

Exercise Sheet 6

Out: 25.11.2015

Due: 02.12.2015

You should work in groups of two. Don't forget to put your names and student ID numbers on the solution you hand in!

Exercise 6.1 (Element Textures, 4 Points). Create a JVX model for a simple house with element-based texture coordinates and a texture image. The house should be formed by a cube whose top face is replaced by a simple roof. Then generate element-based texture images for all faces and put them onto the geometry.

Exercise 6.2 (Transformations in Texture Space, 8 Points). Write a project which takes a textured geometry (encoded in a *.jvx format) and scales, rotates and translates the texture on the geometry. Your project should have three sliders: 1 for uniform scaling uniform, 1 for translation in x-direction and 1 for rotation with respect to the point $(1/2, 1/2)$.

Hint: Useful classes for linear transformations are `PdVector` and `PdMatrix`. Send your project as a runnable .jar to your tutor following the usual naming convention `name1_name2_texturetransf.jar`.