Computer Graphics

LECTURE 09

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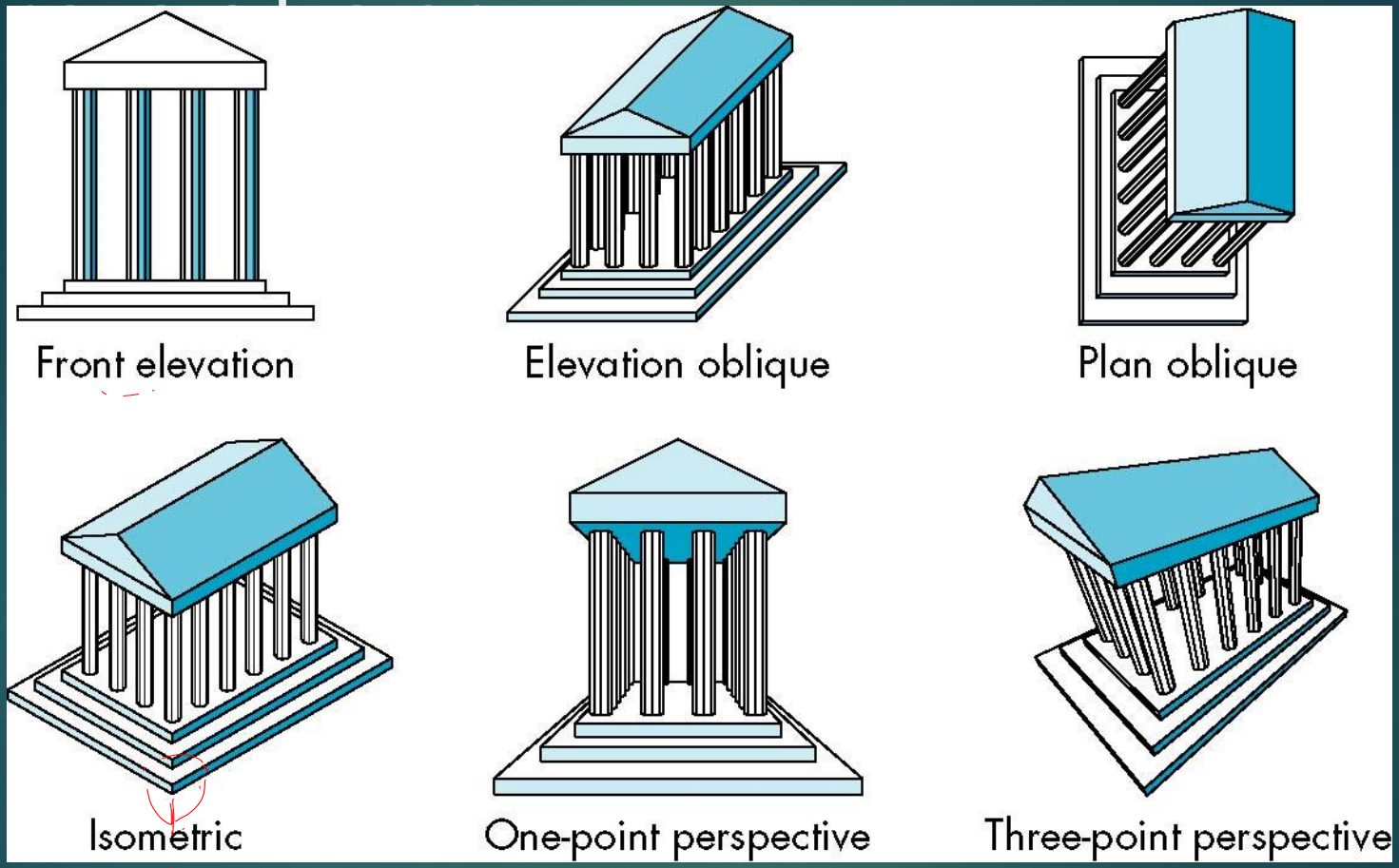
Last Class

- Viewing
  - Perspectives
  - Projections

Today's Agenda

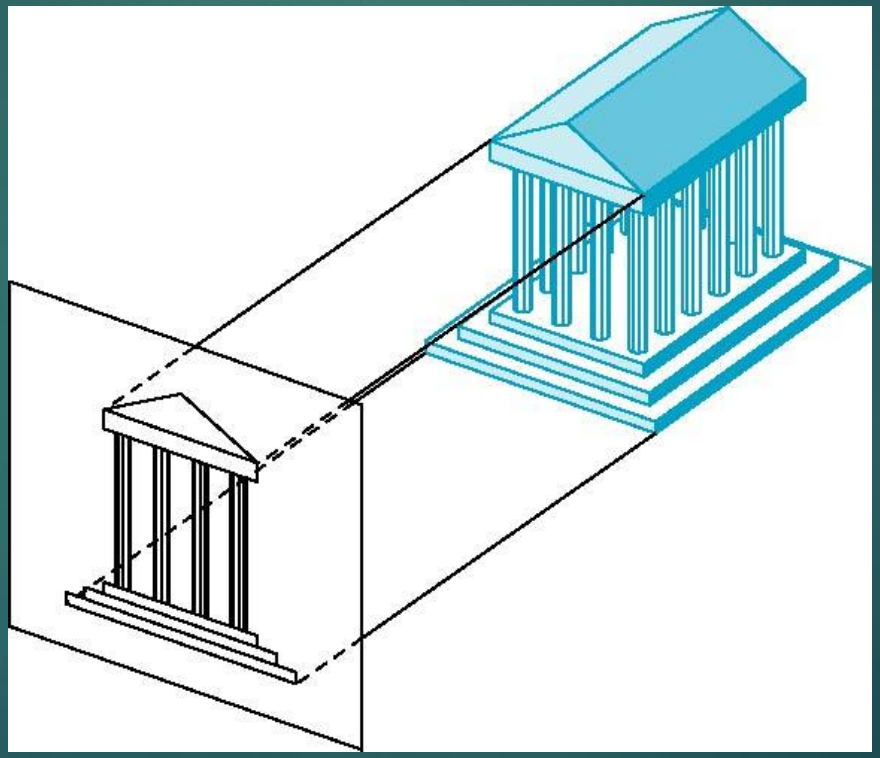
- Perspectives
- Projections

Perspectives and P



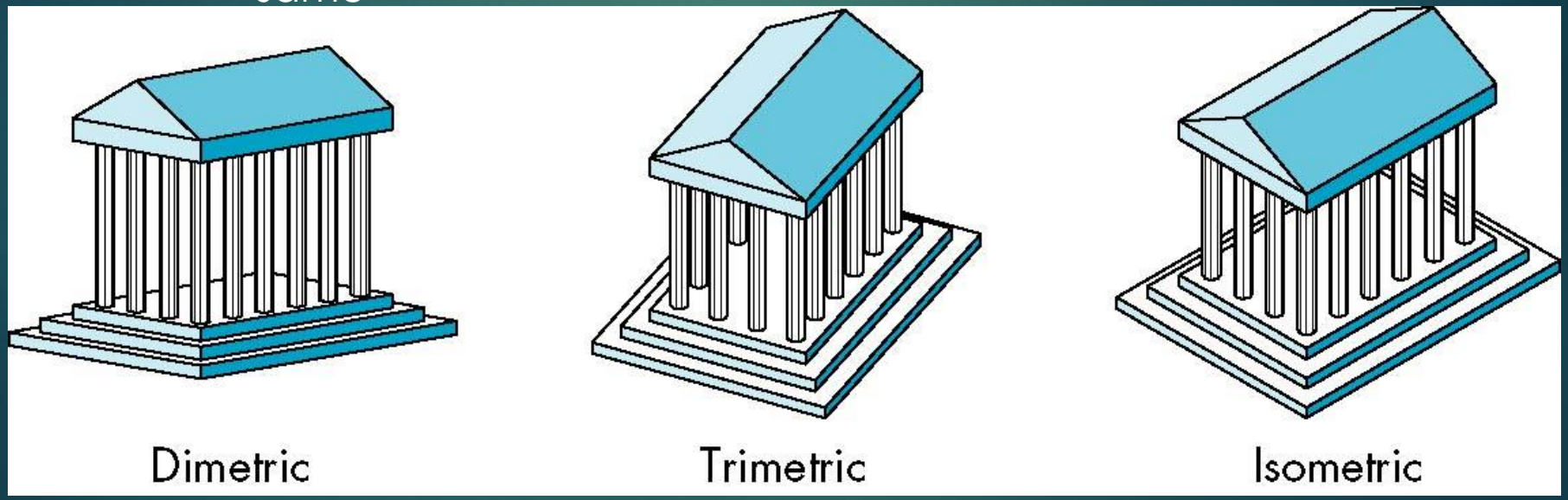
Orthographic Projections

- The projectors are orthogonal to the projection surfaces

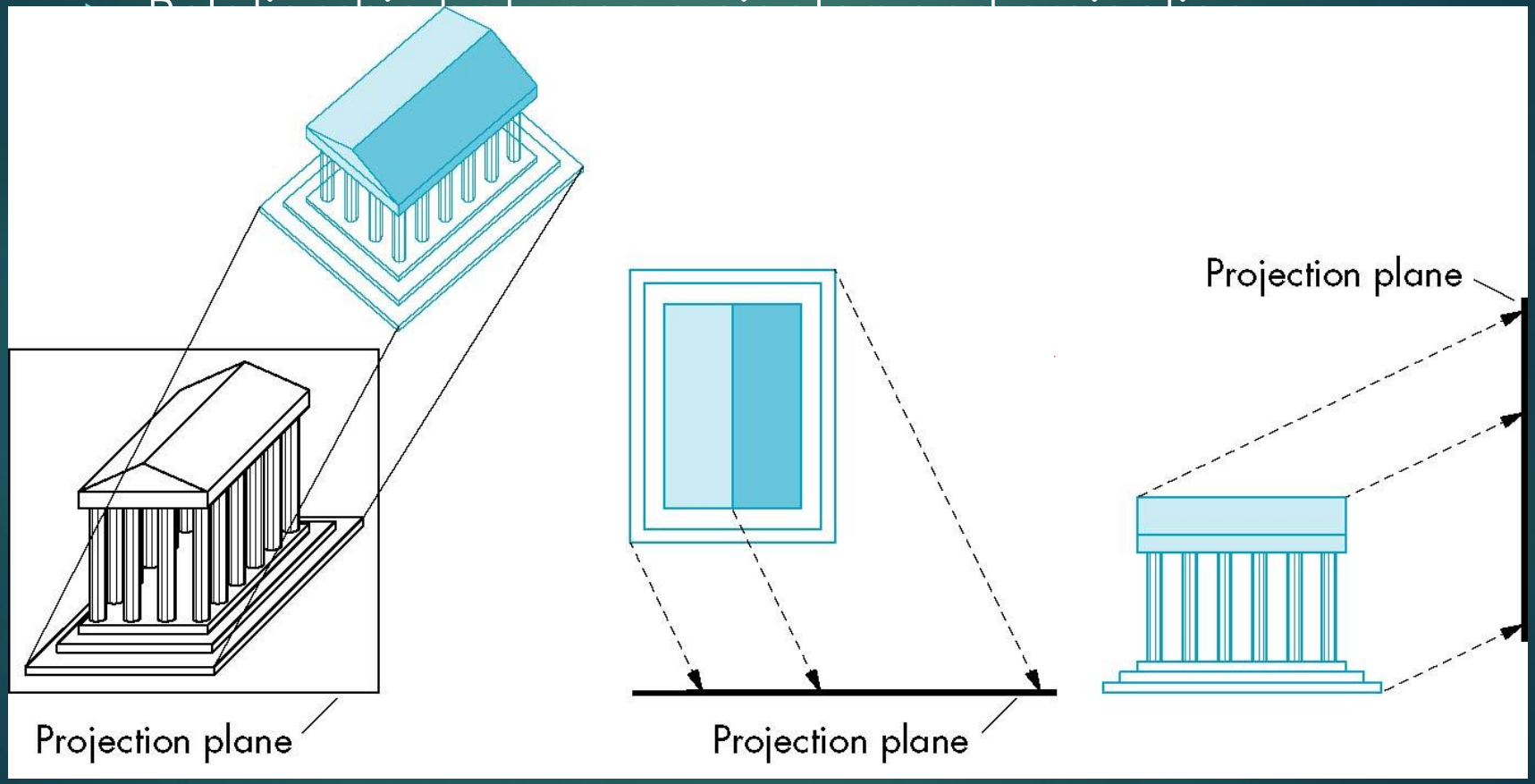


Axonometric Projections

- Projection planes can move relative to the object
  - Axonometric projections are classified by how many angles of a corner of a projected cube are the same

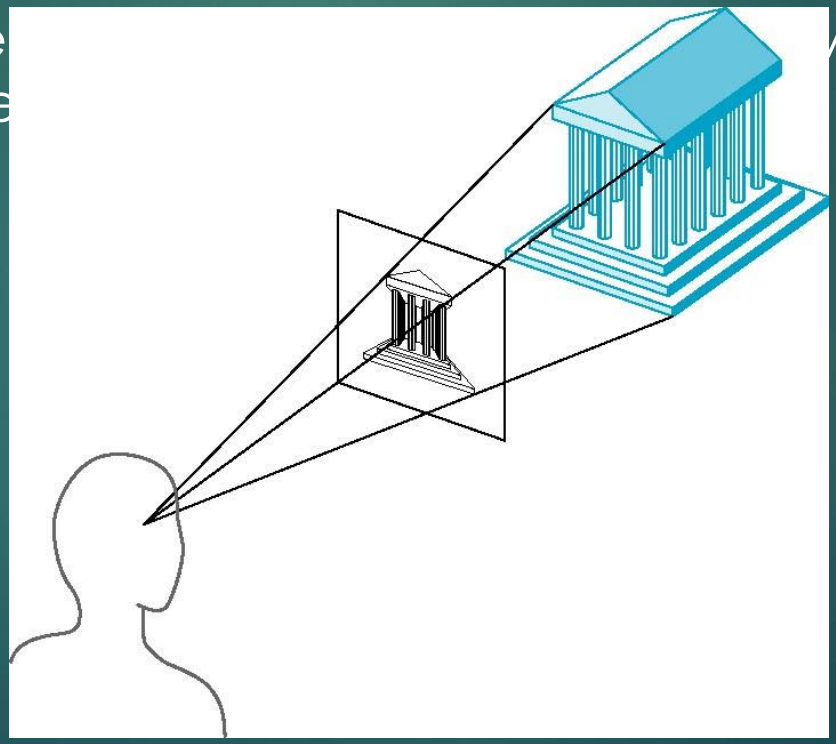


Oblique Projections



Perspective Projections

- Perspective views are characterized by **diminution** of size.
- When obje viewer, their image



Three Point Perspective

- None of the principal face is parallel to projection plane.
- No. of vanishing points is three in a cube

Two Point Perspective

- One of the principal directions is parallel to projection plane.
- No. of vanish e

One Point Perspective

- One of the principal face is parallel to projection plane.
- No. of vanishing points is one in a cube

Computer Viewing

- Computer viewing comprises following aspects
  - Positioning of the camera
  - Selecting a lens (Projections and Perspectives)
  - Clipping
- Can be accomplished with transformations.

Summary

- Perspectives
- Projections

References

- Fundamentals of Computer Graphics Third Edition by Peter Shirley and Steve Marschner
- Interactive Computer Graphics, A Top-down Approach with OpenGL (Sixth Edition) by Edward Angel.