A11 – Make the smooth objects

The current application contained in `index.html`, creates four flat objects: a square, an octagon, a circle (approximated by a 64 sides polygon) and a star. Models are created in file `models.js`. In particular, it uses the procedure `addMesh()`, that receives as parameters the vertex buffer (an array of three elements with the coordinates of the vertices), the normal vector buffer (an array of three elements with the direction of the normal vectors to the surface for the considered triangle in the corresponding vertexes), the index buffer (an array of indices in the vertex buffer), and an RGB color (a three-elements array, with the value of the red, green and blue components of the color, each one in the 0-1 range). Primitives are encoded as indexed triangle lists.

Modify the procedure to encode, instead of the currently define objects: a cube, a cone, a cylinder and a sphere.

In the application, the mouse turns the view, and the slider at the bottom of the page can be used to change the objects being displayed. To help you in the creation of objects, it is possible to toggle a wireframe view pressing the space bar key.