COMPUTER GRAPHICS FOR GAMES

P2 2025-26

Carlos Martinho
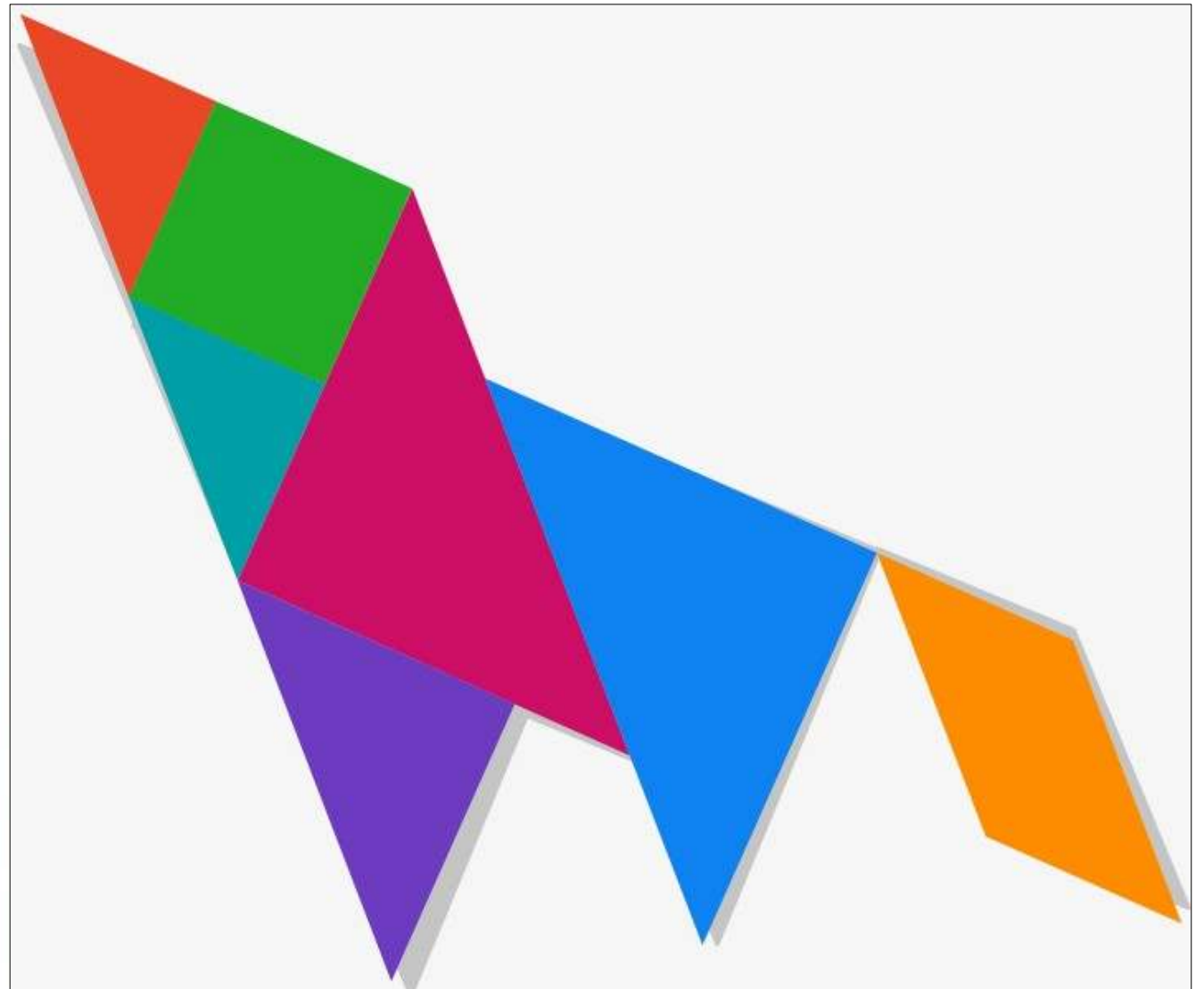
November 2025
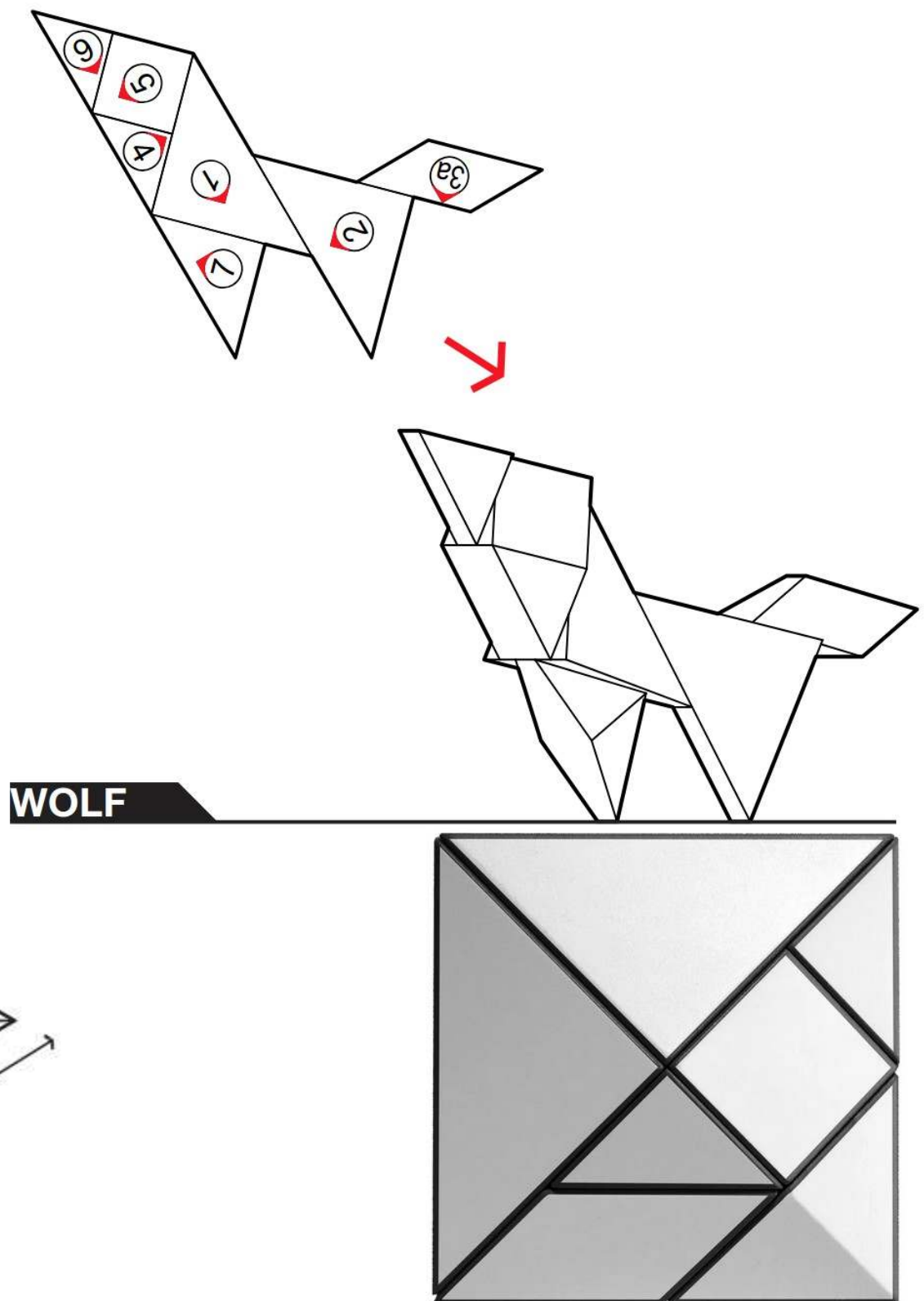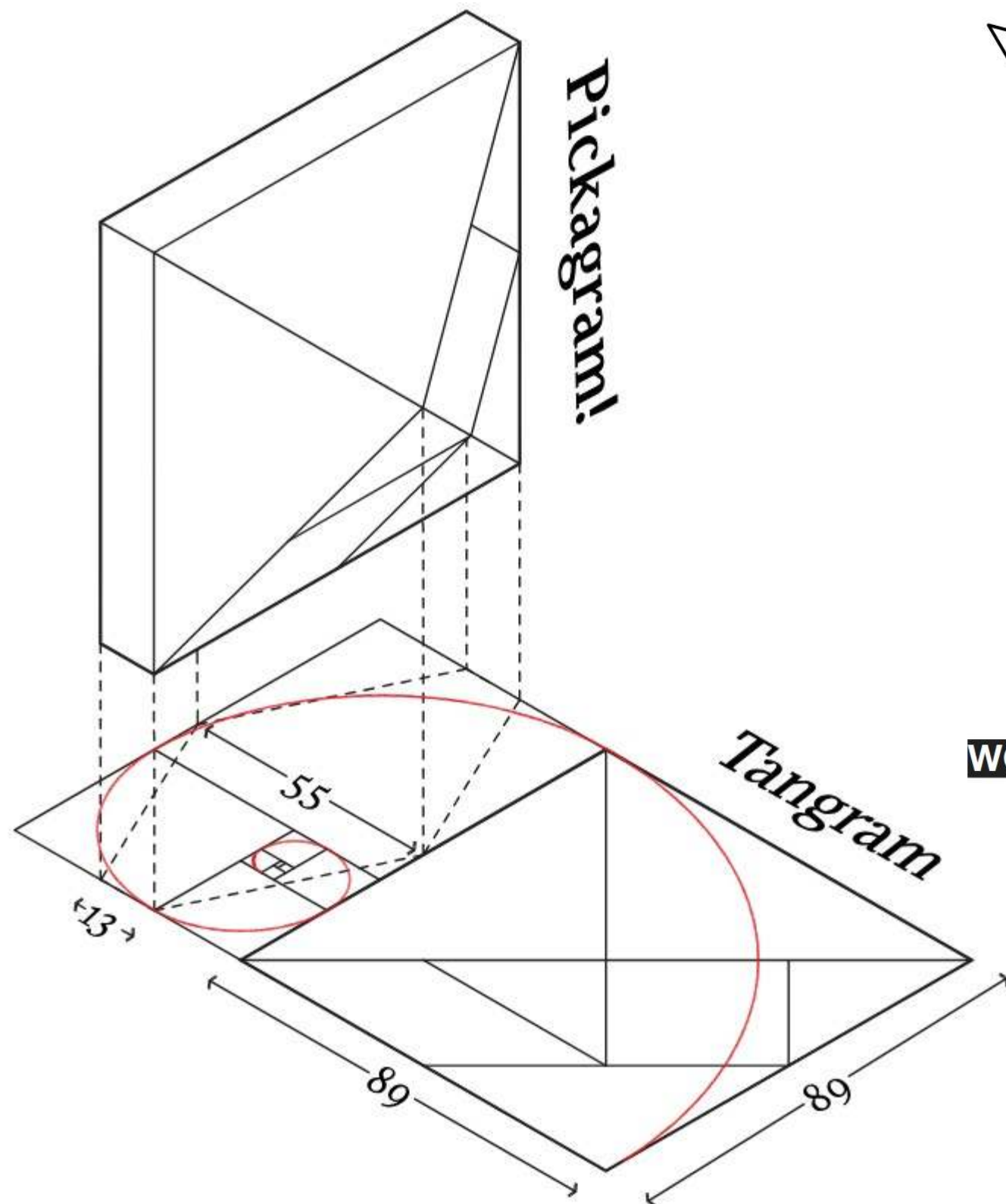
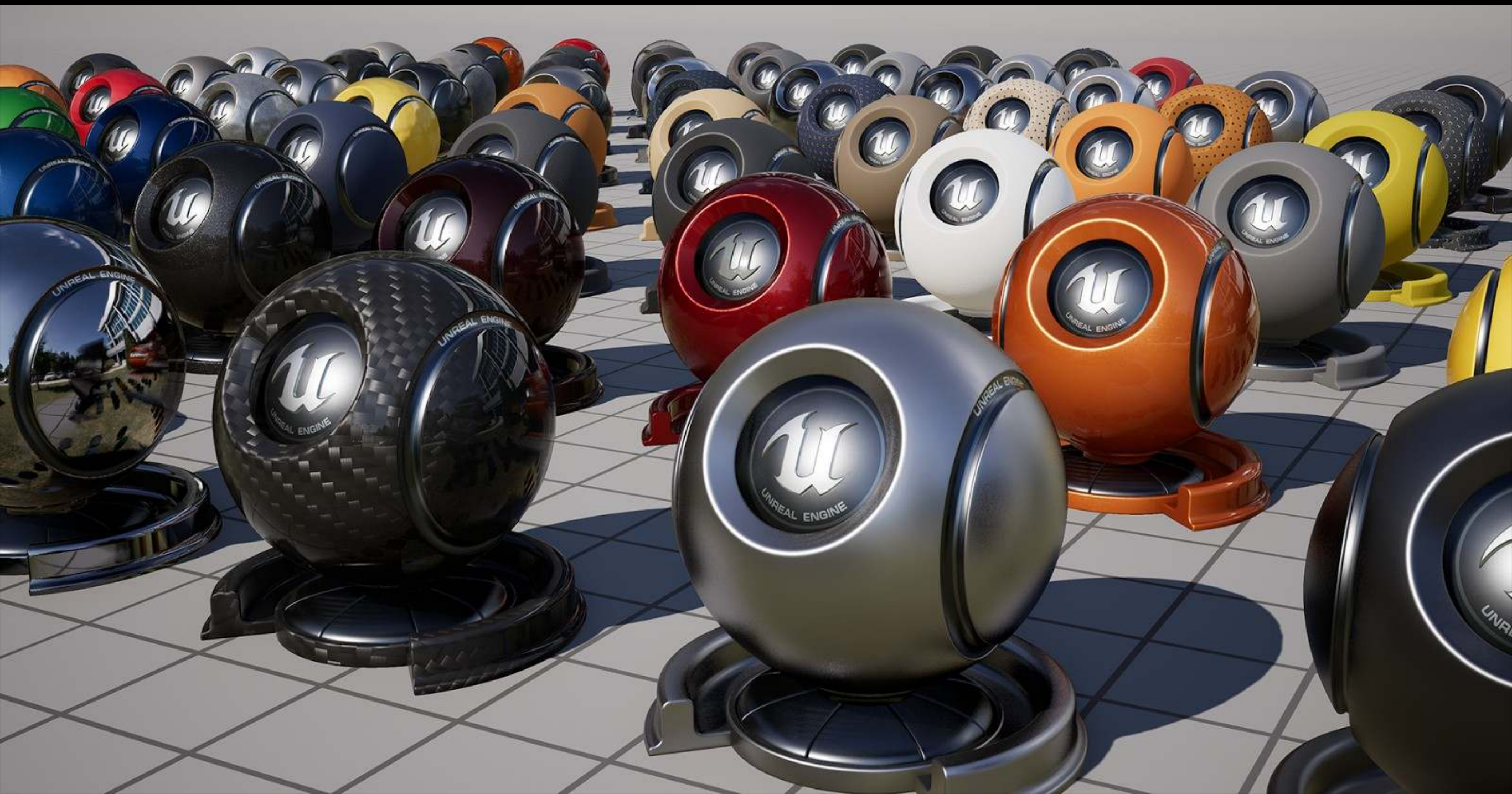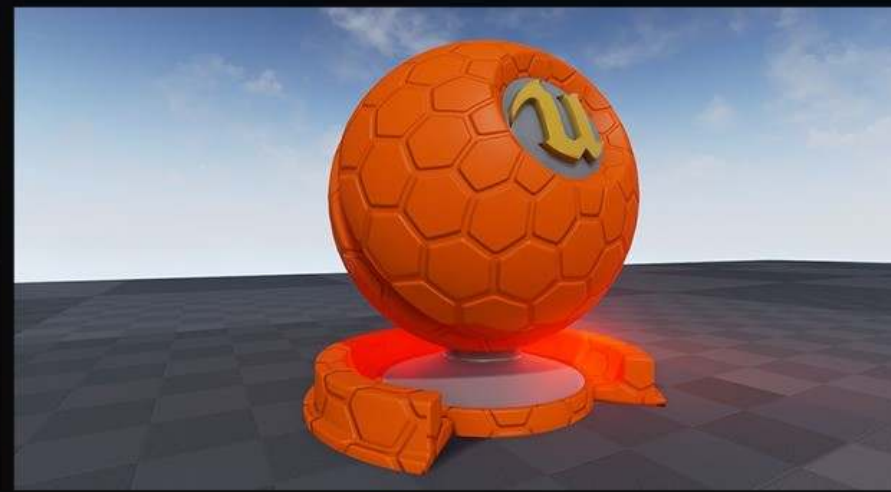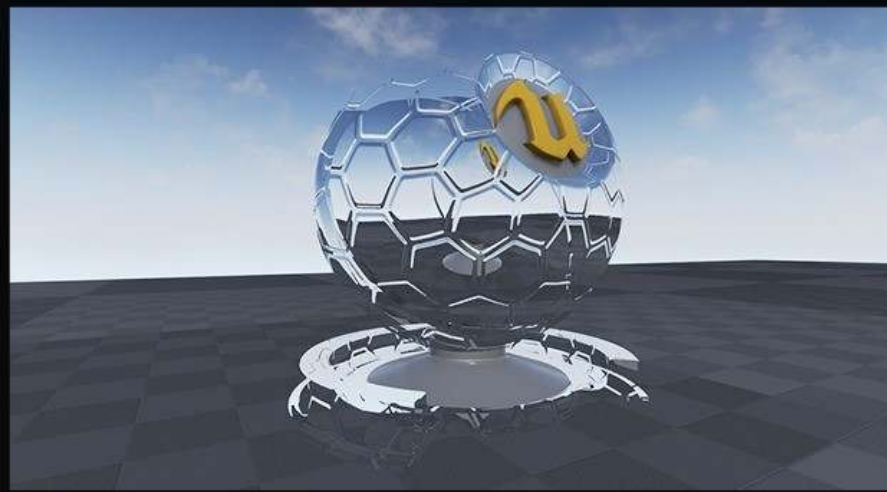| W	Date	Lectures	Labs	Assignments due	Grade
1	Nov 11 (Tue)	Introduction, Review	Team forming C++ IDE		
1	Nov 14 (Fri)	Mathematics for CG (part 1): dot, cross, matrices	GLM / GLM setup		
2	Nov 18 (Tue)	Mathematics for CG (part 2): matrices, quaternions	GLM library	**A1 : GLM (50% in class)** Nov 20 (Thu)	**1.0**
2	Nov 21 (Fri)	Programmable Graphics Pipeline, Drawing in OpenGL	OpenGL / GLFW / GLEW Setup	Tan/Picka-gram Shape (in class)	
3	Nov 25 (Tue)	Viewing Pipeline Viewing in OpenGL	Drawing + Transformations	**A2 : 2D Tangram** Nov 27 (Thu)	**3.0**
3	Nov 28 (Fri)	Geometry Management Meshes and Scene Graphs	Viewing + Quaternions		

Tangram

Pickagram

Pickagram!

Tangram

55

13

89

89

WOLF

December 2025

W	Date	Lectures	Labs	Assignment due	Grade
4	Dec 2 (Tue)	GLSL Shaders Lighting (1): Cel Shading	Meshes + ASSIMP Library		
4	Dec 5 (Fri)	Lighting (2): Gouraud and Phong Shading	Project Support	**A3 : 3D Pickagram** Dec 8 (Mon)	**4.0**
5	Dec 9 (Tue)	Mapping (1): Texturing, Sampling and Filtering	Shader Project Individual Project Definition	**A4 : Project Proposal** Dec 11 (Thu)	**1.0**
5	Dec 12 (Fri)	Mapping (2): Procedural Textures and Noise	Goal Definition and Execution Planning		
6	Dec 16 (Tue)	Mapping (3): Environment Mapping and Fresnel Reflectance	Project Support		
6	Dec 19 (Fri)	Mapping (4): Render Target Textures, Tangent Space, Normal and Displacement Mapping	Project Support		

January 2026

W	Date	Lectures	Labs	Assignments Due	Grade
7	Jan 6 (Tue)	Mapping (5): Ambient Occlusion and Physically Based Rendering	Project Support		
7	Jan 9 (Fri)	(project report Q&A)	Project Support	**A5 : Shader Project** Jan 9 (Fri)	**8.0**
8				**A5: Project Report** Jan 12 (Mon) **Project Discussions** Jan 15-16 (Thu-Fri)	**3.0**

IN BRIEF

- 40% - Base Project (teams of 2, 3 checkpoints)

- 60% - Shader Project (individual, 2 checkpoints)

CONTACT

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