PROJECT NAME: 2048

GROUP NUMBER: 08

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Problem Statement

To Develop an Addictive game for people who like to play with numbers called 2048 Puzzle Game. 2048 is a single-player puzzle game in which the objective is to slide numbered tiles on a grid to combine them and create a tile with the number 2048. It can be regarded as a type of sliding block puzzle.

Specifications

RULES:

1. 2048 is played on a simple grey 4×4 grid.
2. Tiles slide as far as possible in the chosen direction until they are stopped by either another tile or the edge of the grid.
3. If two tiles of the same number collide while moving, they will merge into a tile with the total value of the two tiles that collided.
4. The resulting tile cannot merge with another tile again in the same move.
5. The game ends when no more new tiles can be placed on the grid and no tiles can be combined.
6. When the player has no legal moves (there are no empty spaces and no adjacent tiles with the same value), the game is over.

SEQUENCE OF PLAY:

The 2048 game starts with an empty 4 x 4 grid. Two tiles are placed on the grid at random locations. The tiles will either have a 2 value or a 4 value. There's a 90% chance that a new tile will have the 2 value and a 10% chance that a new tile will have the 4 value. You use the arrow keys, or the W,A,S,D keys to slide the tiles up, left, down, or right. All of the tiles move as far as they can in that direction.

When two tiles of the same value are next to each other, and you press the arrow key in that direction, they combine to form a tile with the next highest power of 2. For example, when two 2 tiles are in the top row and you press the right or the left arrow key, they combine to

form a 4 tile. Two 2 tiles combine to form a 4 tile. Two 4 tiles combine to form an 8 tile. Two 8 tiles combine to form a 16 tile. And so on.

One new 2 or 4 tile is placed in a random empty location each time the tiles are moved and / or combined. You can find 2048 strategy tips in various places on the Internet. The main idea is to keep the highest value tiles in one of the four corners. There's some luck involved, as the new tiles appear in random locations.

SCORING:

A scoreboard on the upper-right keeps track of the user's score. The user's score starts at zero, and is incremented whenever two tiles combine, by the value of the new tile. As with many arcade games, the user's best score is shown alongside the current score.