

## Documentation Lab. 4

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### FA File -> EBNF form

digit = "0" | "1" | "2" | ... | "9"

letter = "a" | "b" | ... | "A" | "B" | .. | "Z"

char = letter | digit

space = " "

state = letter | letter {letter | digit}

transition = state space char space state

file = state {space state} NEWLINE

char {space char} NEWLINE

state NEWLINE

state {space state} NEWLINE

transition {NEWLINE transition}

***public FAScanner(String filePath) {...}***

Input: String -> file name

Constructor. Creates the instance and initializes it's attributes by calling the private function *initializeElements()*

***private void initializeElements() {...}***

Input: ...

Output: ...

Opens and reads the data from the input file and initializes the classes attributes.

***private boolean checkIfDFA() {...}***

Input: ...

Output: boolean -> true/false

Checks if the FA read from the file is a DFA or not, by going through each list<string> from transitions and checking if all their lengths are less or equal than 1 for true, and false otherwise.

***public boolean checkSequenceDFA(String seq)***

Input: string -> sequence that we need to check to see if

Output: boolean -> true/false

Checks if the Sequence given satisfies the DFA from the input file.