Finite Automata

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Github: https://github.com/dacianf/FLDC/tree/main/lab_fa

Implementation:

Finite Automata class has the following fields:

```
    - String[] states           - the set of all state
    - String[] alphabet         - the alphabet
    - String initialState       - the initial state
    - Dictionary<Tuple<String, String>, List<String>> -
all transition pairs
    - String[] finalStates      - the set of final states
```

Transitions are stored inside a dictionary with:
- KEY: tuple from a state and an element from the alphabet
- VALUE: list of strings where a string is a state that can be reach from the key

The finite automata is read from a file an has the following EBNF form:

states = 'Q' '=' '{' stateIdentifier {',' stateIdentifier } '}'
alphabet = 'E' '=' '{' charIdentifier {',' charIdentifier } '}'
initialState = 'q0' '=' stateIdentifier
finalStates = 'Q' '=' '{' stateIdentifier {',' stateIdentifier } '}'
transitions = 'S' '=' '{' '\n' { transitionStateIdentifier } '}'
transitionStateIdentifier = '(' stateIdentifier ',' alphabet ')' '->' stateIdentifier ',' '\n'
stateIdentifier = 'q' digit {digit}
digit = '0-9'
charIdentifier = digit | 'a-z' | 'A-Z' | { digit | 'a-z' | 'A-Z' }