

Project Proposal - T03G01

Snake.io

Brief Description:

Snake.io is a 2-player, where 2 snakes fight each other until the end of their lives. Or it can just be a snake eating fruits.

Functionalities desired:

- Single and multiplayer;
- A simple menu where the user can choose to play with a friend or alone, or exit;
- Snakes increase in size when they eat the food that spawns;
- A piece of food spawns randomly every time the current one is eaten;
- A snake dies when the other one touches it or when it collides with a wall;
- The last standing snake wins;
- Make snake spit venom and split when hit;
 - if snake goes below spawnSize it **dies**

Devices and their roles:

- Timer: Controls the game's frame rate and tracks the time the game has taken;
- Keyboard: Controls the snakes' movement;
- Mouse: Select an option in main menu;
- Graphics: Handles everything related to the display;
- Serial port: Ensures the multiplayer game's version.

Workplan:

- **Week1**
 - Design state machines;
 - Design Events, handlers, etc.;
 - Implement all devices except the serial port;
 - Design API's and Data Structures;
- **Week2**
 - Implement the Main Menu (it will be useful to test the Video Graphics);
 - Draw game elements to the screen;
 - Implement game logic;
 - change snake direction
 - eat fruits
 - grow
 - **die**
 - Test API's.
- **Week3**
 - Implement serial port;
 - Implement Multiplayer features;
 - Generate Doxygen;
 - Finish project report.