v1.0

MURDER MAGIC GDD

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[**Game Overview**](#_dq28npb2bslr) **2**

[**Plot & Setting**](#_bm2xgzh6ijdt) **2**

[**Core Gameplay**](#_lvq611pra5wv) **3**

[Player](#_62yae6gfuqua) 3

[Enemies](#_9xyxlv5tpku4) 3

[Map](#_egihfifyiyne) 3

[Spells](#_vzzi8b23l6jl) 4

[**Interface Usage**](#_hvtf74gs7lq) **4**

[**Menu and General Game Usage**](#_p9xmq3tnvnqe) **5**

[**MENU FLOW CHARTS \*-PLACEHOLDER-\***](#_mbjms8ji505s) **5**

[**TDD \*-PLACEHOLDER-\***](#_o19jxu6yaqo0) **5**

[**UML \*-PLACEHOLDER-\***](#_878fwp732o9b) **5**

# Game Overview

Murder Magic is a top-down fantasy shmup where the player controls the Mighty Merlin. The player will have limited spell slots (2) and must level up and manage which spells to use to become the Mightiest Mage in MagiShire.

# Plot & Setting

The peaceful lands of MagiShire are under attack by the Evil Wizard! Evil Wizard is mean and rude and just wants everyone to be as sad and angry as he is all the time, so he’s going to destroy MagiShire! Merlin the Mighty must save MagiShire, lest the village fall into the clutches of the Evil Wizard.

Trying to reach the top of the evil wizard’s tower, you must obliterate anything in your way with magical pew-pews and deadly spells. But beware, the Evil Wizard will send all his minions to try and stop you so he can throw the land into desperate malcontent.

# Core Gameplay

## Player

* The player controls Mighty Merlin, using the WASD keys to navigate the level, and the mouse to aim and shoot his spells.
* Right and Left click are the player’s spell inputs
* Hitting E will open the “Equip” menu
  + This menu shows the left and right click ability slots
  + Also seen here are the 5 spells in the game (only the first 2 are unlocked/not greyed out)
  + This menu also show the number of skill points the player has/can spend
* Mana is not an issue in this game, though spells will have certain durations/cooldowns
* The player will gain XP for killing a unit
* Levelling up allows the player to unlock new spells, and allot skill points into unlocked skills to empower them (mostly just dps)

## Enemies

* There will be 3 classes of enemies in this game
  + Goblin (basic)
  + Ogre (advanced)
  + Demon (Boss)
* The enemies will spawn from predefined locations in each level
  + Each spawn location will have its own location-based trigger
  + Each spawn will have its own list of what to spawn
  + Boss will have its own spawn trigger and will only spawn the boss

## Map

* The map will consist of 3 floors, each one connected seamlessly by spiral stairs (will need logic for looking through walls/ceilings)
* When the player reaches the stairs of a floor, the objective list will update reflecting completion of a floor
* The boss room will be blocked by a force field that will only drop when all enemies in the game have been defeated
* May or may not have other/dynamic map elements (doors, locks, chests, etc)

## Spells

* Magi-Bolt (starter)
  + Simple purple projectile, low cooldown + damage
  + Upgrade to increase damage and decrease cooldown (increase fire rate)
* Wind Surge (starter)
  + Hits everything within X range of player, medium cooldown + damage
  + Upgrade to increase push distance and damage
* Magi-Blast
  + Purple cone blast, medium cooldown, aoe damage
  + Upgrade to increase damage and cone length
* Burning Hands
  + Fire cone channel, medium cooldown, 3s cast duration, low damage per second
  + Upgrade to increase cone angle and dps
* Lightning Strike
  + Shoots an arc of lightning in front of the player 2 times, high cooldown + damage
  + Upgrade to increase damage and number of arcs

# Interface Usage

XP Bar:

* Across the bottom of the screen, likely yellow or purple
* Kills reward XP, at 100% the player should level and the bar should reflect the new level
* Each level unlocks 1 of the 3 remaining skills (until all are unlocked)
* Each level grants 1 skill point to upgrade unlocked skills

Health Bar:

* Above the XP bar, taller/thicker than XP, likely green (red for missing?)
* Health regens at a slow speed (or health pickups?)
* The player regens full HP on level up
* Game over at HP = 0

Spell Indicator:

* On screen representation of Left and Right mouse button
* Shows which spells are currently assigned as well as a cooldown timer

Objective Window:

* On the right side of the screen as follows. Each bullet appears after the previous nested bullet is completed.
  + “Use WASD to run around”
    - “Cast your primary spell with Left-Click”
      * “Cast your secondary spell with Right-Click”
        + “Hit E to toggle view of your spellbook”
  + “Kill 10 creatures”
    - After complete “Kill all creatures”
  + “Reach the stairs on this floor”
    - After complete “Reach the top of the tower and stop the Evil Wizard!”

Spellbook:

* E opens and closes
* Has 2 slots for active spells, 5 slots along the right for list of all spells
* Can level up a spell on the right list by hitting the + next to it
  + Consumes 1 skill point

# Menu and General Game Usage

We will be designing a main menu and an options menu (probably with just the ability to mute/unmute, quit the game or return to the main menu. Options menu will be accessed via ESC.

# MENU FLOW CHARTS \*-PLACEHOLDER-\*

# TDD \*-PLACEHOLDER-\*

**Programs**

This game will be built using Unreal 4.22.3 and Visual Studios 2019, so we can program in C++, along with taking advantage of the UI and design capabilities of UE4.

**Set up**

This will be built in third Person C++ option in UE4, with the camera angle changed so it will appear to be a top down look. We will be implementing a save system to transfer information from one level to another along with each level of the game will be loading a new level for the player, transitions between levels will be done by doors and loading screens.

**System**

The end result of this game will be a program to be played on a PC with windows 10 running, it will use keyboard and mouse functions for controls.

**Naming Conventions**

All classes will start with a capital letter, ie Spells

All will use Camal Case ie MagiBoltSpell

**Folder System**

In the ThirdPerson folder there will be folders for mesh, material, and textures for objects in the game, there will be a sound folder, and other needed assesses named as found. Each folder can have subfolders if needed, ie textures can have a sub folder for buttons and such.

In the ThirdPersonCPP folder will have the Blueprints, Maps, UI and any other system folders needed. There can be subfolders as well if needed, ie in Blueprints you can have a sub folder for Enemy UI.

In the C++ folder newly create files must be set to public, and the system will create public folders, if we find that the C++ information becomes too over crowded each parent and child class can be assigned a single folder.

# UML \*-PLACEHOLDER-\*