

PROJECT OVERVIEW

MUAC VIRTUAL TOUR

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DESCRIPTION

By way of this document, I outline the MUAC Virtual Tour project, a 3D virtual reconstruction of a space inspired by the University Museum of Contemporary Art (Museo Universitario Arte Contemporáneo, MUAC) located in the University Cultural Center (CCU) of the National Autonomous University of Mexico (Universidad Nacional Autónoma de México, UNAM).

This project, built in C++ and OpenGL, creates an interactive virtual tour including custom geometry, interactive navigation, lighting, camera systems, animations, and an explorable environment inspired by the museum's distinct architecture.

FEATURES

- **Explorable 3D environment** modeled in C++ with OpenGL.
- **Real-time lighting.**
- **First-person camera mode** with smooth movement.
- **Shaders** for materials, textures, shadows, and reflections.
- **Procedural geometry and static models** integrated into the scene.
- **Event-driven interaction system** via keyboard and mouse.
- **Modular structure.**
- **Cross-platform build.**

TECHNOLOGIES USED

- **C++ 17**
- **Modern OpenGL (4.x)**
- **GLFW** – window/input management
- **GLAD** – OpenGL function loader
- **GLM** – math library

CONTEXT

Bla bla bla, the interest of this project occurs because art is cool, blab la bla.

The virtual tours state is bla bla bla.

Purpose: Sets the scene and makes the reader understand the environment, problem, or inspiration behind the project.

- Elements:
- Why the project exists
- Background / industry / domain info
- Constraints or limitations at the start

OBJECTIVE

Bla blab la, the main objective is blab la bla

- Purpose: Shows intention and direction—what you were aiming for.
- Elements:
- Short-term goals
- Long-term or aspirational goals
- Impact or purpose

EXPECTED RESULTS

PARTICULAR OBJECTIVES

Bla blab la, deliverables bla bla bla

Purpose: Communicates the “where we’re heading” aspect. Good for showing ambition.

- Elements:

- Target outcomes
- User / audience impact
- Metrics of success (if applicable)

SCHEDULE AND VERSIONS

Date of start

Current version at portfolio

Purpose: Reflects reality—shows structure, iterations, and evolution.

- Elements:
- Timeline or milestones
- Iteration notes or version history
- Challenges or pivots

CURRENT STATUS

Next steps to follow

Purpose: Captures the present reality and makes it forward-looking.

- Elements:
- What's complete vs in progress
- Remaining challenges
- Planned future iterations