* Assignment - 5

Title - Bezier Curve

Aim:- write a C++ program to draw any object or wave, using Bezier curve generation technique.

Prerequisite:-
1. Basic programming skill of C++
2. 64 bit open source linux.
3. open source C++ programming tool like C++ / GCC.

Learning objectives:-
To learn Bezier curve techniques.

Theory:-
open Graphics library is cross language, cross-platform API for rendering 2D and 3D vector Graphics (use of polygon to represent image). open GL is a low load, widely supported modeling and rendering software package available across all platform. It can be used in a range of graphic applications such as games, CAD design or modelling, open GL API is designed mostly in hardware.

Bezier Curves:-

It is one of the parametric curves most frequently used in computer Graphics and were independently developed for computer assisted car design by two engineer both working for french. automobile company and paulde costell who was engineer for citoren.

properties of Bezier Curves:-

① A very important property of Bezier curve is that they always pass through the first and last control points.

② The degree of polynomial defining the curve segment is always on less than the number of defining polygon points, so far example, if we defining polygon. points, so far example if we have 4 control points, then the degree of polynomial is 3. i.e cubic polynomial.

③ In Bezier curve, moving a control points after the shap of whole curve.

④ Bezier curve generally follows the shap of the defining polygon.

⑤ A curve is always inside the convex hall of controll points.

Conclusion:- Thus, we have studied and implemented the concept of open GL and Bezier curve technology.