Team Members:

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Project Description:

In this project, we were tasked to create a functioning model of the game "Pac-Man", using C++, SFML and all the skills we had learned throughout the course. This project has definitely increased our practical coding and algorithm formation skills, as we learned to implement the theories we studied in a realistic manner. Throughout the building process of this final project, each member of our group has experienced working on a task as a group, and working on a task individually. While our final product cannot be described as perfect or flawless, we, as a team, are definitely proud of what we have achieved. In our product, we have created the game maze using a text file of -1's and other positive integers, with -1's representing the walls of the maze, and the positive integers being the walkable parts of the maze. A 2D array was used to represent the rows and columns in the maze. Classes were made to objectify all dynamic objects in the game, and SFML was used to visualize the game on-screen. Eventually, our game resembled the original Pac-Man game sufficiently; however, we did struggle with the implementation of the ghosts using graphs. Therefore, we tried our best to do a similar job to the graph algorithm, yet it is not very accurate. All in all, we created a decent game that still requires improvement.

Classes Description:

In the game, we used a total of 8 classes. These classes were for:

The maze, the main menu, pacman, the food (pellets), and each of the ghosts.

There was a parent ghost class, which each of the ghost classes inherited from; however, as each ghost moves differently, each child ghost class (blinky, inky … etc.) had a unique move function. The pacman class contained the functions needed for pacman's movement through the maze. The maze class contained the functions needed to display the maze. The menu class is responsible to create a main menu before the start of the game, and the pellets class has the necessary functions to display the pellets on the walkable parts of the maze.

Members Contribution:

In writing and implementing the code to this game, we have all contributed logically in brainstorming and testing the parts other members were working on. We have all together decided on the classes layout for the project initially, and made adjustments according to our experiences in writing the code. Each of us experienced creating the classes, and using all necessary SFML functions to display our work. We have all also searched online for more resources to try to give us more tools to create a better project.

Thank you.