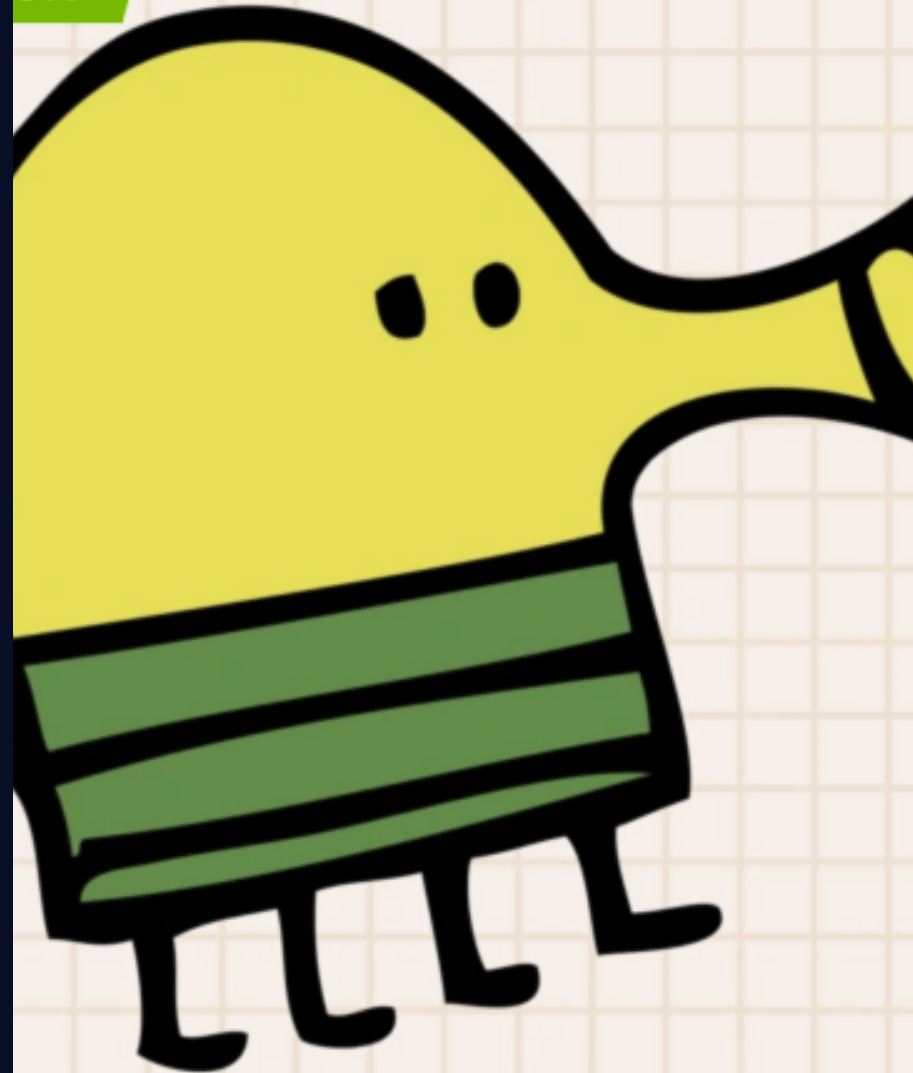# Milestone Report: 3D Doodle Jump

We're excited to present the final milestone report for our 3D Doodle Jump project. This report summarizes our progress, preliminary results, and future directions.

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Project Introduction

Game Concept

We are going to create a 3D, procedurally generated go-until-you-die plat former that feels fresh with better graphics and simulation methods for enemies.

Problem Description

This task is difficult because we're combining several advanced computer graphics methods that have never been used together before, so implementing them will be a challenge.

Development

We approach this problem by using the Unity engine and draw inspiration from original Doodle Jump. We will also consult academic papers and online resources for simulation and animation methods.

Preliminary Results
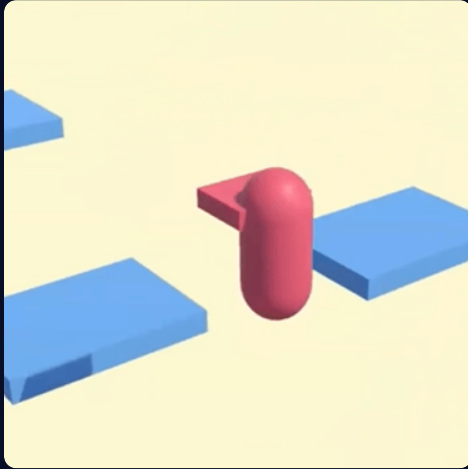
Player Movement and Third Person Camera

We created a PlayerMovement script for 3D Unity games that handles movement, rotation, and jumping. The script applies gravity and allows customization, providing a standard player movement system.
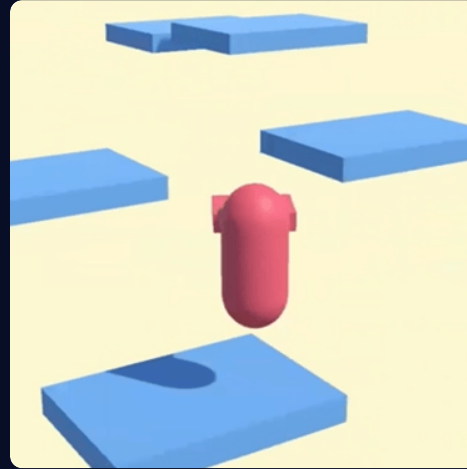
Procedural Platform Generation

We created a RandomPlatformSpawner script that generates random platforms as the player progresses, deleting those below and behind to prevent lag.
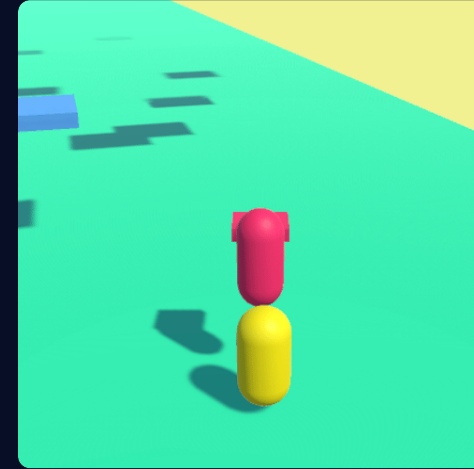
Enemy Types and Simulation

We created different enemy types as well as enemy spawning mechanics (using cluster AI) in the game, and incorporated similar death mechanic in the original doodle jump into our game.

Key Challenges

Technical Issues

Since this is our first time using Unity (or C#), there are a lot of unforeseen technical issues during the development.

Testing Issue

Lack of adequate game testing experience also makes it harder for first time developers to properly test the game.

Team Dynamics

Ensuring effective communication and collaboration over project duration while the team is fully remote was a key challenge.

Progress and Next Steps

Overall, our progress has been going according to plan. Our future work plan includes:

1 Replacing our primitive shapes with 3D models

2 Integrating the enemy AI with the player infinite level progression

3 Integrating various platform types with the random prefab spawning

4 (REACH) Adding animations