

■ 2048 Game — Python Edition

■ Overview

The 2048 Game is a single-player sliding tile puzzle built using Python.

The goal is simple: combine numbered tiles to create a tile with the number 2048.

Each move slides all tiles in one direction, merging identical tiles.

■ Game Rules

1. Use the arrow keys (↑, ↓, ←, →) to move tiles.
2. When two tiles with the same value touch, they merge into one with the sum of both values.
3. After every move, a new tile (2 or 4) appears at a random empty spot.
4. The game is won when you reach 2048.
5. The game ends when there are no possible moves left.

■ Requirements

Make sure you have Python 3.8+ installed.

■ Install dependencies

If using Tkinter (default GUI):

```
pip install tk
```

If using Pygame (for advanced UI):

```
pip install pygame
```

■ How to Run

1. Clone or download the project:

```
git clone https://github.com/yourusername/2048-python.git
```

```
cd 2048-python
```

2. Run the game:

```
python 2048.py
```

3. Use the arrow keys to play and try to reach 2048!

■ Project Structure

```
2048-python/
```

```
■■■■ 2048.py # Main game file
```

```
■■■■ game_logic.py # (optional) Handles core logic
```

```
■■■■ gui.py # (optional) Tkinter UI file
```

```
■■■■ README.md # Project documentation
```

```
■■■■ assets/ # Images, icons, sounds (optional)
```

■ Features

- 4x4 interactive grid.

- Score tracking system.
- Detects Win (2048) and Game Over states.
- Option to Restart the game.
- Smooth tile movement and merging animation (if using Pygame).
- Simple and beginner-friendly Python code.

■ Future Improvements

- Add Undo Move functionality.
- Add Leaderboard / High Score saving.
- Add Custom grid size (e.g., 5×5).
- Add Dark mode or themes.

■■■ Author

Your Name

■ your.email@example.com

■ <https://github.com/yourusername>

■ License

This project is open-source under the MIT License.