A04 – Parallel projections

In this assignment, there are two exercises, contained files `index1.html` and `index2.html`.

The first (`index1.html`) requires you to create a perspective projection matrix in file `perspective1.js`. By pressing and dragging the mouse over the window, you can rotate the parallel view: if everything is correct, you should see a house in the middle of the screen which can be seen from different angles by dragging the mouse. The mouse wheel should move you forward and backward.

The exercises in `index2.html` extends the previous case, by considering a slider that can be used to set the Fov-y of the camera (i.e. to zoom in and out), and by extending the 3D canvas to the entire window. In this way, the aspect ratio of the display can be changed by resizing the window. In this case, the new size of the window is passed in parameters w and h, while the Fov-y selected in the slider is passed in parameter fov. The code for computing the right perspective projection matrix should be inserted in file `perspective2.js`.

Extra
Copy the file `index1.html` *into two new pages:* `indexLeft.html` *and* `indexRight.html`*, and* `perspective1.js` *into* `perspectiveLeft.js` *and* `perspectiveRight.js`. Modify the two HTML files to load the corresponding perspective file. Now imagine that the two files are shown into two monitors put side by side: define the projection matrices into `perspectiveLeft.js` *and* `perspectiveRight.js` to support the showing of the application on the two monitors. For the moment, it is enough to manually sync the two windows, by manual rotating them of an equal amount.