# Zense Project

# COVID DODGER

## INTRODUCTION

The name of the game is- 'Covid Dodger'. It is a 2D game in which the player is a person sitting on a vaccine shaped vehicle. The goal of the player is to avoid the coronaviruses that would come at him. As long as the player avoids hitting them, he moves forward. The score increases as long as the player moves and doesn't hit the Covid-19. If the player hits the coronavirus, then the game ends.

## MOTIVATION FOR THE IDEA

Nowadays everything is revolving around Covid-19. Whatever we do, coronavirus is involved in it. From that I got the idea that let us make a game related to coronavirus. After much brainstorm, got the idea of building a 2D runner game using Unity.

## IMPLEMENTATION

The game is made using Unity as the game engine. The scripts (i.e. the codes) for the game is written in C# language using the unity engine libraries. The GUI of Unity was also used to build the game.

The game has two scenes. One the main menu which displays the game title and two options i.e., Play the game and Quit the game. The quit Game option closes the game while Play Game option takes the user to the main game.

The game starts with the player moving in the left direction, sitting in a vaccine-shaped vehicle. Shortly, coronaviruses start coming at the player. The player has to dodge or avoid those coronaviruses. It can be done using the arrow keys to move the player up and down (the player can move only up and down). The goal of the player is to avoid being hit by coronaviruses, as long as he does this, the game continues and the score of the player increases.

If the player touches or hits a coronavirus, the game gets over. A game over panel appears before the screen with two options: Play again and quit game. By clicking the Play again option, the user is brought back to the back and the user can play the game again. Quit game option closes the game window.

## USING UNITY GAME ENGINE

The Main Menu of the game is made using the UI of the Unity Engine. The game objects like the player and the coronaviruses' sizes were adjusted using the same. The game ovel panel was also made using the Unity UI. The physical properties of boundaries to both the game objects were also given using it. The background sound tracks are put using the 'Audio Source' game component of Unity.

The interaction between the player and the coronaviruses, the spawning of coronaviruses and the incrementation of score was done using C# scripts and these were attached to their respective gaming objects. The Camera movement and the player's speed was also controlled using a separate script. The particle effect was done using particle sprite effect of unity engine.

## INSTALLATION AND USAGE

First, download the zip folder from the GitHub Repository. In the zip file, find a folder named 'Zense Unity Project'. In that, find a folder named 'Covid_Dodger'. Extract the content of this folder. Now, go to the location where the files are extracted. In order to play the game, double click on the 'Covid Dodger.exe' file. (The documentation of how to control and play the game is provided in the READ ME file.)

## FUTURE ASPECTS

Future aspects include creating more levels for the game with more speed and less spawning time of the coronaviruses. Since various variants of coronaviruses are coming up, we can develop coronaviruses with different powers like shooting at the player etc.

Changes such as sound effects when the player moves and when the mouse hover over the options can be added. The collision can also be made more creative using particle effects.

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