# PORTO FEUP FACULDADE DE ENGENHARIA UNIVERSIDADE DO PORTO

## **Project Proposal**

T01G03 LCOM - 2021/22

## **Project description**

This project is based on the "bomberman" game, which has different levels. Each level has an arena with many obstacles where the player has to defeat multiple monsters, picking up power-ups and planting bombs to destroy those obstacles and to kill the monsters. The bombs can explode in vertical and horizontal direction, and the explosion becomes larger with the use of power-ups. His only hope is to escape through the exit.

#### Devices to be used

- Timer
  - Keep a fixed frame rate in the main game loop.
- Video Card
  - o Show menu and game interface.
  - Draw all game objects and enemies.
  - Usage of double buffering and page flipping techniques, in order to prevent flickering.
- Keyboard
  - User input to interact with the character (Space Bar and WASD).
- Mouse
  - Select options in the main menu.
- RTC
  - Inform the user about the current date and time.
- Serial Port
  - Multiplayer mode with another player on another PC.

#### Work Plan (3 weeks)

- 1. Timer and Video Card
- 2. Keyboard and Collision Detection
- 3. Mouse, RTC and Serial Port

