**Lexic**

Alphabet

- upper and lower case letters of the english alphabet: a-z, A-Z

- decimal digits: 0-9

a. Special symbols:

arithmetic operators: +, -, \*, /, %

assignment operator: =

equality and order operators: ==, is, !=, is not, <, <=, >, >=

boolean (logic operators): not, and, or

increment/decrement operators: ++, --

separators: [ ], \n, :, ;, space, \n

reserved words: @let, @check, @otherwise, @iterate, @stop, @print, @enter, @while

b. Identifiers

id = letter{letter|digit}

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

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

sign = "+" | "-"

zero\_digit = 0

non\_zero\_digit = "1" | ... "9"

comma = ","

c. Constants

i) integer:

integer = zero\_digit | sign non\_zero\_digit { zero\_digit | non\_zero\_digit }

ii) character:

character = """ char """

char = letter | digit

iii) string:

string = """ {char} """

d. User defined data type

iv) object

object = "{" { id ":" constant "," } { id ":" constant } "}"

constants = integer | character | string

v) array

array = "[" { constant ","} constant ]

vi) float

float = sign digit {digit} [comma digit {digit}]