One new class is FiniteAutomata, which contains as parameters: the states, the alphabet, the initial states, the final states, and the transitions. It contains the method readFromFile, which is used to initialize all the parameters, and isDfa to check if the FA is deterministic or nota The last method is used in the method isAccepted which checks if an input sequence can be accepted by the FA.

The other new class is Console, which takes as argument a file name and uses it to make the FA parameters. It also has a dictionary of commands and methods, which are also part of the class and are called inside the run method. It also has a method displayMenu, also used in run method, in order to give the choices to the user.

In order to integrate the FA in the Scanner class, I introduce two FA parameters inside it, one for constants (integers, as required) and one for identifiers. They are initialized using readFromFile method, and then are used in scan method, where we call isAccepted on tokens, for both constants and identifiers, instead of the old regex methods.

FA.in => FA = {"0"}"1"{"0"}"1"{"1"}

B = {"0"}

A = B"1"{"0"}

C = A"1"{"1"}

FA = A | C