3f(1, 1, 0);
        for (i = 0; i < 4; i++) {
                glVertex2f(x1[i], yc[i]);
                glEnd();
                glFlush();
        }



}
void mymouse(int btn, int state, int x, int y)
{
        if (btn == GLUT_LEFT_BUTTON && state == GLUT_DOWN && flag < 4)
        {
                x1[flag] = x;
                yc[flag] = 500 - y;
                cout << " X: " << x << " Y" << 500 - y;
                glPointSize(3);
                glColor3f(1, 1, 0);
                glBegin(GL_POINTS);
                glVertex2i(x, 500 - y);
                glEnd();
                glFlush();
                flag++;
        }
        if (flag >= 4 && btn == GLUT_LEFT_BUTTON)
        {
                glColor3f(0, 0, 1);
                display();
                flag = 0;


        }
}
int main(int argc, char* argv[]) {
        glutInit(&argc, argv);

        /*
        //USE KEYBOARD
        cout << "Enter the x co-ordinates";
        cin >> x1[0] >> x1[1] >> x1[2] >> x1[3];
        cout << "Enter y co-ordinates";
        cin >> yc[0] >> yc[1] >> yc[2] >> yc[3];
        //END KEYBOARD
        */
        glutInitDisplayMode(GLUT_SINGLE | GLUT_RGB);
        glutInitWindowSize(500, 500);
        glutInitWindowPosition(0, 0);
        glutCreateWindow("BZ");
        glutDisplayFunc(display);
        glutMouseFunc(mymouse); //INCLUDE FOR MOUSE, REMOVE FOR
KEYBOARD
        myInit();
        glutMainLoop();
}
```