https://github.com/MihaiCatalin120/Compiler

The Finite Automata is a class with 5 fields: states, alphabet, initialState, finalStates, transitions.

The transitions are kept in a dictionary consisting of {sourceState -> list of dictionaries with the structure: {ToState -> destination state, Label -> symbol present in the alphabet}}.

The check for the deterministic property is done by checking for each source state if there are multiple transitions that have the same label but point to different destination states.

When accepting a sequence, the FA follows every symbol in order and checks if by applying the internal transitions it will reach a valid final state

EBNF

states = word {word}

alphabet = word {word}

initialState = word

finalStates = word {word}

transitions = word word word

word = character {character}

character = “a” | “b” | … | “z” | “A” | “B” | … | “Z” | “0” | “1” | … | “9”