1. Suppose we have a Hermitian curve \((X_0(t), Y_0(t))\). We want to define a second curve, \((X_1(t), Y_1(t))\), that satisfies some continuity constraints at its boundary with the first. Assume \(X_0(t)\) is specified by \(X_0(0), X_0(1), X_0'(0), X_0'(1)\). What conditions must \(X_1(0), X_1(1), X_1'(0), X_1'(1)\) satisfy if we want
   a. \(C^0\) continuity
   b. \(G^0\) continuity
   c. \(C^1\) continuity
   d. \(G^1\) continuity
   e. \(C^2\) continuity

2. Based on the properties of the Bezier curve, sketch the quadratic Bezier for the following control points.

\[ p_0 \quad p_1 \quad p_2 \]
2. Use deCasteljau’s algorithm to compute \( u(1/2) \).

4. Construct the polar form for \( X(t) = at^3 + bt^2 + ct + d \).