Technical Design Document - Collide

## **Game Engine**

Godot 4.3 has been selected as the game engine, since it is versatile and capable of creating a 3d game with modern technologies.

### **3D Objects**

Player:

Round object with two legs, which will be a light color.

Mob:

Round object with two legs, which will be a dark color.

### **World**

Collision Detection:

Intersection between player and mob, which can be calculated by utilising the vector3 describing the position of each object. Furthermore to perform flocking behaviour collision detection between mobs is also present.

Physics:

Gravity will be the only implemented physic, which will prevent player and mobs from incrementally increasing distance to ground.

Interaction:

To interact with the world the arrow keys can be utilised to control the player.

### **Logics**

Game Logic:

When mobs collides a flocking behavior will be performed, which increases the possibilty of a collision between player and mobs.

Artificial Intelligence:

Mobs will move around in the world, and act as AI’s.

### **Networking**

To get a smooth multiplayer experience between multiple clients, peer-to-peer is nearly a most! This can be achieved with a real time protocol, such as webRTC.

### **Delivery Platform & Hardware/Software Requirements**

Delivery Platform:

Game will be avaiable on computer, since some of the peripherals is needed.

Hardware Requirements:

Minimum since a capable game engine is used.

Software Requirements:

Linux and Windows will be the only supported operating systems.