

# T04G07 - Pong

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- Description:

Pong is a two-dimensional game that simulates table tennis. The player controls a paddle by moving it vertically. They can compete against another player controlling a second paddle on the opposing side. Players use the paddles to hit a ball back and forth. In this version, players have powers to increase competitiveness.

- Functionalities desired:

- menu: where the player can choose the game mode;
- player vs computer: the player disputes the match against the computer;
- player vs player: using serial port (if achievable) it is possible to play between two computers;
- movement with keyboard: the player will be able to move using the keyboard;
- esc to leave the game or return to the menu;
- powers triggered by in-game events:
  - place a wall with the left button click;
  - place a teleport with the right button click.

- Device's roles:

- graphics: rendering the menu, the ball, the paddles and the powers in the game;
- keyboard: get user input in menu and in game to move paddles;
- mouse: positions and triggers powers in the game;
- serial port: to allow Player vs Player feature;

- Workplan:

- 1st week: graphic of ball moving and menu;
- 2nd week: keyboard input and game mechanics;
- 3rd week: mouse inputs and serial port.