

# Concept Document

## Title Page

The title page includes general information about the game:

Game Name: Dungeon Delver



Game Logo:

Game Catch Phrase: “Seek the Surface”

Document Type: Game Design Document

Document Version: 2.0

## Credit Page

The credit page should present information about the person who authored the document and for what company.

Document Purpose: CS 321

Document Version: 2.0

Working Title: Dungeon Delver

Game Concept: Dungeon Delver is a top down dungeon crawler game. The players goal is to travel through the maze-like floors of the dungeon while gathering items and fighting enemies. Items will be scattered throughout each floor and progression will be impossible without first finding certain ones. This game is inspired by other games like Zelda Link’s Awakening and Diablo.

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## Introduction

Dungeon Delver is a third-person fantasy style dungeon crawler game where the player's sole goal is to escape. The player will traverse through the dungeon fighting enemies at every turn and gathering items to help in their escape.

## Game Analysis

### GAME DESCRIPTION

Genre: Adventure / Dungeon Crawler

Game Elements: Fighting Enemies, Exploring Levels, Gaining Items

Game Content: Action / Adventure

Theme: Fantasy

Style: Polygon

Game Sequence: Real-Time

Players: Single-player

### GAME REFERENCE

Game Taxonomy: Dungeon Delver is a Fictional Game

Player Immersion: Players will get strategical and mental enjoyment by planning how to execute abilities and clear levels of the dungeon best.

References: Dungeon Delver hopes to channel the design choices of Diablo into something that players can enjoy. Levels of the dungeon will be set up in the same way with procedural generation putting together prefabs.

### GAME TECHNICAL

Technical Form: 3D polygon graphics (POLYGONS - Dungeon Pack Unity Asset Store)

View: Third Person

Platform: PC.

Language: C#

Device: PC

### Game Play

Players will start the game thrown into an introduction level to learn how to move using the keyboard and fight enemies. During this intro they will be introduced to the first group of enemies the Goblins. They will find that the first level seems easy and when finished will be thrown into the true dungeon. Once here they will encounter tile after tile of goblins accompanied by their leaders and find that the sorcerers aren't any more friendly. Sorcerers are weaker than goblins but attack at a distance so approaching them is difficult. Items will be presented throughout from health potions to save you in sticky situations to items that allow you to access new gameplay mechanics like jumping. Since each level is procedurally generated each dungeon can be enjoyed over and over and never feel stale.

### Key Features

- Two gametypes: Story and Delver mode
- Three Different Enemy types
- Infinite Gameplay in Delver mode
- Dungeon's are procedurally generated and will be different every time you play.
- Single player gameplay

# Design Document

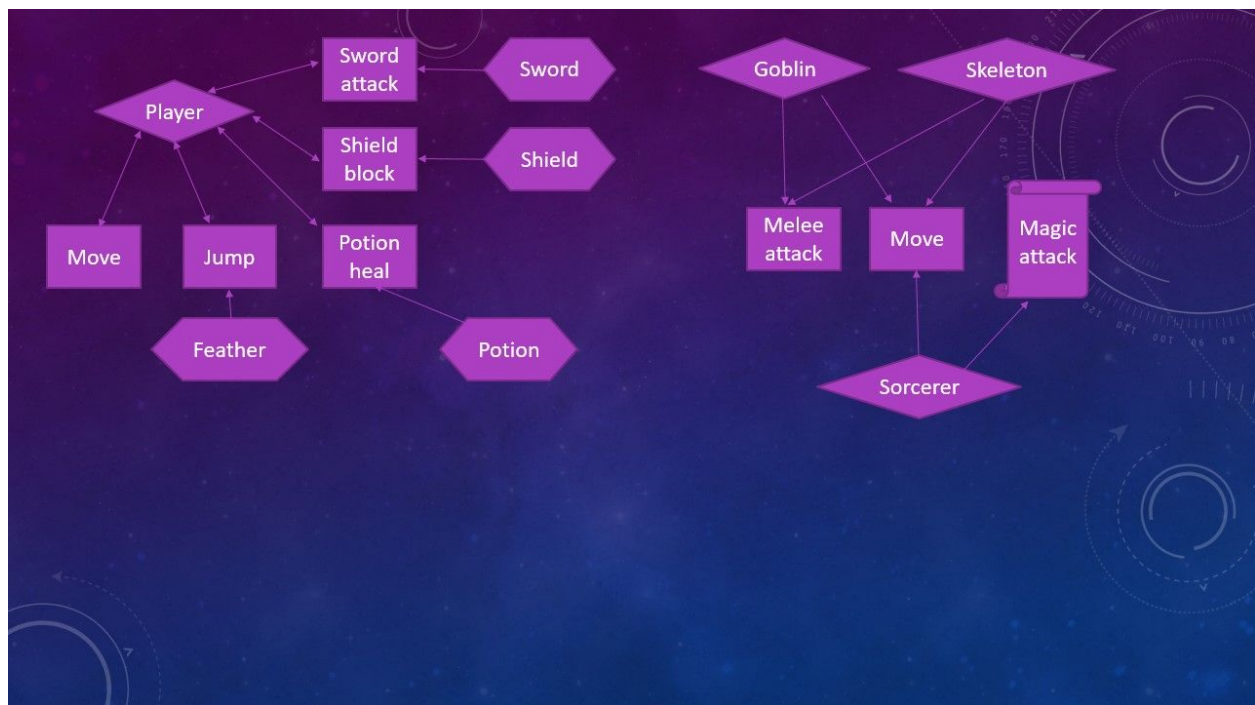
## Design Guidelines

Creative restrictions: We are time-constrained to approximately 3 months, and are students so we cannot purchase many assets.

## Game Design Definitions

At the end of each level there will be an iron door that the player can interact with and the next level will load. They will start the game from the start menu detailed below. Player's use the WASD to control movement and mouse clicks for attack and block, they also have special abilities bound to e, r, and f. Gameplay will have players traveling through level after level to find the final boss who, when defeated, will get the player the win. If the player runs out of health before they get to that point though they get a game over and have to start from the beginning.

## Game Flow-Chart



## Player Elements

- HP\_Pot | Health Potion
  - Regenerate players health if lost. Do not revive player after death.
- Jump\_Item | Feather of Flight
  - Allows the player to jump over gaps
- Legend\_Swrd | Legendary Sword of the Pit
  - Legendary sword that lets the player do more damage
- Legend\_Shld | Legendary Shield of the Pit
  - Legendary shield that lets the player block heavier attacks.

## Player Definition

The default player will not be able to jump but will be able to move with WASD controls. The left click will swing the sword and the right click will block with the shield. The game provides information on controls at the menu screen but once in the game, it will be up to the player to discover how they can move through the dungeon. Winning in story mode will consist of the player beating the final boss on the third level. In delver mode there is no concept of “winning” but the number of levels a player progresses through will be tracked. The goal for the player in that mode is to make it even deeper into the dungeon. A player will lose when their health hits 0. If death occurs the player will have to restart the game entirely.

## Player Properties

- Player Health: Start at 100 and no way to enhance
- Weapons: The player starts with a standard sword and shield but can be upgraded by finding the legendary set. The sword and shield will change design when the new ones have been acquired.
- Actions: The player can only move with the WASD keys and have two abilities: Heavy Slash and Spin Attack. The player will gain the ability to jump after the feather has been acquired.

## Player Rewards (Power-ups & Pick-ups)

- Health Potions can be obtained and will heal the player.
- The legendary sword and shield can be obtained to make the players attacks more deadly and defense stronger.
- A feather can be obtained in a hidden chest to give the player the ability to jump.

## User Interface (UI)

The games menu will consist of mode select, controls, and exit game buttons. On death the player will have an interface to either quit game or restart. The player can pause the game by pressing escape and will offer the ability to continue, restart, or quit the game.

### Heads up Display (HUD)

The HUD will consist of a health bar.

### Player View

The camera will be 3rd-person behind the player, looking slightly down, giving mainly an indication of what's in front of them but still making enemies directly behind visible. Due to the winding nature of the dungeon, only the current room is visible with most hidden behind walls.

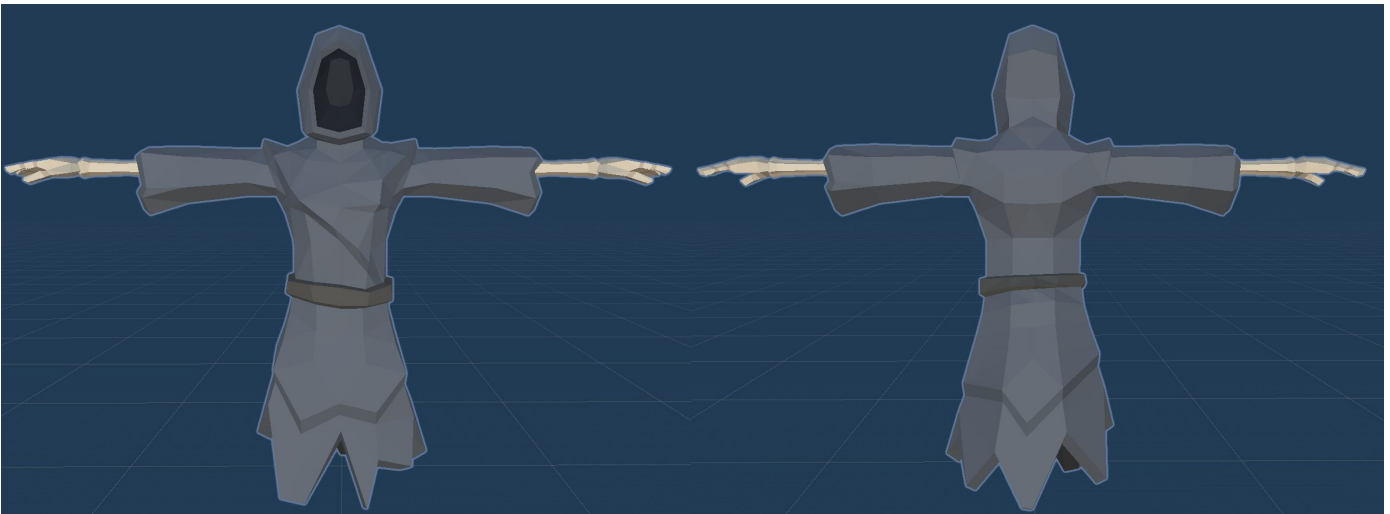


## Antagonistic Elements

- gob\_(level) | Goblins
  - The most basic enemy type that the player will encounter. There are three different types of goblins Soldier, Priest, and Warlord. Each will be slightly stronger in that order.



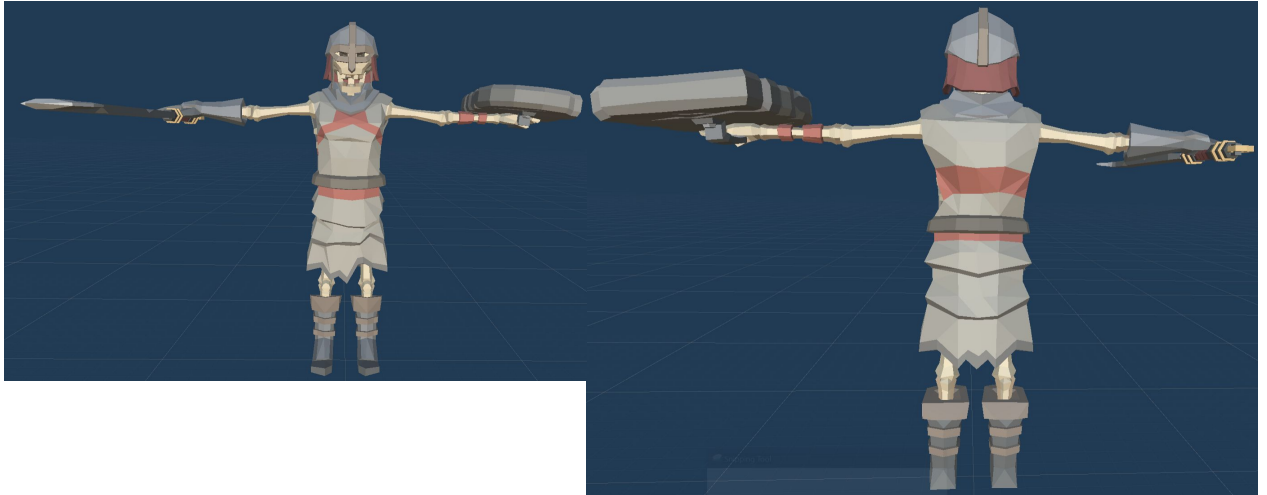
- sorc\_enemy | Sorcerers



- Sorcerers are the range enemies the player will encounter. They attempt to stay at range while hurling fireballs at the main character.



- skel\_enemy | Skeleton
  - Skeletons fight at close range and will deal more damage than any other non-boss enemy in the game.



- boss | Boss
  - The boss tracks the player and has more health than any other enemy in the game. It also does more damage per hit than any other enemy.



### Antagonistic Definitions

The enemies are what makes most of the challenge for the players in Dungeon Delver. They are constantly seeking out the player to kill them and force them to lose. Exploration of the dungeon can lead to secret chests that presents the player with rewards they will not be able to progress without.



## Antagonistic Properties

- Deal damage to the player
- Make the game harder for the player

## Artificial Intelligence (AI)

- Goblins
  - Normal State: Idle animation some will be roving around floors
  - Detection State: If the player walks into their field of view they will detect them
  - Reaction State: The goblin will chase down the player and attempt to kill them
  - End State: If the player kills it the goblin will die and disappear, otherwise if the player dies the goblin will dance.
- Sorcerer
  - Normal State: Idle floating animation with some roving around floors
  - Detection State: If the player walks into the field of view or runs into them
  - Reaction State: Will try to maintain distance and fire off fireballs
  - End State: If the player kills them they will die and disappear, otherwise if the player dies they will dance.
- Skeleton
  - Normal State: Idle animation with some moving around floors
  - Detection State: If the player moves into the field of view or bumps into them
  - Reaction State: Will try to kill the player with their sword or block attacks with the shield
  - End State: If the player kills them they will die and disappear, otherwise if they player dies they will dance.
- Moving around floors in idle will be called Roaming
- Fighting the player will be called Attacking.

## Global Game Elements

There are barrels and other storage objects thrown through the world. They have no impact on the player but do have collision. Each tile will have an invisible boundary on the outer edges to stop the player from running straight off. The camera will maintain the same view of the player throughout the game. The skybox will be a dark color until the player manages to escape the dungeon.

## The Story

The player takes on the role of a knight from the local city of Krost. Late one night while walking the streets searching for cutpurses he found himself drawn into an alley by a strange sound. The alley was a dead-end with some strange dark hole in the ground. He crouched down and peered inside what seemed like a never ending hole. Suddenly, a large skeletal hand burst from the hole and before he could react it tugged his legs out from under him. Dragged into the endless depths below our knight finds himself struggling to escape. He must discover what secrets the dungeons hold and work his way through the confusing maze.

Will he discover the secret of the dungeon fast enough or will he succumb to its twisted inhabitants?

## Level Design

The first level and boss level are hand crafted to offer challenge and fit the narrative of the story. The dungeon floors in between these two are procedurally generated by using prefabricated tiles and connecting them. In the Delve mode every single level is procedurally generated.

## Audio & Sound F/X

- Player got Hit: Grunt/Yell sound from the player should be louder than ambient sound.
- Player Obtained Item: Short jingle that plays indicating the player has obtained an item or opened a secret area.
- Background Music: Intimidating music that plays quietly in the background of gameplay.
- Shield Block: Dull Thud sound
- Sword Swing: Swoosh sound that plays on sword swings.
- There will be no use of a vibration or ring mode.

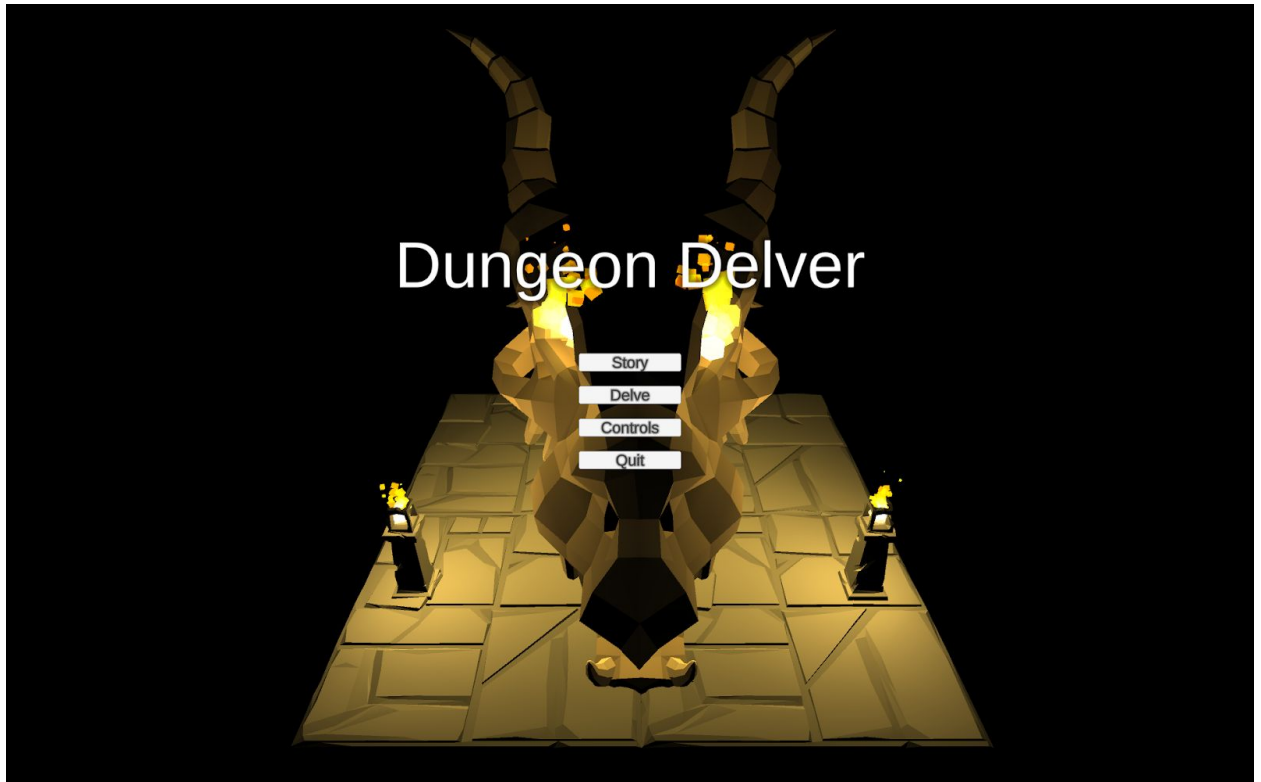
## Game Architecture



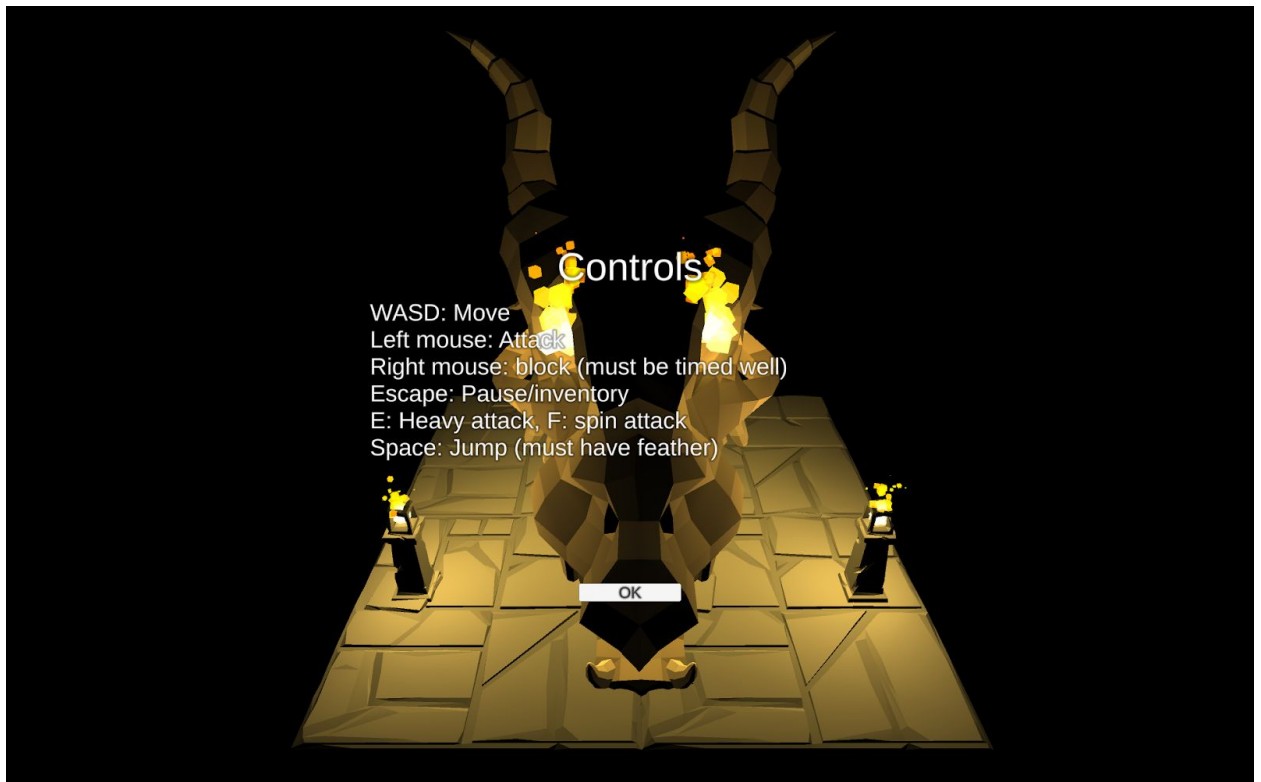
## Game Architecture Overview

There will be a start, win, lose, and pause screen that the player can access.

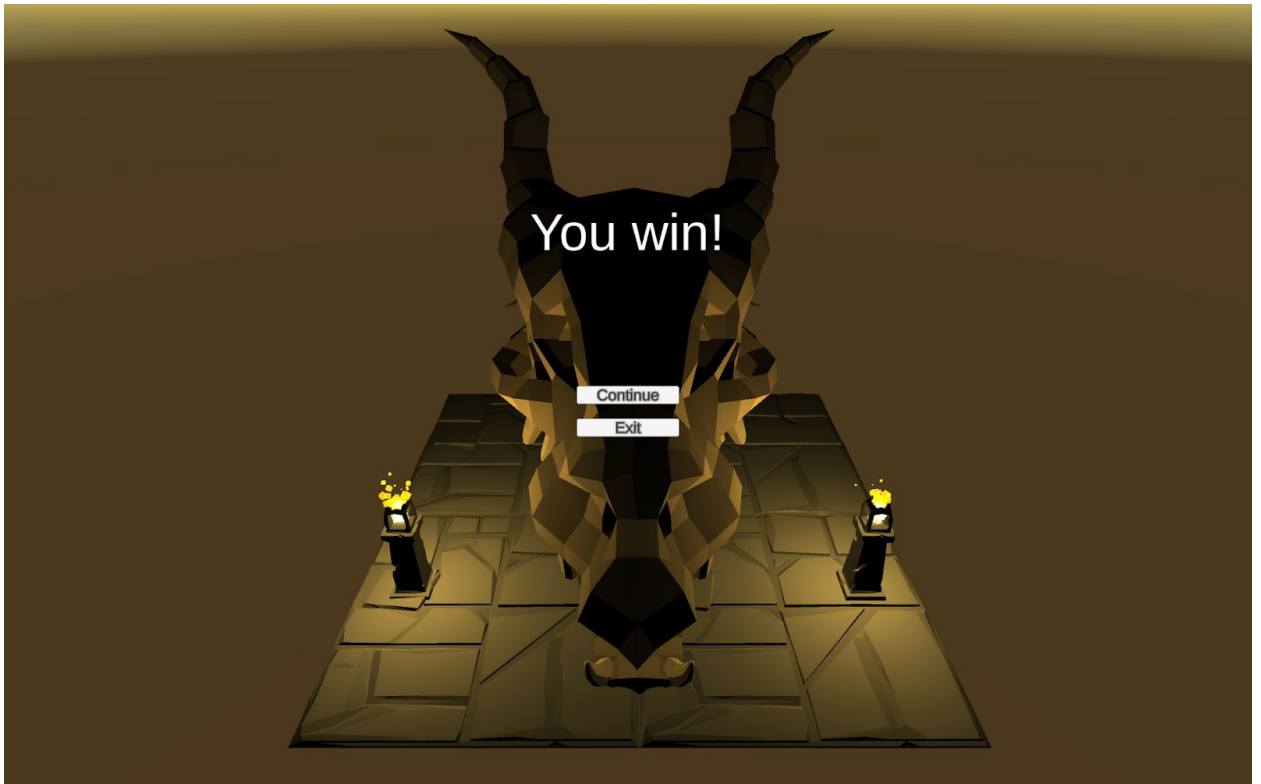
- The Start screen will have mode select, controls, and quit buttons.



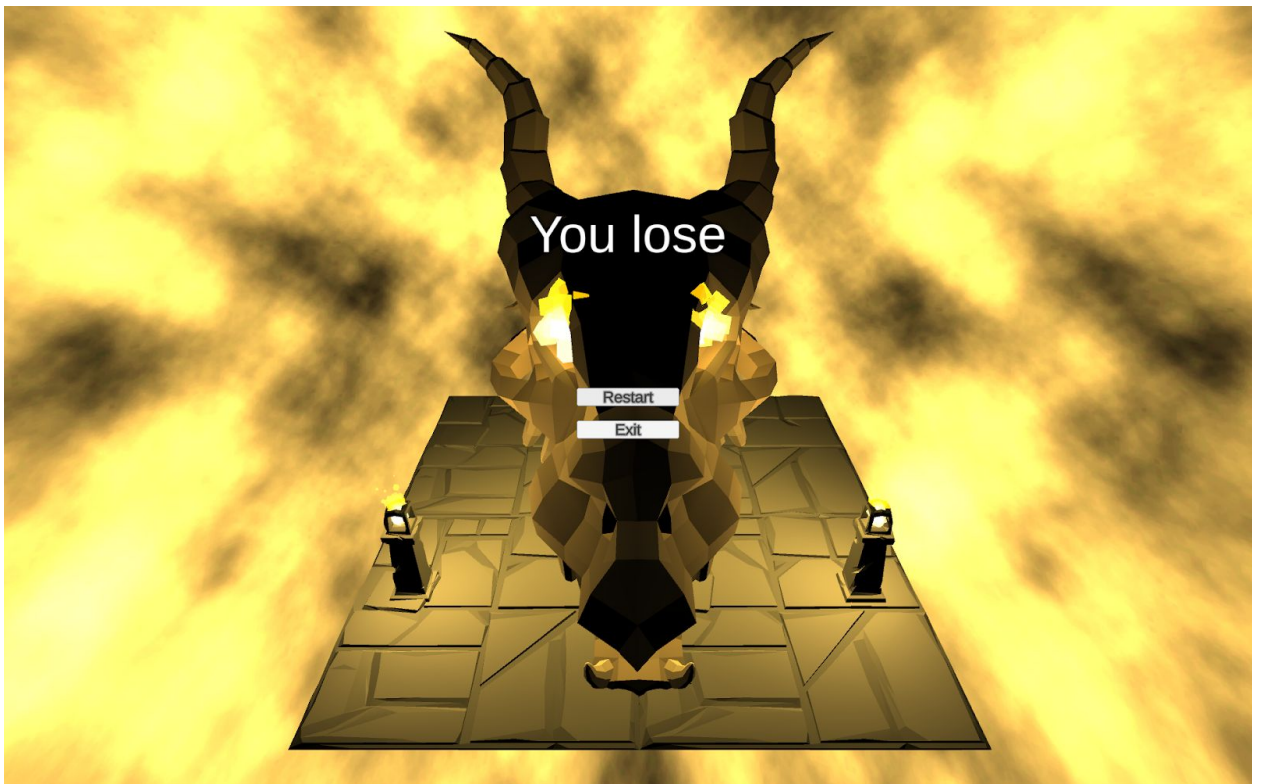
- The controls screen will simply show the controls as text.



- The win screen will have a continue button or quit button.

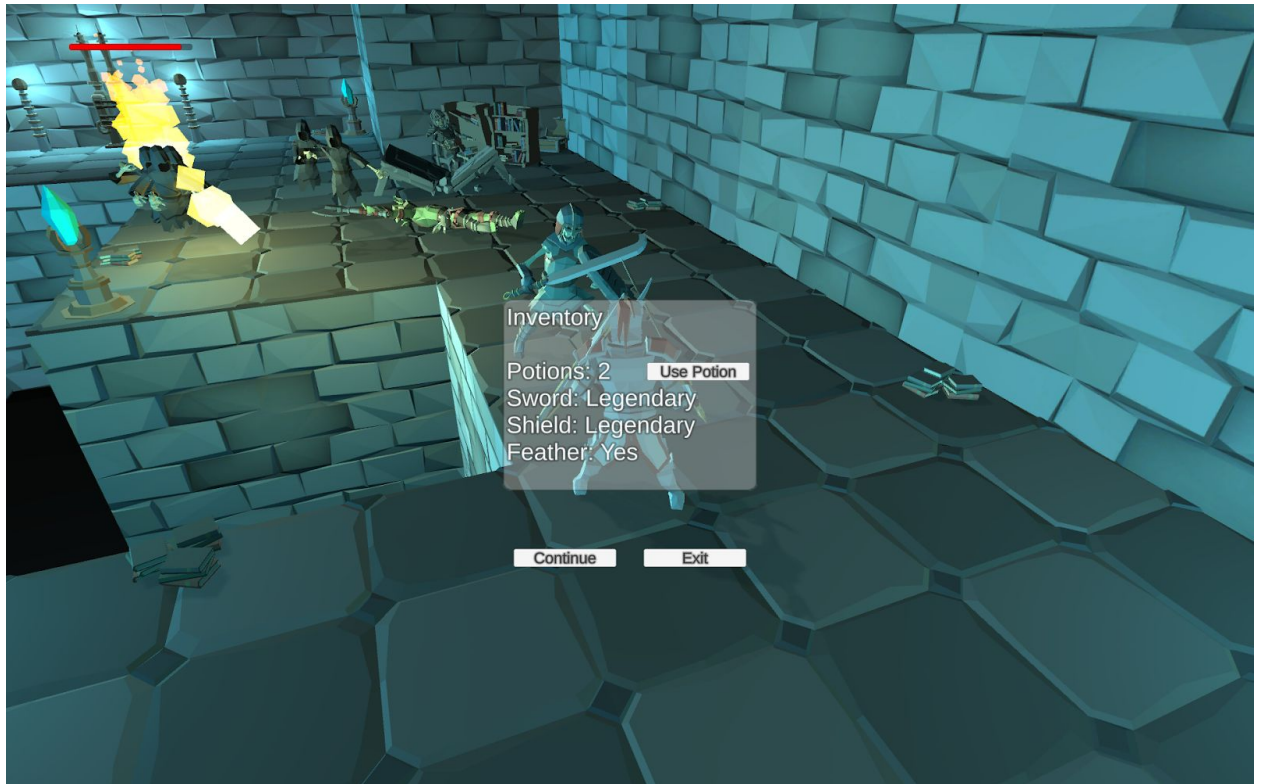


- The lose screen will have an exit game button.





- The pause screen will have the inventory and an exit button.



### How To Play Copy

Use the WASD keys to move the character around the world. Look out for the hidden Falcon's Feather to enable jumping with the spacebar. The character will swing a heavy slash if the E key is pressed, and Spin Attack when the F key is pressed. Watch out for those cooldowns though. Explore the Dungeon and find the Skeleton King who pulled you into its depths in the story mode. Test your abilities in the Delve mode and see how many levels you can clear.

# Technical Document

## System Requirements

- PC
- Mouse and Keyboard

## Code Structure

All enemies will have a collider on their weapons that will trigger health loss on the player if they collide. Shields will stop damage from occurring if they are in the process of blocking. Some enemies will have roaming functions while others will simply wait until the player is in range and then stalk them. The player will be able to control movement with functions in one main player controller. As the player earns more items and unlocks new forms of movement functions that were impossible to use earlier will become available to the script.

## Concerns and Alternatives

The biggest problem we could not solve in time is the inability to add NavMesh to tiles for procedural generation. This means that enemies in procedurally generated levels have to track the player directly without being able to use NavMesh to determine if they can walk there. They all have the ability to float and can walk through walls.