Escher Plex is an Unreal 3 game in which a player is able to traverse any surface. I created this mechanic with the hopes to create something unique during my Capstone project (10 weeks). Having successfully built the logic into my character I moved to making an endless staircase, using Matinee and Kismet. Kismet proved to be a great tool built into Unreal, adding functionally for level streaming and quick logic checks.

My biggest challenge was learning Unreal Script (Unreal’s wrapper language for C++) to control the characters movements based on collision with the world. While the vector math would have been a simple dot and cross against the normal, interpreting what Unreal Script gave me access to lead me down some dark paths. Finally figuring how rotators and transformations could be used in conjunction I landed at a solution.

A large section of Kismet nodes creating the level streaming and door logic throughout the game. Having reviewed my code and a deeper understanding of Kismet I realized most of this functionality could have been broken into sequences and reused.

While wall walking is enabled the character is placed into a first person view. Placing doors and stairs at different angles and surfaces really gives the player a feeling for M.C. Escher’s Relativity.

A game to challenge all levels of gamers. In the game the player has to navigate a series of room.

In order to give a good challenge I added a way for players to walk along any surface.

This created in interesting game mechanic and proved to be a fun challenge to design for.

The game contains one of M.C. Escher’s more famous ideas, an endless staircase, as well as moving walls and platforms.