

Code:

```
1  #include <stdio.h>
2  #include <conio.h>
3  #include <graphics.h>
4  #define CONTROL_POINTS 4
5  struct Point
6  {
7      int x, y;
8  };
9
10 // A cubic Bezier curve implementation
11 double bezierCurve(int cPoints[], double t)
12 {
13     double t2 = t * t;
14     double t3 = t2 * t;
15     double mt = 1 - t;
16     double mt2 = mt * mt;
17     double mt3 = mt2 * mt;
18     int i;
19     return cPoints[0] * mt3 + 3 * cPoints[1] * mt2 * t + 3 * cPoints[2] * mt * t2 +
20           ↪ cPoints[3] * t3;
21 }
22 int main()
23 {
24     int gd = DETECT, gm;
25     int i;
26     struct Point drawPoint;
27     double t = 0.0;
28     double increment = 0.001;
29     int cPointsX[CONTROL_POINTS];
30     int cPointsY[CONTROL_POINTS];
31     initgraph(&gd, &gm, "C:\\TURBOC3\\BGI");
32     for(i = 0; i < 4; i++)
33     {
34         printf("Enter the coordinate for the control point %d", i + 1);
35         scanf("%d%d", &cPointsX[i], &cPointsY[i]);
36     }
37     cleardevice();
38     for(t = 0.0; t < 1.0; t += increment)
39     {
40         drawPoint.x = (int) bezierCurve(cPointsX, t);
41         drawPoint.y = (int) bezierCurve(cPointsY, t);
42         putpixel(drawPoint.x, drawPoint.y, WHITE);
43     }
44     getch();
45     closegraph();
46     return 0;
47 }
```