Interactive Computer Graphics

Lab 8 (05/10/2021)

Using OpenGL, draw the following figures. The dimensions of the various components in the figures can be considered as you wish, but the overall shape should be the same as the figures given in the question.

1. Use the following methods to draw a Parabola (horizontal and vertical both). The Vertex, color, focal length should be taken as random input (Everytime you run the algorithm, a new Parabola will be generated).
   a. General Parabola drawing Algorithm
   b. Parametric form
   c. Mid-point Parabola drawing (MPD) algorithm

2. Use the following methods to draw a Hyperbola. The Center, Vertices, Co-Vertices, color should be taken as random input (Everytime you run the algorithm, a new Hyperbola will be generated).
   a. General Hyperbola drawing Algorithm
   b. Parametric form
   c. Mid-point Hyperbola drawing (MPD) algorithm