

# Programming Assignment 2

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# 1

## 1.1 PROS

Our scanner was tested with multiple edge cases as well as various longer c-program examples that fulfill the given specification. Our scanner produced the expected outcomes for the cases that we used for testing.

## 1.2 CONS

If extending our scanner for a more complete programming language, the scanner should be implemented using python's standard library's regex module instead of writing our own custom matchers.

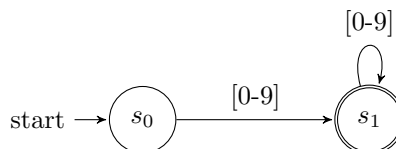
# 2 DFA

The input strings are tested using the DFAs below.

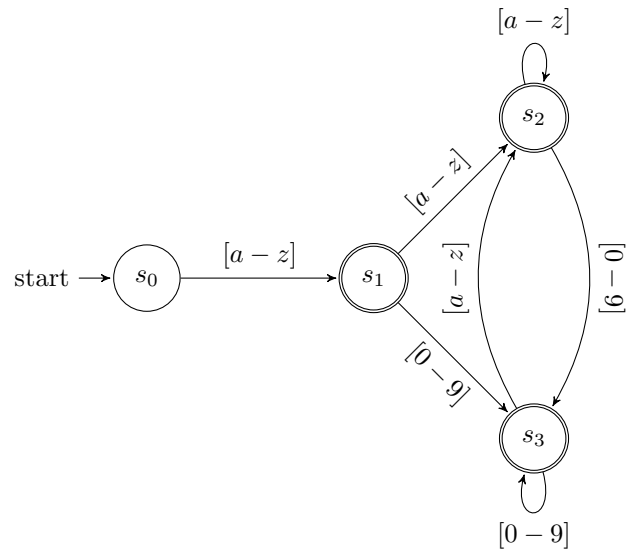
The Error states are not explicitly shown here but the different DFA:s will produce different errors when rejecting an input string. The resulting error and the error handling subroutine is dependent on the rejecting DFA, the current state(in the DFA) and the input character that causes the rejection of the input string. If a DFA rejects an input string from the initial input character we move forward to test the first character using the next DFA.

In the case of a alphabetic input, the input string will first be checked for a valid ID, and in the case of a valid ID it will be checked for a valid KEYWORD.

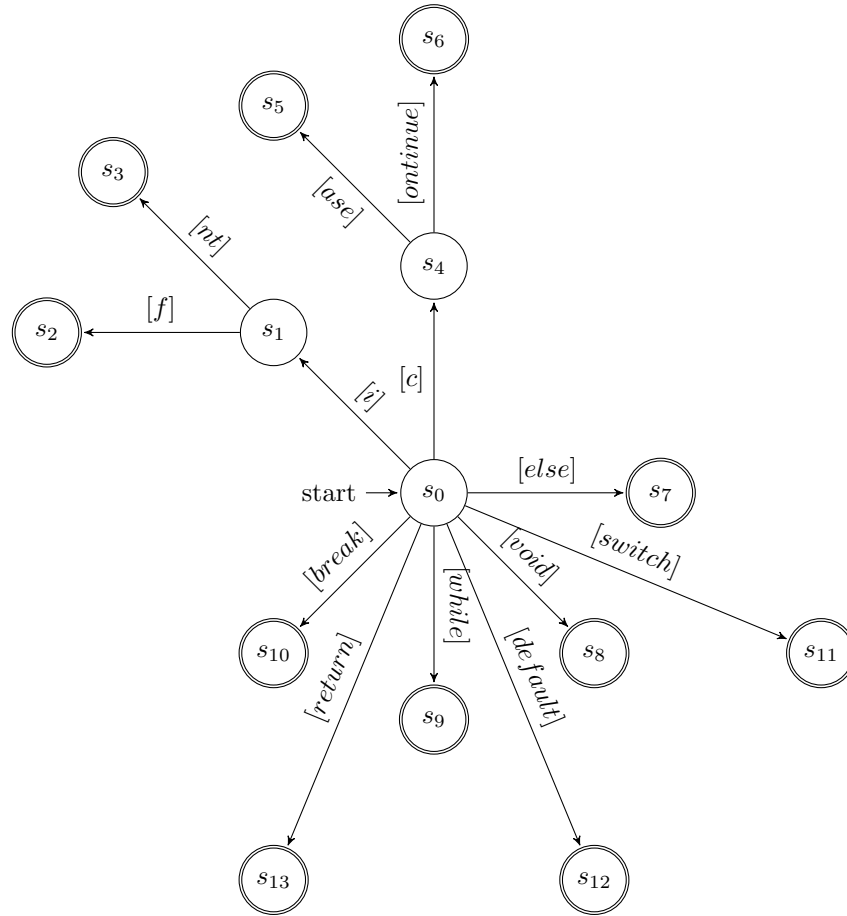
## 2.1 NUM



## 2.2 ID



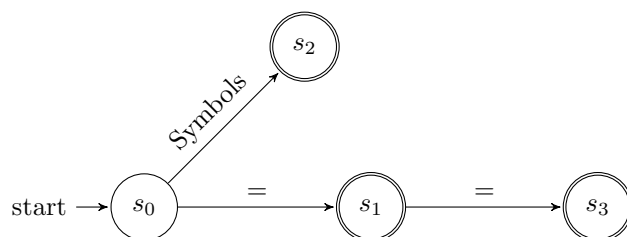
## 2.3 KEYWORD



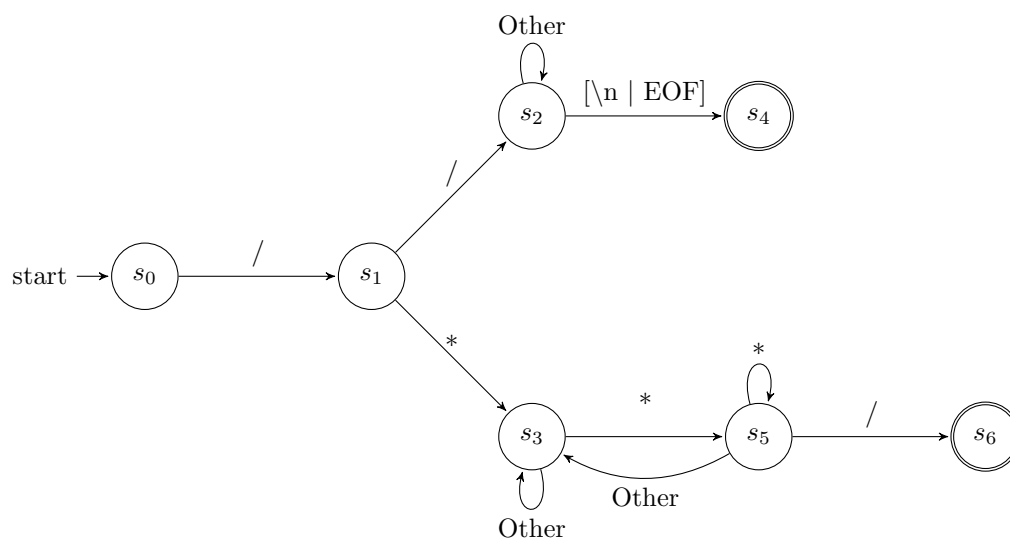
## 2.4 SYMBOL

Below the group "Symbols" include the following symbols:

`;` `:` `,` `[` `]` `(` `)`   `+` `-` `*` `<`



## 2.5 COMMENT



## 2.6 WHITESPACE

