IOS

Fakulty for Informatics
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Assignments 1

„3d Computer Vision“

Deadline 17.05.2021, online.

Preliminary remark

1. Do **not** use functions from OpenGL, OpenCV, or any other library to compute affine and projective maps!
2. Use the 3d-rendering framework provided and edit, extend and modify appropriately.

Part 1 (3d Scene)

Use OpenGL commands to render your own scene (consisting of wireframe models of some objects). The appropriate position in the code is marked with a comment.

Part 2 (Perspective Camera Model)

Implement your own perspective camera model consisting of all relevant camera parameters and render the relevant quantities, e.g. center of projection, camera pose, image plane, image principle point, etc.

Remark: The camera-class in the framework is used for rendering purpose only. It is **NOT** the perspective camera of this part of the assignment.

Part 3 (Perspective Projection)

Project the scene from Part 1 onto the image plane of the perspective camera model of Part 2 using the perspective camera model of Part 2.