

<https://github.com/GamaCatalin/FAReader>

The program goes through the input file and reads the following components of the FA as following:

- 1 line the states separated by a space
- 1 line the alphabet of the FA separated by a space
- 1 line the final states separated by a space
- 1 line the initial state
- N lines to the end of the file the transitions one on each line written as 'state a-state b-path'

The program can determine if the given FA is deterministic or not by checking for every transaction if there are multiple paths that can be taken which lead to different states. If the FA is not deterministic the sequence verifier cannot be accepted and prints a relevant message.

The program verifies a given sequence by:

- Splitting it into chars
 - o If a char is found that does not belong to the alphabet a message is shown and the program does not go further
 - o If all chars are contained in the alphabet the program goes to the next step
- The list of characters is passed through a method that walks from the initial state following the given character in the alphabet
 - o If the given character does not belong to the current state the method returns false and the program prints a message that states the sequence is not valid
 - o If the given character belongs to the state's transitions the current state gets updated and the program goes to the next character in the sequence
 - o At the end the current state is checked if it is a final state
 - If it is not a final state the method returns false and a message is shown that the sequence is not accepted
 - If it is a final state the method returns true and a message is shown that the sequence is accepted