



HACETTEPE UNIVERSITY
DEPARTMENT OF COMPUTER ENGINEERING

BBM203 SOFTWARE LABORATORY I
2020 FALL
ASSIGNMENT I

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November 19, 2020

1. SOFTWARE DESIGN NOTES

(I executed with “g++ *.cpp -std=c++11 -o test”)

1.1 PROBLEM DEFINITION

In this experiment, we tried to make a Klondike Solitaire game with the provided text files. Solitary has stock, waste, foundations, pile areas, and in this game we are trying to use the cards to swap or move these cards to the areas mentioned above and make moves to win the game. And we are expected to develop the Solitaire card game by using using the arrays, that we have created using text files correctly.

1.2 SOLUTION

1.2.1 MY APPROACH

In this problem, the most important part for me was to convert the deck text file to array that I could use most conveniently.

So, I created 2 arrays for deck. The first is for recording cards and the second is for recording open and closed cards. And I decided to make these 2D array in order to make changes more easily, that is, to change the indexes easily.

“On my deck arrays”:

In the row 0 : I use for cards in the stock

In the row 1: I use for cards in the waste

In the row 2, 3, 4, 5 : I use for 4 foundations

In the row 5, 6, 7, 11, 12 : I use for 7 piles

So, that part was the most important part for me.

1.2.2 CLASS DIAGRAM

In my “ReadingClass” class, I converted text files to arrays and using the array related to this command, I called methods according to the commands in this.

In my “OutputFile” class, I created an output file in this class. I wrote methods to correctly print my “deck array” into output text file.

In my “ArrayClass” class, I wrote methods to organize my arrays related deck.txt according to these commands (move pile,move waste ...).

1.2.3 Explain in what parts of the program you have used the arrays as data structure. Where did you use arrays and for what purpose?

I used arrays for saving commands and cards.

For commands, I created “*commands array*” (local) array for command.txt. I saved commands to call methods accordingly

For cards, I created “*deckarray*”(global). and “*openCards array*”(global) from deck.txt.

In “*deck array*”, I saved my card names I updated indexes of cards accordingly commands.

In “*openCards array*” I saved visible or not visible cards. For this to be understood, I gave 1 if is visible, else 0 if they is not visible.

Using these two arrays, I can easily print in the output file.

I used these arrays to record the current state of my game and to make arrangements comfortably.