Computació Gràfica i Multimèdia

Màster en Enginyeria Informàtica

Curs 2022/23

Project description

This year we will develop a project devoted to the creation of a "Pacman"-type videogame.

The project is composed of four work packages. This document describes the second one.

Work plan for the second work package

The second work package is composed of the following tasks:

- Inclusion of food elements to the map.
- Inclusion and animation of the main character.
- Inclusion and animation of enemy characters.

Task 1. Inclusion of food elements to the map

Some details are given next:

- At the beginning of the game, each corridor-type square contains a food element.
- The room at the center of the map (the starting point for enemies) does not contain food.
- When the main character moves to a square containing food, it eats the food element so that the food element disappears from the square.
- A food element can be represented as a little square located at the center of the square.

Task 2. Inclusion and animation of the main character

Some details are given next:

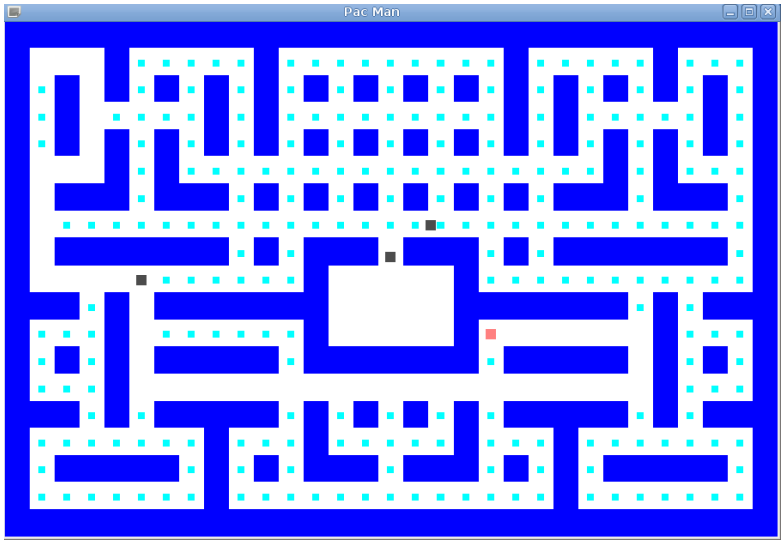
- The main character can simply be represented as a square or a circle.
- Its objective is to eat all the food elements in the map.
- The main character moves from the center of a square to the center of a contiguous one. Movements are indicated through the keyboard.
- Its movement must be smooth and implemented using variable frame rate.
- You can decide which its starting point in the map is.

Task 3. Inclusion and animation of enemy characters

Some details are given next:

- An enemy character can simply be represented as a square or a circle.
- Its objective is to collide against the main character.
- Its movement must be smooth and implemented using variable frame rate.
- An enemy character moves from the center of a square to the center of a contiguous one. Its movements are decided autonomously. Implement it as an agent that takes its own decisions.
- The number of enemies on the map can vary. Implement them so that your application can accommodate the dynamic addition and dynamic deletion of enemies.
- The starting point of enemies is the room located at the center of the map.

An example is next shown.



Deadline

This activity has to be handed in before **November, 3rd, at 18.00h**, by uploading a **zipped file** containing the source code through the corresponding activity of the virtual campus.

Include **only** ".c", ".cpp" and ".h" files together with a "Makefile" script which compiles the project in a Linux console.

Each group will be interviewed about the uploaded activity.