**EXPERIMENT 4 :- Bezier Curve**

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**CODE:-**

**from turtle import \***

**def drange2(start, stop, step):**

**numelements = int((stop-start)/float(step))**

**for i in range(numelements+1):**

**yield start + i\*step**

**print("Enter x1,x2,x3,x4,y1,y2,y3,y4 in each line")**

**x0 = int(input())**

**x1 = int(input())**

**x2 = int(input())**

**x3 = int(input())**

**y0 = int(input())**

**y1 = int(input())**

**y2 = int(input())**

**y3 = int(input())**

**penup()**

**pencolor('red')**

**goto(x0,y0)**

**pendown()**

**goto(x1,y1)**

**goto(x2,y2)**

**goto(x3,y3)**

**penup()**

**xu=0.0**

**yu=0.0**

**pencolor("black")**

**penup()**

**for u in drange2(0,1,0.001):**

**xu = pow(1-u,3)\*x0+3\*u\*pow(1-u,2)\*x1+3\*pow(u,2)\*(1-u)\*x2+pow(u,3)\*x3;**

**yu = pow(1-u,3)\*y0+3\*u\*pow(1-u,2)\*y1+3\*pow(u,2)\*(1-u)\*y2+pow(u,3)\*y3;**

**goto(xu,yu)**

**pendown()**

**print("done")**

**exitonclick()**

**Input:- x=[10,100,200,300],y=[10,200,50,300]**

**Output:-**

