

Andrew Liu

Period 1

Group Name: ALPlaysGames

Group Member(s): Andrew Liu

Project Title: Arcade Games

**Description:** I built many different arcade games into one program. The first game I have is TicTacToe, where the objective is to create horizontal, vertical, and diagonal lines of three of the player's own symbols. In my program, you can play tic tac toe with two players, or against the computer. The second game that is implemented in my program is the snake game. The objective of this game is to grow as large as possible by eating the "fruits" that are randomly placed on the grid. The third game I implemented was a two-player pong game. This version of pong is played until one player gets a score of 3. Two players control their own paddle and try to prevent the pong ball from hitting the wall on their side. The last game I implemented is a wack-the-mole game. The user will have ten seconds to hit as many moles as they can. These moles will randomly spawn anywhere on the screen. In this project, I combined all four of these games into one navigable arcade-styled program.

### Functionalities

- Main Menu
  - Has a list of all the available games that can be played. Click T for TicTacToe, S for Snake game, P for Pong, and W for whac-a-mole. After the completion of each game, pressing the key M will bring the program back to the main menu and you can then play other games.
- TicTacToe
  - Two modes: One-player and two-player modes.
  - One-player mode: There is a random algorithm that just plays a move randomly. It will run instantly after the player makes the move.
  - Two-player mode: O goes first, X goes second, consecutive clicks switches players
- Snake
  - Classic snake game, fruits randomly spawn and the snake is controlled by the up, down, left, and right arrows.
  - The snake speeds up very quickly after eating each fruit, it caps out at a speed of 4
- Pong
  - Two-player game: the left paddle is controlled by the W and S keys and the right paddle is controlled by the up and down arrows.
  - The velocity of the ball is fixed in the X direction but random in the Y direction to ensure that the game is fast-paced, but also random and requires the player to move their paddle quickly.
- Wack-A-Mole
  - Moles randomly spawn on the screen and the user needs to click on as many as they can in a 10-second time frame.
  - There is a high score counter for this game and is stored in a file called highmoleScore.txt

**How it works:** Everything is self-explanatory. There are brackets [] around keystrokes that will lead to certain actions. For example, Snake [S] means press S for the snake game. Controls are given for pong and whac-a-mole has a short description of how to play. Everyone should be able to know how to play TicTacToe and Snake. Directions are given throughout the program, just read them :)

