FINAL PROJECT

Design and 3D modeling

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OBJECTIVES

1

Obj file computing and creation for the shapes (static)

2

Positioning of shapes in the space and between each other (dynamic)

3

Blender's python script creating following a template (dynamic)

PLANNING

Main Idea is to generate the appropriate obj components, due to face orientation aspect.

Expose the program to external use (a.k.a. API)

Inspiring from python's libraries structure

RESSOURCES

All in python, meshlab, and blender	Obj file creation: math, numpy
	Visualization: pyvista, meshlab, blender
	Blender script: bpy
	GUI: tkinter
	Others: sys, pathlib
	Execution automation: shell and bat scripting

DEVELOPMENT (AGILE)

v1: basic obj production, gui template

v2: curves adding, shapes merging

v3: blender script

v4: association of all the code, and inserting the dynamic aspect of it

RESULTS

Live demo

User's manual

Execute execute.sh (linux) or execute.bat(windows) to run the application (obj creation, blender script generation, or both), then choose, on cmd, to pre-visualize the output. Afterwards, use the obj file or bpy script generated to start 3d modeling.

Thank you for your attention

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