Computer Graphics Project #1: N Degree Bézier curve

The general form of a degree n Bézier curve defined by the points P_i *is* given by

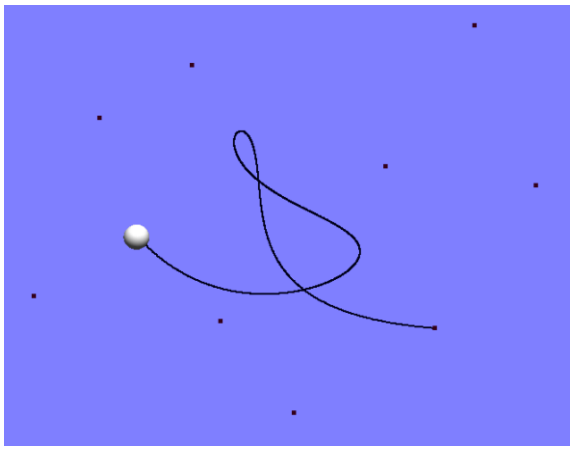
$$C(t) = \sum_{i=0}^{n} b_{i,n}(t) P_i$$

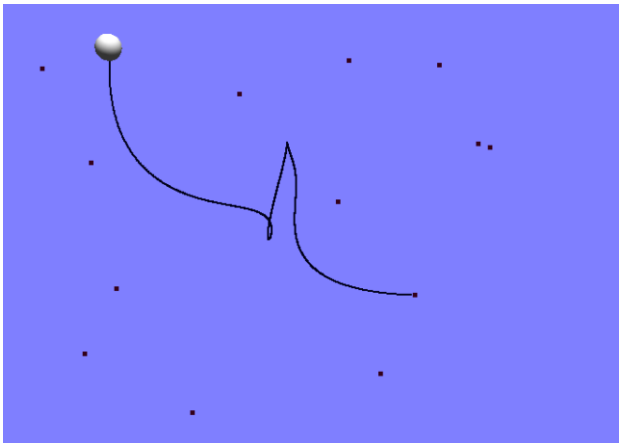
where i=0,1,2……n and $b_{i,n}(t) = \binom{n}{i} t^i (1-t)^{n-i}$ *(Bernstein Polynomials)*

Binomial Coefficient given by $\binom{n}{i} = \frac{n!}{i!(n-i)!}$

Using this equation draw n degree of with the following functionality:

- Extend the Bezier Curve lab to do the following
- Define initial maximum number of control points to 50 (program stop drawing after 50 clicks)
- Write function to calculate factorials
- Mark the control points on the screen for each left mouse click: use glPointSize(5);
- Start drawing Bézier curve when number of control points reach 3 and beyond: use glBegin(GL_POINTS) to plot the graph. Set glPointSize(2);
- Each click where n>3 must plot a unique Bézier curve
  Animate sphere move along the path
- Use right mouse click to toggle between hide/show control points
- Use middle mouse button or "space" key for reset the program





Include your *Name*, *ID*, *Class* and *Project Name* at the top of the code. Please comment your code describing what each of your code line dose. Save the file as "projectXX.cpp"