

Computer Science Foundations - Final report

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# 2048 Game

Team 4

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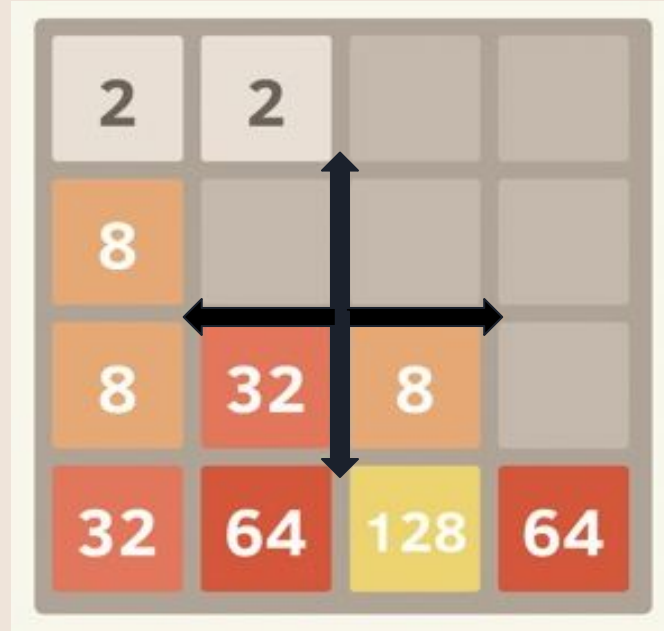
# Outline

- What's 2048 game
- How did we make 2048 game by Python
- How to play (Demo)
- Questions

# What's 2048 Game

The 2048 game is a puzzle game where the goal is to combine numbered tiles to reach the tile with the number 2048. The standard rules for the 2048 game are as follows:

- **Game Board:** The game is played on a 4x4 grid.
- **Tiles:** The game starts with two tiles, each having a value of either 2 or 4, placed randomly on the grid.
- **Tile Movement:** The player can move the tiles in four directions: up, down, left, and right. All the tiles on the board will move in the chosen direction as far as possible, until they either hit the edge of the grid or another tile.
- **Merging:** When two tiles with the same number collide as a result of a move, they merge into a tile with a value equal to the sum of their values. For example, if two tiles with a value of 2 collide, they merge into a single tile with a value of 4.
- **Scoring:** The player's score is the sum of all merged tile values. The goal is to achieve the tile with the value 2048.
- **Game Over:** The game is over when there are no valid moves left (i.e., when the grid is full, and no adjacent tiles can be merged). The player's final score is recorded.



# How did we make 2048 Game in Python

- Set up a Display function
- Set up Merging functions
- Start Board Setup
- Game Mechanisms Setup
- Win/Loss Conditions
- Game Loop

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Demo

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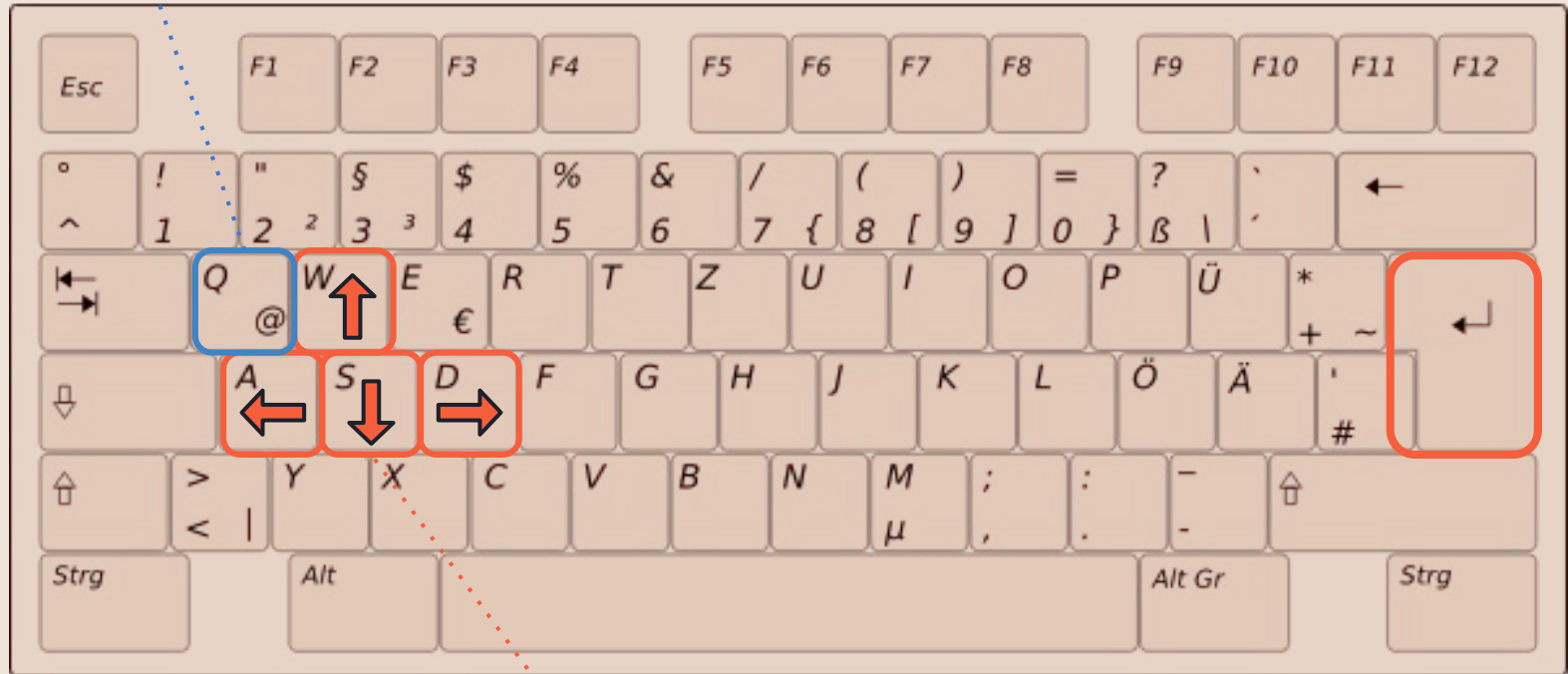
## Play from initial game state

1. Open and run `game.py`
2. Open and run `execution.py`
3. Enter 'w' for Up, 'a' for Left, 's' for Down, 'd' for Right
4. Enter 'q' to quit the game
5. Enter 'y' if you want to save the current game state before quitting  
Enter 'n' if you don't want to save

## Resume the game

1. Open and run `execution.py`
2. Enter 'y' to resume the previous game  
Enter 'n' if you don't want to resume the previous game

Quit



Control the move



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Questions?

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Thank  
You !

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