## Overview

Summarized in one sentence, the game is a cooperative networked dungeon crawler enriched with native virtual reality support.

The main objective is to create a cooperative dungeon crawler with VR and rogue-like elements. During a game, up to four diablo-like crawlers must work together to survive and work their way through a procedurally generated dungeon, supported by a dungeon master. The dungeon master is a god-like entity that can observe and influence the dungeon from a giant’s VR perspective as well guide and support the other players. The crawlers as well as the master working alongside each other to achieve a common goal will realize the theme of “Together” for this project.

This document will discuss the basic structure and mechanics of the game in question. As such, it is divided into the following sections: Crawler and Master gameplays, Combat system and technical details.

## Dungeon Setup

The dungeon will be generated randomly each time. Crawler players will be placed in different rooms separated from each other. The map will have fog of war for them and such, they will only be able to see the rooms each player has explored their self. The master, however, will be able to see the entire layout of the generated dungeon in order to make it possible for him to plan the best courses of actions and routes to the end goal.

Enemies and traps will be spawned inside the dungeon, invisible to both the master and the crawlers. Enemies will be visible only when a crawler player comes in visual range of them. This will ensure an element of surprise for all players. If the need to locate enemies within the dungeons arises for the master player, they will be granted abilities to see enemy locations for short durations.

## Crawler Gameplay

The crawlers will be played on a standard PC using keyboard and mouse. Each crawler will have a unique perspective of the map containing a real time view of their immediate surroundings and a structural view of the dungeon rooms they have explored thus far (i.e. Fog of War). This necessitates the presence of an intermediary party (the master) to act as a coordinator between the crawlers. Their primary tasks will be defeating foes, interacting with objects inside the dubgeon, reaching certain locations, collecting loot and the like.

Each crawler will have special abilities depending on class like mage, knight, archer, etc. Each specialized classes will have its strengths and weaknesses. Thus, a single crawler will not be able to master the dungeon alone. These classes will not only provide a different experience for each player but also give him or her a specific role in the team. A squad of multiple players will ideally pick different classes to complement each other’s strengths.

No levelling system, or a very rudimentary one, will be implemented in order to avoid programming complexity. The objective of classes and abilities will be to provide the feel of a role-playing game without actually creating an entire “Dungeon and Dragons”-like stat system.

## Master Gameplay

The master will ideally be a player using an HTC Vive. The dungeon will be mapped to the movement space of the system, so he can walk around the entire dungeon and focus on areas of interest intuitively. From the crawlers’ perspective, they will be able to see him as two floating hands and an abstract face representation floating just above the dungeon.

The role of the master player can be summarized in two words: “Support” and “Logistics”. He is the guide that lead the crawlers to their destination. This can be in the form of helping isolated crawlers avoid combat, bringing them together to form teams, aiding them in combat, coordinating their individual movements and so on. As such, the master player can be seen as the strategist of the group. The survival of the crawlers within the dungeon will rest ultimately on the master’s decisions.

The master players will have a complete layout of the dungeon along with the real–time positions of the crawlers. Enemies will not be visible to the master though to provide a challenge and an element of surprise. Hence, it will be important for the master to plan in case his plans go awry.

The master’s set of actions will include pointing in certain directions or placing physical markers to hint to players what they deem to be the correct course of action. This will allow them to coordinate the crawlers’ movements and guide them through the dungeon. The master player will also have his own set of abilities that can be used to assist the adventuring crawlers. These abilities can include radar to view enemy positions for short durations, traps and attacks to aid in combat, buffs like increased speed or damage for crawlers and perhaps even altering the structure of the dungeon! The goal of this is to provide the master player more to do than just being a passive observer. These abilities will be the means of the master player to interact indirectly, or directly, with the world and keep him engaged.

The master will perform his actions using gestures and placing or tossing physics-based objects within the VR space. The abilities of the master can have area of effect that affects both enemies and players. This way the accuracy of the gestures, support item placement and dungeon navigation is directly related to the actual movement of the player, giving them a much better feel of being the god-like entity inside the game.