

MMC-170: Unreal Midterm Project

Learning Objectives:

- Integrate simulation of experiences using current technologies.
- Apply interactive techniques to game technologies.

Midterm Description:

Students will have one week to complete this midterm project. The project scope covers all concepts discussed through weeks 1 through 5 of the course. For a list of these topics students are to refer to the syllabus on Blackboard.

This project can use either a first person or third person template to complete the project. In Project 1, students created a specific environment genre. For this midterm, students will create an environment that is different from Project 1. For example, if Project 1 focused on a fantasy forest, for the midterm it should not be a fantasy forest, it should be another genre.

Students will also need access to a graphical editing program. Again, the free version is GIMP and can be downloaded for no cost or account creation.

Steps for Completion:

- **Step 1:** Students should review and gather what assets they want to incorporate into the project and make sure they have added them to the library for their account.
- **Step 2:** Students should review external creative commons websites for audio, and images for material creation.
- **Step 2:** In Unreal, create the game project using either the First Person or Third Person template. Students should make sure to choose a location for the project folder that they will be able to find at a later time.
- **Step 3:** Import the assets to be used in the project. Any audio and materials should be imported/placed into the Content Folder for ease of access.
- **Step 4:** Using the image created or downloaded, prepare the bump and normal map to be used in Unreal. These additional assets should be placed in the content folder of the Unreal project for ease of access.
- **Step 5:** In Unreal, navigate to **File > New Level** and select **Default**.
- **Step 6:** Using the current open level file, do **File > Save Level As** and save the level as yourlastname_Midterm. This will set you up with a clean level to begin creating in.
- **Step 7:** Begin to add in geometry and any assets to create the layout and design of the environment. Remember to test often and save often.
- **Step 8:** Apply any materials (including your created material), audio and lighting to the scene.
- **Step 9:** Save, and begin taking screenshots of the environment for Floop.

- **Step 10:** Publish the game, zip the published game folder for submission to Google Drive to share. **DO NOT UPLOAD YOUR ENTIRE UNREAL PROJECT.**

Rubric and Requirements:

The following is the rubric with points and requirements the instructor will grade the project on:

- 10 Points: The level is blocked out well. Static meshes are appropriately placed and sized in reference to the player size.
- 20 Points: Incorporation of one student created material.
 - Name the material M_PersonalMaterial
- 10 Points: Use of an audio clip as a sound effect in the game environment.
- 20 Points: All visible elements of the environment should have appropriate materials applied.
- 20 Points: Static meshes are imported correctly with no loss of material mapping.
- 30 Points: Use of the appropriate volumes from class discussion.
- 20 Points: The player should not be able to fall off the edge of the world
- 20 Points: Use of at least three lights in the environment that lend to the ambiance of the level.
- 20 Points: High resolution screenshots for presentation of the midterm to be shared via Floop.
- 10 Points: Screenshot of the World Outliner Panel in Unreal. It should show:
 - Assets
 - Volumes
 - Lights
 - Meshes
- 5 Points: Screenshot of Content Browser showing:
 - Student Created Material
- 5 Points: Screenshot of the self-created material window displaying the connected material nodes.
- 20 Points: Game is packaged for Windows and runs.

Additional Resources:

- **Week 1 through 5 Folders on Blackboard and content within them.**
- [YouTube Video References](#)
- [Unreal Engine 4 Documentation](#) (NOTE: Again, many of the references needed from the documentation I've already linked to in the Week 1 through 5 Folders on Blackboard.)