《Computer Aided Geometric Design》
Assignment 7

November 4, 2024

1. Program and draw a perspective projection of a cube with center x and side length $2d$ on a 2D plane, where point x and the value of d are specified by the user. Make reasonable assumptions about camera parameters and orientation.
2. Draw an ellipse $x^2/a^2 + y^2/b^2 = 1$ and a hyperbola $x^2/a^2 - y^2/b^2 = 1$ using rational quadratic Bézier splines, with as few segments as possible. Parameters a and b are specified by the user.。
3. In 3D space, draw the Bézier curves from the previous problem represented in homogeneous coordinates (i.e., the three-dimensional curves before projection transformation).

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Requirements

Deadline: Sunday evening, November 17, 2024