Social Distance Game

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Introduction

Due to the current situation provoked by the Coronavirus, I decided to work on an educational game to help face the Coronavirus pandemic. Players can become better at social distancing by playing this game. Social distancing means keeping a safe space between yourself and other people who are not from your household. If someone is sick and there are no people around, a virus cannot spread. To practice social or physical distancing, we have to stay at least 6 feet (about two arms' length) from other people who are not from our household in both indoor and outdoor spaces.

Game Tutorial

In this game, you are walking on a street while you must continue to comply with social distancing guidelines and remain two meters away from other people in the street. Therefore, you have to move to the right or left, in case people are coming inside your "safe zone". Your *safe zone* is shown by a green circle around you (Figure .1).

As the game goes on, more people appear and the characters move faster. Hence, keeping the social distance will be more difficult. Whenever someone enters your safe zone, the risk of infection increases. Your health is shown on the top left side of the screen by *heart* icons (Figure .2).
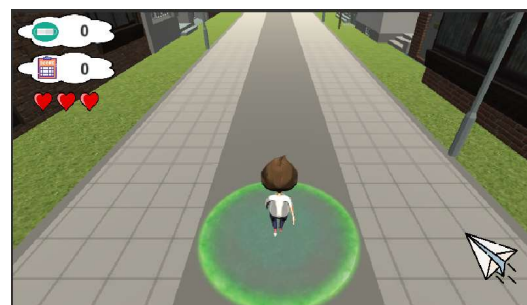
Figure 2

As you walk you can find some masks on your way (Figure .3). Collect them as much as you can. The number of collected masks is shown on the top left side of the screen by a *mask* icon (Figure .2).

Figure 1

Figure 3

If you want to have a superpower for a while, you can pass over the *angels* which are shown in Figure .4. The angels give you the ability to fly over the street and collect more masks.

Figure 4

You have to consider that collecting the masks is not the aim of the game. Your score will be computed by the number of masks you donate to people. You can donate the collected masks by pressing the *send* icon (Figure .5) while people are close enough to you.

Figure 5

The goal of the game is to donate masks as much as you can, before you are infected. Your score is shown on the top left side of the screen, below the number of collected masks (Figure .2)

If you become infected, the ambulance arrives to take you to the hospital (Figure .6).

Figure 6

Scripts

Amb

This class is written for controlling the time of instantiating the ambulance in the *GameOver* scene. Also, it shows the game over canvas after when the ambulance arrives.

AmbAnim

This class is associated with ambulance prefab. It controls the ambulance's animation.

AngelTime

This class is written for when the player is passed over an angel. In this case, it spawns some masks and clouds in the sky.

CameraMotor

This class controls the camera position. At the first of the game, it changes the camera position from the upper place to the down and then follows the player's position.

CanvasScript

This class is associated with the final canvas. In case the new score is more than the previous highest score, it changes it. Also, there are two functions in this class for the *Restart* button and the *Quit* button.

CollectAngel

This class contains a function for when the player passes over an angel prefab. In this case, it destroys the prefab and set a boolean variable to true.

CollectMG

This class contains a function for when the player passes over a mask prefab. In this case, it destroys the prefab and set a boolean variable to true.

GameData

Some important variables of the game are defined in this class. This class shows the number of collected masks and also shows the player's score. Also, it checks if the game is finished or not.

PeopleWalk

This class is written to define the speed of people. As the level of difficulty of the game increases, the new people's speed increase too.

PlayerMotor

This class controls player moving, by pressing arrow keys or tap on the screen in case of using a phone. If the player passes over an angel icon, it moves the player up. In this class, there are two functions too. One of them is to understand if people are entering the safe zone. In this case it decreases the health of the player. The other function is for when the send icon is pressing. In this case, if the collected masks are more than zero, a Boolean variable becomes true.

Rotation

This class is written to rotate the masks prefabs.

Score

In this class, the difficulty of the game changes after passing certain meters by the player.

ShootDir

This class controls if the sent mask is hit to a person or not.

ShowHealth

This class is for managing the heart icons of the canvas. It destroys one of the hearts in case a person enters to the safe zone of the player.

ShowAngel

This class spawns the angels on the street. After some meters passed by the player, it instantiates an angel in a random x position on the street.

SpawnMaskGel

This class spawns the masks on the street. After some meters passed by the player, it instantiates a mask in a random x position on the street. At the same time, it destroys one of the previous masks, if the number of active masks exceeds a certain number. Also, if the player passes over a mask, it destroys the mask and decreases the number of active masks.

SpawnPeople

This class works similarly to SpawnMaskGel class. It instantiates people in random x positions on the street.

SpawnStreet

This class spawns the street blocks after the certain meters passed by the player and delete the passed street block. The street blocks which are instantiated, are chosen randomly.

StartScript

This class is written to manage the start canvas, by defining two functions for two buttons of the canvas. The function for the first button, change the text, and the second function changes the scene.

TutorialManager

This class is used in *TutorialScene*. In this class, a function for the *ok* button is defined. This function manages the texts of the canvas and also creates prefabs that are used in the game and destroy them after representing their functionality.

Assets

The people in the street are chosen from "*Avatars Game Animations Bible Free Demo*" Package. This package contains few Demo characters and few animations. All the sounds in the game, except walking and flying sounds, are chosen from "*FREE Casual Game SFX Pack*". The walking and flying sounds are chosen from "*Classic Footstep SFX*" package. The mask and the angel prefabs are chosen from "*Easy Primitive People*" package. The ambulance prefab is from "*LowPoly Ambulance*". The objects in the streets are from "*Park Props Pack*", "*Simple City Pack plain*", "*Realistic Tree 9[Rainbow Tree]*" and "*UK Terraced Houses FREE*". The clouds are from "*Standard Assets*". The first character is from "*Character Pack: Free Sample*".