**Sub regular expressions**

**digit**

regular expression: 0|1|2|3|4|5|6|7|8|9

**digit\_**

regular expression: 1|2|3|4|5|6|7|8|9

**letter**

regular expression: a|b|c|d|e|f|g|h|i|j|k|l|m|n|o|p|q|r|s|t|u|v|w|x|y|z|A|B|C|D|E|F|G|H|I|J|K|L|M|N|O|P|Q|R|S|T|U|V|W|X|Y|Z

**Regular Expressions**

**vtype**

alphabet: [a, b, c, h, i, l, n, o, r, s, t]

regular expression: int|char|bool|string

**bool**

alphabet: [a, e, f, l, r, s, t, u]

regular expression: true|false

**num**

alphabet: [-, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, ε]

regular expression: 0|(ε|-)(digit\_)(digit)\*

**character**

alphabet: [ , ‘, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z]

regular expression: 'Letter| |digit'

**String**

alphabet: [ , ", 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z]

regular expression:

"(letter| |digit)\*"

**id**

alphabet: [0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z]

regular expression: letter(digit|letter)\*

**keyword**

alphabet: [a, c, e, f, h, i, l, n, r, s, t, u, w]

regular expression: if|else|while|return

**comp**

alphabet: [!, <, =, >]

regular expression: ==|!=|<|>|<=|>=

**arithmetic**

alphabet: [+, -, \*,/]

regular expression: +|-|\*|/

**assign**

alphabet: [=]

regular expression: =

**semi**

alphabet: [;]

regular expression: ;

**comma**

alphabet: [,]

regular expression: ,

**lparen**

alphabet: [(]

regular expression: (

**rparen**

alphabet: [)]

regular expression: )

**lbrace**

alphabet: [{]

regular expression: {

**rbrace**

alphabet: [}]

regular expression: }