



Hacettepe University
Department of Computer Engineering

2020-2021 Fall Semester

BBM 201 Software Laboratory I
ASSIGNMENT I

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1-)About the game

Solitaire is a game that requires 1 player and a standard 52 deck of playing cards. The objective of Solitaire is to organize a shuffled deck of cards into 4 stacks (one for each suit) in ascending order (Ace to King).

2-)Software design notes

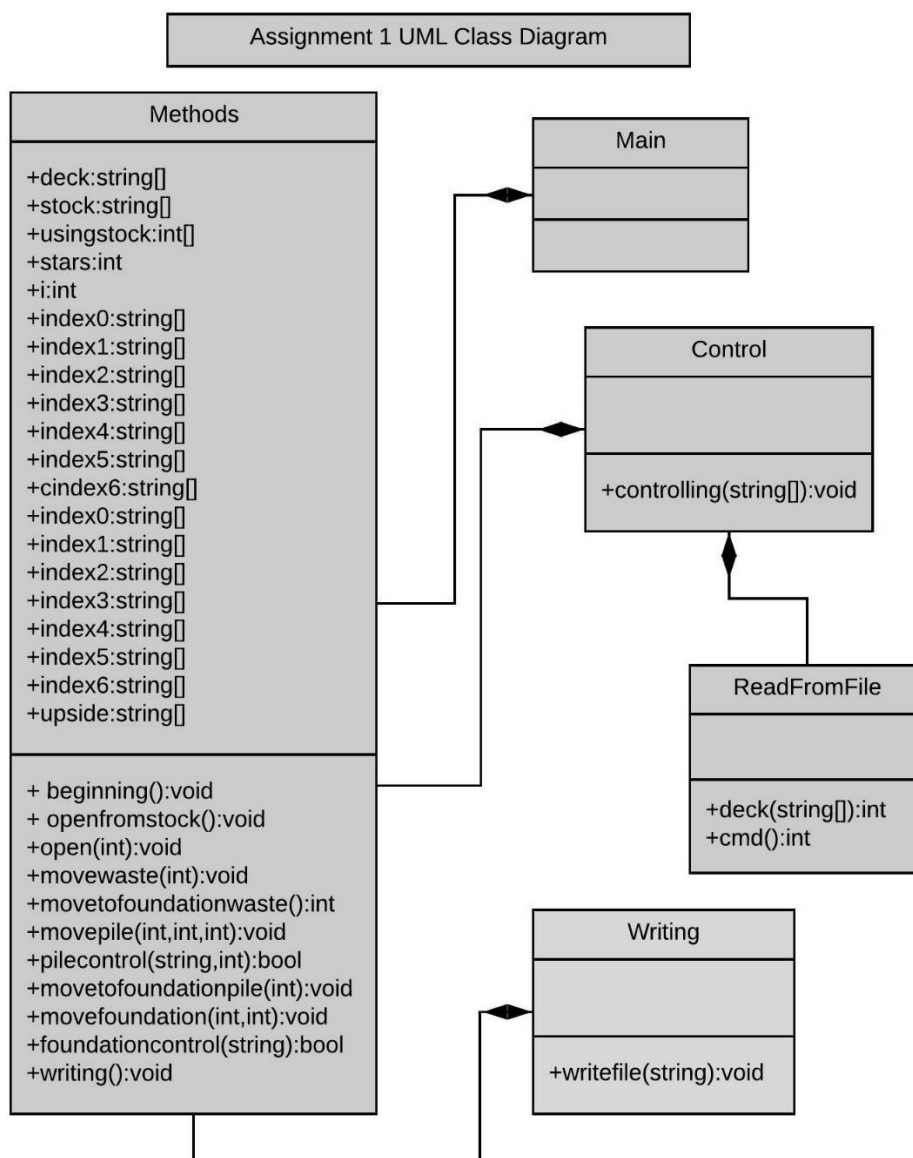
2.1.Problem:

In this assignment, it was asked to write the game named solitare as explained above with C++ codes. According to game rules, we had to check certain situations and place the cards correctly with using arrays and basic C++ structures.

2.2 Solution:

*2.2.2 Aproaching : I think first design is important before writing code so, I created a structure of assignment in my head. For easy understanding of codes, I defined five different classes. These are Main, ReadFromFile, Control, Methods and Writing. Every method was splitted by missions.

*2.2.3 Class diagram and definition :



Main Class:

In this class, I created Methods' object to using its method.

ReadFromFile Class:

I got elements line by line from "deck.txt" and "commands.txt". I was checked each line of commands.txt and sent it to the Control Class and I added every card in "deck.txt", to the array.

Control Class:

It checks which method the lines it gets from ReadFromFile. According to type it sends different methods in Methods Class

Methods Class: It makes moves in the game , it sends Writing class by the cards and commands also wrong conditions, it specifies "Invalid Move".

Writing Class:

Its gets element from Methods to write a new txt file,

***2.2.3 Using Array:** This assignment is based on arrays as requested.

Looking at the Above Class diagram, Methods class has a lot of arrays. This arrays' purpose are;

- Index0 to Index6 are using to store a cards respectively.
- Cindex0 to Cindex6 are using to specify closed cards and after using game methods opened cards.
- Deck array is using to store cards at piles.
- Stock array is using to store cards at stock
- Usingstock array is using to define and delete used cards in stock array
- Upside array is using to write row that include every element at top.

3-)Important note about the assignment

After compiling, you need to use, `dos2unix <deck_file> <commands_file>` to not get an wrong representation.