DMET 502 - Computer Graphics
Projections

German University in Cairo
Department of Computer Science and Engineering

Q1) Consider a unit cube with two of its corners at $[0, 0, 0]^T$ and $[1, 1, 1]^T$. Given a view plane with a normal vector $[-1, 1, 1]^T$, determine the isometric projection of its corners onto the xy-plane.

Q2) Given a view plane with a normal vector $[3, 3, 4]^T$, determine the homogeneous diametric projection matrix (onto the xy-plane) that can be used with it.

Q3) If the center of projection is placed at $[0.5, 0.5, -d]^T$. Determine the one-point perspective projection matrix onto the xy-plane.

Q4) If the center of projection is placed at $[0, 0, 0]^T$ and the view plane is placed at $x = d$, derive the projection matrix.