

(RCA-551) Computer Graphics & Animation  
ASSIGNMENT

Aim: Write a Program to draw Two dimensional Bezier curve.

```
#include<graphics.h>
#include<math.h>
#include<conio.h>
#include<stdio.h>
void main()
{
    int x[4],y[4];

    int gd=DETECT,gm;
    int i;

    double xt,yt, t;

    initgraph(&gd,&gm,"C:\\\\TurboC3\\\\BGI");
    printf("\\n Bezier Curve");
    printf("\\n Enter the x and y coordinates of four control points");

    for(i=0;i<4;i++)
    {
        scanf("%d%d",&x[i],&y[i]);
        putpixel(x[i],y[i],RED);
    }

    for(t=0.0; t<=1.0; t=t+0.0001)
    {
        xt =pow(1-t,3)*x[0]+3*t*pow(1-t,2)*x[1]+3*t*t*(1-t)*x[2]+pow(t,3)*x[3];

        yt =pow(1-t,3)*y[0]+3*t*pow(1-t,2)*y[1]+3*t*t*(1-t)*y[2]+pow(t,3)*y[3];
        putpixel(xt,yt,RED);
    }

    getch();
    closegraph();

}
```

DOSBox 0.74, Cpu speed: max 100% cycles, Frameskip 0, Program: C:\

\*\*\* Bezier Curve \*\*\*

Please enter x and y coordinates 200 300

300 400

300 300

100 200

