

# ViRush

## Week 1

- Team composition : Andrici Costina, Moisanu Stefan, Rameder Carol
- Type of game : Single Player PvE in 2D
- Game description :

We're taking the metaphorical fight against Coronavirus onto the battlefield. The player's main goal is to remain uninfected by strategically fighting waves of enemies (viruses, 5G antennas, microchips etc.) on a limited play area, using different kind of weapons (syringes, disinfectant gel etc. ), abilities (social distancing, immunity) and resources (fences, facemasks, ammunition, HP) .

- Core gameplay : A sprite which moves, dodges, shoots, builds
- Similar concepts :  
<https://play.google.com/store/apps/details?id=com.rebelbinary.onlyone&hl=en&gl=US>

## Week 2

- Chosen IDE : Unity
- What we have done :

We created a rectangular 2D-Tilemap for the map that is composed of 2 elements:

- middle rectangular: play area where the player can move freely
- out\_of\_play area: a border of spikes around the play area that keeps the player in

There is a player sprite that can move in 4 directions, which can attack by pressing the mouse .

We have taken the elements from the Unity Asset Store for map tiles and player movement animation .

To be done :

- create our own character's and weapons' design
- create the enemies that move fixed path
- implement interaction between enemies and player: attacks deal damage

### Week 3

What we have done :

- Created enemies that move and spawn randomly
- The player and the enemy can take damage; that damage is subtracted from their max health. If that health goes below 0, death animation is played and object gets destroyed
- Bullets deal damage and get destroyed on collision

To be done:

- Creating more play areas
- Implementing a way to move from one play area to another

### Week 4

What have we done:

- Creating 4 more play areas, containing enemies that move, spawn and take damage
- Creating a possibility to move from one area to another by teleporting

To be done:

- Making the area outside the playfield dangerous

- Creating the idea of health bar

Week 5:

What have we done:

- Making the area outside the play arena dangerous. The player instantly dies when leaving the authorized area.
- Implementing the idea of health. When touched by an enemy, the players' health is lowered. If the player ends up with no health, it dies.

To be done:

- Creating an animation for the moment when an enemy or a player dies.
- Displaying the health bar on the screen
- Creating different types of enemies

Week 6:

What have we done:

- Creating a new type of enemy: a bat that follows the player and constantly tries to damage its health by using its infected substance
- Creating its certain stopping distance and its certain retreat distance, among his own health properties.

To be done:

- Displaying the health bar on the screen
- Counting the number of destroyed enemies and display it on the screen

Week 7:

What have we done:

- Displaying the health bar on the screen (top left)
- Adjusting the teleporting function

To be done:

- Creating different types of projectiles having different properties
- Implementing different strategies for both the player and the enemy
- Adapting the game's characters to our actual theme

Week 9:

What have we done:

- Created different types of projectiles having different properties: the main viruses, spawned in each area, and the bats, flying around, following the player and spreading damaging substances.
- Implemented defending strategies for the player: a mask it can insert by pressing 'f' on the playground through which the enemies can't pass.
- Adapted the sprites' design to our theme: the enemies look like viruses, bats, chemical infected substances

To be done:

- Implementing a possibility to fill back the player's health bar
- Creating the possibility to change masks' orientation in order to strategically move and defend
- Animating the enemies

Week 11:

What have we done:

- Added hand sanitizer sources in order to improve the player's health
- The player can rotate the mask by right clicking it
- Creating animations for the enemies

To be done:

- Implementing quarantine over certain play areas which are full of coronavirus enemies
- Limiting the defending strategy resources

## Week 12:

### What have we done:

- Each play area has a certain source of viruses
- Implemented the quarantine function: the player can't teleport to another play arena if there are too many "coronavirus cases". It has to kill the enemies in order to lower down the covid index. You can see the state of an area by looking at the bottom right placed map.
- The player can use only 5 masks at a time. A mask disappears when it is hit several times by the enemies. If you choose to remove it by right clicking it, you can use it later.

### To be done:

- Display the current score and the highscore
- Display the remaining number of masks

## Week 13:

### What have we done:

- The spawning rate increases in time, which makes the idea of surviving even more difficult
- Created a new threat! There is a death threshold: if there are too many viruses in a room, the player dies. The game map with the infection progress is displayed on the screen (bottom right).
- The current score and the high score is displayed on the screen (top left).

### Brainstorming ideas:

- Implementing the game's structure: levels containing different waves of enemies having different skills and characteristics
- Creating enemies that move and spawn strategically
- Fences defending strategy ( with resources )
- Make the arena a limited platform

- Spawning different kind of enemies
- Implement an in game shop for buying and upgrading weapons, fences or abilities; dead enemies will spawn currency used in shop
- Give the player special abilities ( can be bought from store)
- Map composed of multiple play areas; the player can go to any of them without exiting play area by a mean of transport(trampoline, teleporter etc)
- Enemies spawn all the time; if the player doesn't kill them fast enough quarantine is laid upon that particular zone. Cops appear on exits and wont let u leave unless player presents declaration -> player must either reduce enemy count to lift quarantine or buy declaration from shop