

<https://github.com/razvansfechis/flcd/tree/main/lab4>

Documentation:

class FiniteAutomata ->

Represents a Deterministic Finite Automaton (DFA).

Attributes:

- elem_separator: Separator for elements in the input file.
- is_deterministic): Indicates if the DFA is deterministic.
- initial_state: Initial state of the DFA.
- states: List of states.
- alphabet: Alphabet symbols.
- final_states: List of final states.
- transitions: stores the transitions

Methods:

- __init__(file_path: str): Initializes the DFA from a file.
- accepts_sequence(sequence: str) -> bool: Checks if the DFA accepts a sequence.
- get_states() -> list: Returns the list of states.
- get_initial_state() -> str: Returns the initial state.
- get_alphabet() -> list: Returns the alphabet.
- get_final_states() -> list: Returns the list of final states.
- get_transitions() -> dict: Returns the transition function.
- write_transitions() -> str: Returns a string representation of the transition function.

The input file for the DFA should follow the format below:

```
file          ::= state_list "\n" state "\n" symbol_list "\n" state "\n" transition_list
state_list    ::= state { "," state }
symbol_list   ::= symbol { "," symbol }
transition_list ::= transition { "\n" transition }
transition    ::= state symbol state
```