

COMPUTER GRAPHICS (ITC09)



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CODE

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1. #include <stdio.h>
2. #include <stdlib.h>
3. #include <graphics.h>
4. #include <math.h>
5. #include <iostream>
6. using namespace std;
7. void bezier (int x[4], int y[4])
8. {
9.     int i;
10.    double t;
11.    for (t = 0.0; t < 1.0; t += 0.0005)
12.    {
13.        double x_ = pow (1-t, 3) * x[0] + 3 * t * pow (1-t, 2) * x[1] +
14.            3 * pow (t, 2) * (1-t) * x[2] + pow (t, 3) * x[3];
15.
16.        double y_ = pow (1-t, 3) * y[0] + 3 * t * pow (1-t, 2) * y[1] +
17.            3 * pow (t, 2) * (1-t) * y[2] + pow (t, 3) * y[3];
18.
19.        putpixel (x_, y_, WHITE);
20.    }
21.
22.    return;
23. }
24.
25. int main()
26. {
27.     int gd = DETECT, gm;
28.     initgraph (&gd, &gm, "..\\bgi");
29.     line(10,100,500,100);
30.     line(150,100,150,300);
31.     int x[]={50,120,120,35};
32.     int y[]={100,100,200,200};
33.     bezier (x, y);
34.     line(50,200,150,200);
35.     line(290,100,290,300);
36.     line(170,100,170,300);
37.     int a[]={50,120,120,10};
38.     int b[]={200,200,300,300};
39.     bezier (a,b);
40.     int c[]={180,200,260,290};
41.     int d[]={100,250,250,100};
42.     bezier (c,d);
43.     int m[]={170,170,220,290};
44.     int n[]={100,20,60,100};
45.     bezier (m,n);
46.     line(420,100,420,300);
47.     line(420,200,360,200);
```

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48. int p[]={360,340,350,360};
49. int q[]={200,200,300,300};
50. bezier(p,q);
51. int j[]={290,290,305,320};
52. int k[]={100,50,40,40};
53. bezier (j,k);
54. getch();
55. closegraph();
56. return 0;
57. }
```

OUTPUT



