

=== CONTROLS ===

CONTROLS	FUNCTION
W, ARROW UP	Accelerate
S, ARROW DOWN	Decelerate/Backwards
A, ARROW LEFT, MOUSE DRAG RIGHT	Pan left
D, ARROW RIGHT, MOUSE DRAG LEFT	Pan right
Q	Go down
E	Go up
MOUSE DRAG UP	Camera down
MOUSE DRAG DOWN	Camera up

F1 - Help/Show Controls
F2 - Frame Time on/off
F3 - Wire Frame on/off
F4 - Textur-Sampling-Quality: Nearest Neighbor/Bilinear
F5 - Mip Mapping-Quality: Off/Nearest Neighbor/Linear
F8 - Viewfrustum-Culling on/off
ESC - Quit Game

=== DEVELOPMENT STATUS ===

Implemented until now:

- Bling-Phong illumination model
- All models with textures
- Debug camera (controls see above)

=== EFFECTS ===

Implemented until now:

- Direction shadows with PCF from the sun
(can be seen as the whole room except a part of the floor are in shadow)

=== IMPLEMENTATION DETAILS ===

Requirements:

- Windows
- OpenGL 3.3 Core Profile

Libraries used:

- Assimp: <http://www.assimp.org/>
- FreeImage: <http://freeimage.sourceforge.net/>
- Glew: <http://glew.sourceforge.net/install.html>
- PhysX: <https://developer.nvidia.com/physx-sdk>

Models:

- Chessboard with figures: <https://free3d.com/3d-model/chess-table-18114.html>
- Chest of drawers: <https://www.turbosquid.com/3d-models/free-sideboard-3d-model/558818>
- Frame: <https://free3d.com/3d-model/frame-75994.html>
- Knight1 and Knight2: <https://free3d.com/3d-model/knight-84265.html>
- Door: <https://free3d.com/3d-model/medieval-door-16986.html>
- Torches: <https://www.yobi3d.com/q/3d-models-fire-torch>
- Wardrobe: <https://www.turbosquid.com/3d-models/classic-wardrobe-unwrap-model-1288182>
- Chairs: <https://www.turbosquid.com/3d-models/free-wooden-chair-3d-model/791045>
- Table: <https://free3d.com/3d-model/round-table-928375.html>

Additional Textures:

- Walls of Room: Stone(1)01 from https://www.cg.tuwien.ac.at/courses/Textures/Total_Textures_V1/
- Ceiling of Room: Wood(2)09 from https://www.cg.tuwien.ac.at/courses/Textures/Total_Textures_V1/
- Floor of Room: Wood(2)10 from https://www.cg.tuwien.ac.at/courses/Textures/Total_Textures_V1/

- Frame Image: <https://dermeister.at/evilmaster01.jpg>

Tested on the following graphic cards:

- NVIDIA GeForce GTX 750 Ti
- AMD Radeon Pro 460
- VisLab first white computer on the right side