

Snake

For LCOM's 21/22 project we propose a version of the game Snake.

This version will include single-player and multiplayer mode. In the latter case, one player plays on the keyboard and the second player uses the mouse.

When starting the game, a menu appears with the options to read the rules and instructions; to choose between single-player and multiplayer mode; to see the leaderboard and to exit;

The game itself has 4 objects: the snake (that has 3 lives represented by 3 hearts); the red apple (which increases the size of the snake), and two kinds of poisoned apples that differ on the damage they take: the black ones take 1 heart, and the yellow ones take 1/2 heart.

Throughout the game, the player moves the snake around the screen trying to catch the red apples (that appear randomly in the screen) while avoiding the walls and itself. If the snake touches either the walls or its body, the player automatically loses the game.

In single-player mode the poisoned apples appear randomly in the screen each x seconds (x will be decided later). However, in multiplayer mode, as said before, it's the second player that decides where the poisoned apples will appear.

The second player (the one that throws the poisoned apples) will have a 2 seconds cooldown, in which he won't be able to throw apples, and every 5 seconds, the apples he throws, switch between the black and the yellow ones.

For this project we intend to use the following components:

- **Video**, for the graphics mode.
- **Timer**, to save the time the player survived, and therefore calculate its score.
- **Keyboard**, to choose the option on the menu and to move the snake during the game.
- **Mouse**, for the second player to put the poisoned apples on the multiplayer mode.
- **RTC** to determine when the apples will appear on the screen, and determine the second player's cooldown on putting the poisoned apples.

WORKPLAN (week #1)

- Write project proposal;
- Create graphics;
- Game logics.

WORKPLAN (week #2)

- Keyboard;
- Timer;
- Animations;
- Mouse.

WORKPLAN (week #3)

- RTC;
- Leaderboard.

