

Hacettepe University

Computer Science and Engineering Department

Name and Surname	:Kaan Tunçer
Identity Number	: 21946644
Course	: BBM203
Experiment	: Assignment 1
Subject	: Arrays
Date Due	: 19.11.2020
Advisors	: Feyza Nur Kılıçaslan
e-mail	:kaantuncer@hacettepe.edu.tr

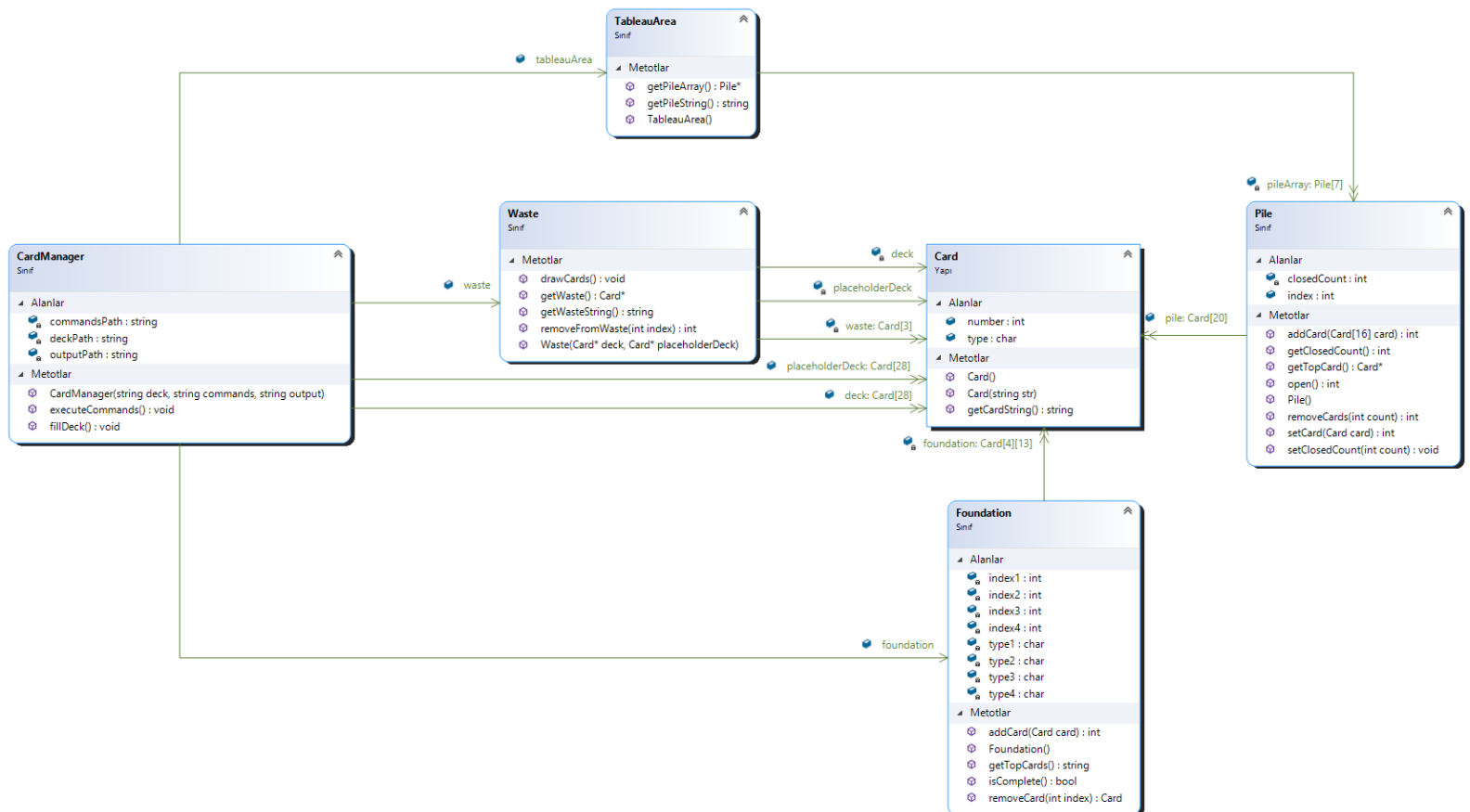
Problem

Recreate a txt version of the game Klondike Solitaire without using any dynamic data structures. Each move and each card is given in their respective txt files. Outcome of each move is written in a txt file.

Approach

After I got familiar with the game I created a class for each part of the board to be as organized as possible. There should be classes for cards, piles, foundation piles, waste pile and the tableau area and these classes should store their respective properties and should be able to perform actions on them. Also there should be a class for managing the entire game by reading and writing to files and executing the commands accordingly.

Class Diagram



Class Explanations

Card : This class has an integer number and a char type.

Waste: This class stores the visible waste pile in waste array and the non-visible waste cards in placeholderDeck array. This class is responsible for all the waste operations.

Pile : This class is for each pile in tableau area. It has a pile array which contains its cards and an index to store the top most cards index. This class is responsible for managing the pile.

Foundation : This class has a type and an index for each pile in the foundation and it has an array for storing these piles. Type represents that piles card type and index represents that piles top cards index. This class is responsible for managing the foundation.

TableauArea: This class contains all the piles in tableau area inside the pileArray array. This class is responsible for organizing the tableau area.

CardManager: This class controls the entire game. It reads the deck file and fills tableau area and waste pile. It also reads the commands and executes them using the other classes. While executing the codes this class writes the results to a txt file.