

2nd Assignment

Due date: August 6, 2019

Possible demonstration day: August 7, 2019 Starting early in the morning,

2048

2048 is a tile based game to join the numbers and get to the 2048 tile! Arrow keys will be used to move the tiles. When two tiles with the same number touch, they merge into one. All tiles move to the arrow direction and merge operation take place starting from the last one on the movement direction. Play the game at (<http://2048game.com/>) and understand the rules clearly.

Implementation will be done for text screen. There are four directions to move: right, left, up, and down. Although the original approach requires a 4 by 4 cell ground, it could be any value and not necessarily square. (Manageable through settings with default 4 by 4.) All the tiles (values) to appear initially on the board could be either 2 or 4 in random. However this randomness should be manageable in terms of overall probability, such as 70% 2 and 30% 4. This value has to be manageable through settings with a default value of 70% 2.

Scores has to be shown on line. Player has to type in its name and at most best ten scores should appear along with date of each game. The game can be saved and uploaded at any time. Since there is no server designed for managing all data files will be kept locally.

There are two modes in the game: game (moves) mode and command (request) mode. In the game mode four directions (U: Up; D: Down, R: Right, and L: Left) as well as save game (S) and switch to command mode (C) are comprises of the set of possible inputs. In the command mode seven inputs are possible Q: Quit the game, P: New user, I: User information, H: To print a help page on game, R: Resume a previously saved game, D: Remove a previously saved game, and N: Start a new game. Please note that maximum of 5 games can be saved per user and they are accessible through numbers 1-5 which will be used for R and D operations in command mode. Best score is the best of all using the same computer. User information should include the best 5 results along with date and time of the instances.

Plagiarism will not be tolerated, You may be asked to make a demo. Features of the program should be clearly written in a single page report. Your achievements as well as the missing issues should be listed in the report.

A typical run is attached. However I would suggest you to play the game a number of times if you have not play 2048 before.

You may ask further questions on the game and assignment on Thursday August 1, 2019 during lecture hours.

Note that your codes will be run on ssh machine for testing!

>2048

Enter your name: Turgay

Welcome Turgay!

You are a new player in this machine.

Do you need help? Y

The aim is to get to the 2048 tile by merging two consecutive tiles in one direction.

Request? N

Score: 0

Best Score: 0

		2	
	2		

Move? R

Score: 0

Best Score: 0

			2
	2		2

Move? R

Score: 4

Best Score: 4

		2	
			2
			4

Move? R

Score: 4

Best Score: 4

			2
			2
		2	4

Move? D

Score: 8

Best Score: 8

			2
			4
		2	4

Move? D

Score: 16

Best Score: 16

			2
	4	2	8

Move? L

Score: 16

Best Score: 16

			2
2			
4	2	8	

Move? R

Score: 16

Best Score: 16

	2		2
			2
	4	2	8

Move? D

Score: 20

Best Score: 20

	2		
	2		4
	4	2	8

Move? D

Score: 24

Best Score: 24

	2		
	4		4
	4	2	8

Move? R

Score: 32

Best Score: 32

			2
2			
			8
	4	2	8

Move? R

Score: 32
Best Score: 32

			2
			2
		2	8
	4	2	8

Move? D

Score: 56
Best Score: 56

			4
2	4	4	16

Move? R

Score: 64
Best Score: 64

		2	4
	2	8	16

Move? S 1

Game 1 is saved!

Request? Q

And program terminates

>2048

Enter your name: Turgay

Welcome Turgay!

You have a previously saved
game!

New Game or Resume Game

Request? R 2

No recorded Game 2 to resume

Request? R 1

Score: 64
Best Score: 64

		2	4
	2	8	16

Move? R

Impossible move!

Try again!

Score: 64
Best Score: 64

		2	4
	2	8	16

Move? U

Score: 64
Best Score: 64

	2	2	4
		8	16
			2

Move? S 2

Game 2 is saved!

Request? N

Score: 0
Best Score: 64

			2
2			

Move? L

Score: 0
Best Score: 64

2			2
2			

Move? L

Score: 4
Best Score: 64

	2		
4			
2			

Move? S 3

Game 2 is saved!

Request? Q