PAC-MAN

One level Pac-Man Clone | C++ | SDL

Starter Project

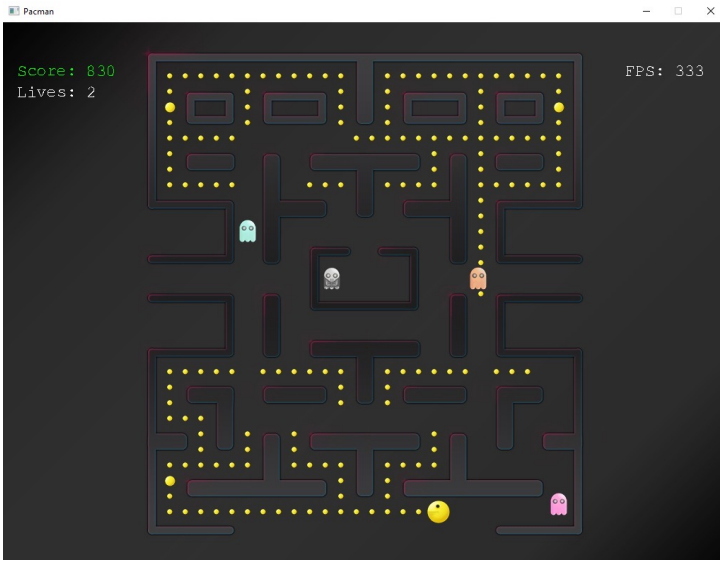
This is a starter gaming project in C++ with SDL. Fully accessible to understand concepts like 2D scenarios creation, characters with sprites and properties, IA behaviors, interaction, geometric positioning and logic algorithms.

Strategy Patter

For develop the several ghosts behaviors it was used Strategy Design Patter. This is a excellent case to apply it for understand the concepts and advantages of write flexible and reusable code.

Dijkstra's Algorithm

There are several algorithms to find the path to chase Pac-Man in the maze. Here, the ghosts uses Dijkstra Algorithms, a very simple algorithm to find the shortest path between nodes in a graph. Do you like recursion?



Mechanics

You can move the avatar with the ← ↑ → ↓ keys and as you start to eat dots the ghost will start to come out from their lair; Blinky, the red ghost, start outside insta chasing Pac-Man, when is less than 97% dots Pinky will start to ambush avatar by 4 tiles ahead. Inky, the cyan, ambush Pac-Man calculating the path depending of Blinky's position when less than 80% dots. And finally Clyde at 70%, the orange chase around Pac-Man in a random like.

Each ghost start chasing for 20 seconds and then will scatter for 4 seconds (each ghost got his corner) and will repeat the cycle indefinitely. Remember that eat a big dot will afraid the ghost by 5 seconds and if they are eaten by Pac-Man, will be dead (can a ghost die?) for 10 seconds traveling back to respawn.