

Presentation



Development Of The Game: Super 2048

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Project Objective

To design a 2048 grid with additional features using modern Programming language: Python

  SUPER 2048			
256	8	2	
2048	32	4	2
1024	64	8	4
256	32	16	8

About The Game

- Super 2048: $4 * 4$ grid.
- Tiles are moved in four directions.
- Two similar tiles merge.
- Game objective: To create '2048' tile.
- Modes: Normal and X Mode
- Super tile.

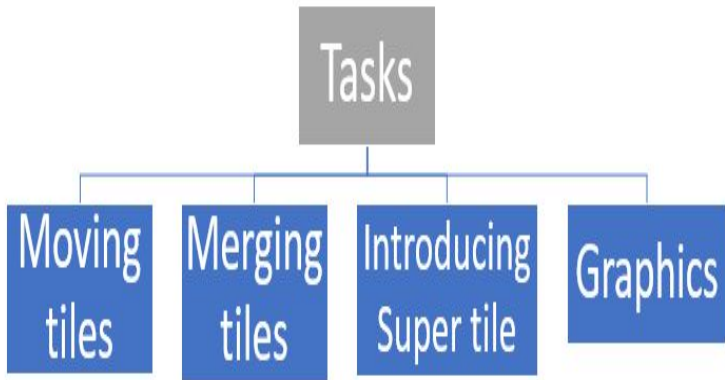
Super Tile

- 1 It appears when 3 merges take place in a single move.
- 2 Checks for the maximum value on the grid.
- 3 Raises the value of maximum tile by 4.

Requirements

- 1 Programming language: Python
- 2 Graphics Platform: Pygame
- 3 Python3 Interpreter
- 4 Operating System: Linux
- 5 Project Documentation: \LaTeX

Tasks



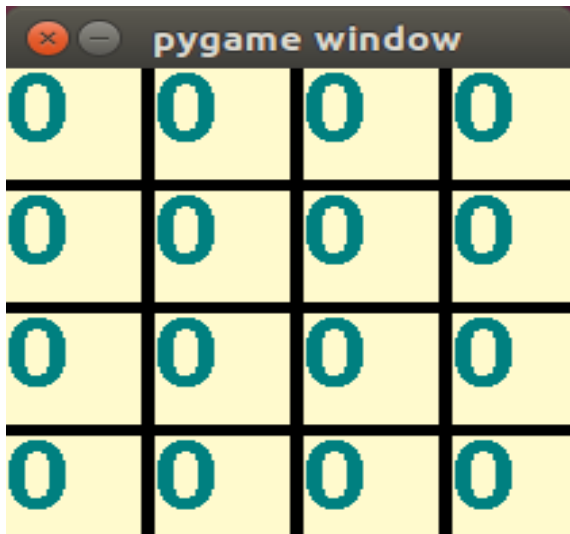
To Learn

How to implement Python coding for Game Development using PyGame

Progress

- 1 Day1: Printing a grid.
- 2 Day2: Printing a list of numbers on a grid.
- 3 Day3: Moving tiles by one-step in all directions.
- 4 Day4: Moving and Merging tiles in four directions.
- 5 Day5: Syncing Pygame and Python code.
- 6 Following week : Super tile.

Output



```
15wh1a05b4@ts-w1se1:~/Project/source$ python3 sample.py
```

```
0 0 0 0
0 0 0 0
0 0 0 0
0 2 0 0
```

```
enter move : r
```

```
0 0 0 0
0 0 0 0
0 0 2 0
0 0 2 0
```

```
enter move : u
```

```
0 0 0 2
0 0 2 0
0 0 2 0
0 0 0 0
```

```
enter move : l
```

```
0 0 2 0
0 2 0 0
0 2 0 0
0 0 0 0
```

```
enter move : d
```

```
0 0 0 0
0 0 2 2
0 2 0 0
0 2 0 0
```

```
enter move : u
```

```
0 0 2 2
0 2 0 0
0 2 0 0
0 0 0 0
```

```

enter move : u
8      16      8      8
4      2      4      4
2      0      2      4
0      0      0      0
enter move : u
8      16      8      8
4      2      4      8
2      2      2      0
0      0      0      0
enter move : u
8      16      8      16
4      2      4      0
2      0      2      0
0      0      0      0
enter move : u
8      16      8      16
4      2      4      0
2      0      2      0
0      2      0      0
enter move : u
8      16      8      16
4      4      4      2
2      0      2      0
0      0      0      0
enter move : u
8      16      8      16
4      4      4      2
2      0      2      2
0      0      0      0
15wb1a@5b4@ts-wi-se1:/B5o1f

```

Normal Mode

256	8	2	
2048	32	4	2
1024	64	8	4
256	32	16	8

X-Mode



Step before Supertile

SUPER 2048 (on ts-wise1) ×			
256	32	8	4
	2	8	4
		2	2
			2

Supertile

SUPER 2048 (on ts-wise1) ×

1024	32	16	8
	2	2	4
	2		

Challenges Faced

- 1 Printing a list on a grid.
- 2 Merging the Like-tiles.
- 3 Introducing Super tile.

Statistics

Category	Python	Pygame
Lines of code	149	41
Number of Functions	9	1
List of Functions	Random tile Up move Up merge Down move Down merge Left move Left merge Right move Right merge	Print Tiles

Bibliography

- 1 www.stackoverflow.com
- 2 www.pygame.org
- 3 www.youtube.com
- 4 docs.python.org