SPLINE CURVE

Spline :- Spline is a flexible strip which was long ago used for designing the Ships.

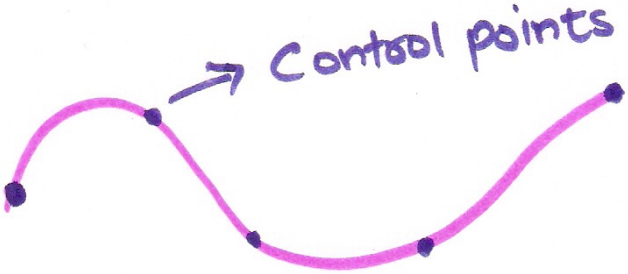
Spline Curve :- A Spline Curve is mathematical representation for which it is easy to build an interface that will allow a user to design and control the shape of complex Curves & Surfaces.

Spline Curve mathematically described with a piecewise Cubic polynomial function whose first & Second derivatives are continuous across the various Curve Section. C^1 & C^2 Continuity.

Control points :- We specify a spline curve by giving a set of **Coordinate positions,** called control points. which indicates the general shape of the curve. These control points are then fitted with piecewise continuous parametric polynomial functions in on the 2 ways :-

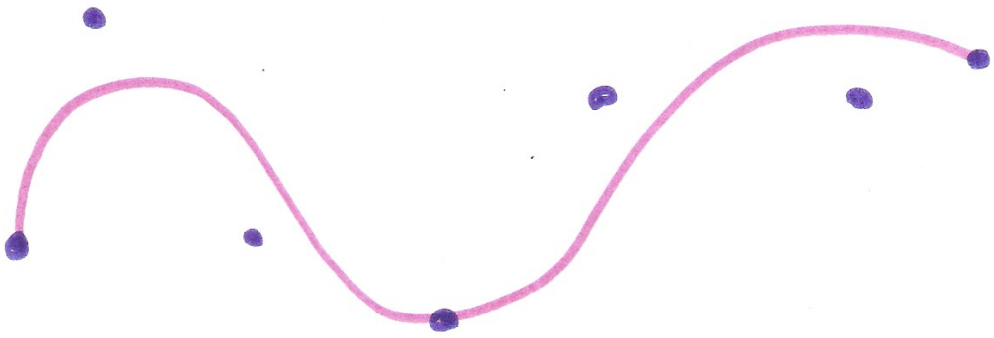
Interpolate or Interpolation Spline :-

When polynomial sections are fitted so that the curve passes through all control points, then the resulting curve is said to be Interpolate the set of control points.



Approximate or Approximation Spline :-

When the polynomials are fitted to the path which is not necessarily passing through all control points, the resulting curve is said to approximate the set of control points.



Approximation Spline

Approximation Curves are Commonly used as design tools to Structure object Surface.