

### A03 – Advanced transforms

The Vulkan application whose source code is contained in file `Assignment03.cpp`, performs to 4 advanced transformations using the matrices written in file `transforms.cpp`.

If you look at the code in `transforms.cpp`, you will see that all transforms are initialized to the identity matrix (which performs no transform..

If you compile and run the application, you will the requested transform see at top of the window, and a wireframe view of the wanted result. If the wireframe and solid object matches, you have done it right! You can press space and move to the next transform.

In this exercise, you can either use your own functions, or the following functions from the GLM library:

```
translate()  
rotate()  
scale()  
inverse()  
transpose()  
glm::radians()
```

If you decide to use your own functions, please note that the assignment requires you to create a `glm::matrix` to store the final result. Make sure to insert your result in the correct order (i.e. specifying matrix elements by columns and not by rows).

Also in this assignment, you can move the view using the same keys as in *Assignment0*:

ESC – quit the application				SPACE BAR – move to the next transform		
<b>Q</b> : roll left	<b>W</b> : forward	<b>E</b> : roll right	<b>R</b> : up		<b>↑</b> : look up	
<b>A</b> : left	<b>S</b> : backward	<b>D</b> : right	<b>F</b> : down	<b>←</b> : look left	<b>↓</b> : look down	<b>→</b> : look right