CG LAB EXPERIMENT 11

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ROLL NO: 38

CLASS: SE9

1. Bezier Curve Program:

Souce Code:

```
// Kunj Hiteshbhai Trivedi SE9_38
#include<graphics.h>
#include<math.h>
#include<conio.h>
#include<stdio.h>
void main()
{
  int x[4],y[4],i;
  double put_x,put_y,t;
  int gr=DETECT, gm;
  initgraph(&gr,&gm,"C:\\TurboC3\\bgi");
  printf("\n****BEZIER CURVE*****");
  printf("\n Enter x and y coordinates:");
  for(i=0; i<4; i++)
  {
    scanf("%d%d", &x[i],&y[i]);
    putpixel(x[i],y[i],3);
  }
```

```
  for(t=0.0; t<=1.0; t=t+0.001)
  {
    put_x=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];
    put_y=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(put_x,put_y, WHITE);
  }
  getch();
  closegraph();
}
```

OUTPUT: