

Module 1: Introduction and Graphics Primitives

Lab Exercises for Week 4

(a) Constructing objects – fans and quads

- Construct a triangle fan, two different quadrilaterals, and a quadrilateral strip (in 2D).
- Experiment with different colours and shading techniques for each object, by specifying a different colour for each vertex.
- Use the space bar to toggle between Flat and Smooth shading. Notice which vertex colour dominates, when flat shading is used.

(b) Drawing a house

- Draw a simple house, to resemble the figure below, using various Graphics Primitives. Note that all the lines in the house are shown here, as though the house is transparent, to aid in your construction of the house. Also note that, with the orthographic projection, we will only see the house from the front. However this house will be used in subsequent exercises, so you should construct the entire building.
- Specify a Viewing Volume, and experiment with different values. You will only see all the house if it is contained completely within the Viewing Volume.
- Vary the LineWidth used, to practise setting `glLineWidth`.
- Change to a random colour when the space bar is pressed.
- Your programs from now on should always include ProgramHelp (via F1) plus a `checkError` routine.

