Final Check-in

Project 2048 Game

CS240

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GitHub Repo: <https://github.com/D4KLRE/Project_Game_2048>

What progress have you made?

We have finished the 2048 Game including additional functions.

What do you still have left to do?

Nothing left to do.

How have you implemented/utilized concepts from this course?

We use algorithm calculation to look for efficient calculation of multiple game logics. And we implement our own arraylist and stack to achieve spawn and undo methods.

Give two examples of design decisions you have made and why you made those specific decisions

After looking into how 2048 game work and having a discussion, we decided to write move and merge methods separately because this is more efficient. The running time is O(). By contrast, the running time of a moveAndMerge method is O().

We achieved the undo method by implementing our own stack of saves. Every time the user perform an action (move and merge up/down/left/right), a save of grid will be generated and pushed into the stack. Instead of recording every change of tile to achieve the undo method, this is more efficient and easier.

Have you started testing your project? If so, how?

We have tested our project many times by playing the game, creating/modifying/removing highest score file, inputting invalid number after being prompted to choose the size of new grid or position of tile to be destroyed, doubled, or spawned.