**Regular Expressions**

***Reserved Words***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| C | C++ | Proposed Language | Regular Expression | Token |
| main | main | !START | (!)(S)(T)(A)(R)(T) | !START |
| String | String | string | (s)(t)(r)(i)(n)(g) | string |
| Bool | Bool | boolean | (b)(o)(o)(l)(e)(a)(n) | boolean |
| int | int | number | (n)(u)(m)(b)(e)/r) | number |
| float | float | decimal | (d)(e)(c)(i)(m)(a)(l) | decimal |
| printf | cout | write | (w)(r)(i)(t)(e) | write |
| scanf | cin | read | (r)(e)(a)(d) | read |
| if | if | if | (i)(f) | if |
| else | else | else | (e)(l)(s)(e) | else |
| else if | else if | elseif | (e)(l)(s)(e)(i)(f) | elseif |
| switch | switch | switch | (s)(w)(i)(t)(c)(h) | switch |
| case | case | choice | (c)(h)(o)(i)(c)(e) | choice |
| default | default | default | (d)(e)(f)(a)(u)(l)(t) | default |
| break | break | stop | (s)(t)(o)(p) | stop |
| continue | continue | jump | (j)(u)(m)(p) | jump |
| for | for | for | (f)(o)(r) | for |
| do | do | do | (d)(o) | do |
| while | while | while | (w)(h)(i)(l)(e) | while |
| true | true | true | (t)(r)(u)(e) | true |
| false | false | false | (f)(a)(l)(s)(e) | false |
| - | - | start | (s)(t)(a)(r)(t) | start |
| - | - | end | (e)(n)(d) | end |
| - | - | END! | (E)(N)(D)(!) | END! |
| && | && | and | (a)(n)(d) | and |
| || | || | or | (o)(r) | or |
| - | - | fixed | (f)(i)(x)(e)(d) | fixed |
| \n | \n | nl | (n)(l) | nl |
| \t | \t | tab | (t)(a)(b) | tab |

***Reserved Symbols***

|  |  |  |
| --- | --- | --- |
| Reserved Symbols | Regular Expression | Token |
| + | (+) | + |
| - | (-) | - |
| \* | (\*) | \* |
| / | (/) | / |
| % | (%) | % |
| ++ | (+)(+) | ++ |
| -- | (-)(-) | -- |
| == | (=)(=) | == |
| != | (!)(=) | != |
| > | (>) | > |
| < | (<) | < |
| >= | (>)(=) | >= |
| <= | (<)(=) | <= |
| ! | (!) | ! |
| = | (=) | = |
| += | (+)(=) | += |
| -= | (-)(=) | -= |
| \*= | (\*)(=) | \*= |
| /= | (/)(=) | /= |
| . | (.) | . |
| , | (,) | , |
| “” | (“) | “ |
| ” | (”) | ” |
| ( | (() | ( |
| ) | ()) | ) |
| [ | ([) | [ |
| ] | (]) | ] |
| { | ({) | } |
| } | (}) | { |
| : | (:) | : |
| @ | (@) | @ |

***Identifiers***

|  |  |
| --- | --- |
| Regular Expression | Token |
| (lowercase) (lowercase/uppercase/numbers/9 | id |

***Literals***

|  |  |
| --- | --- |
| Regular Expression | Token |
| (nonzero)(numbers/8 | numberlit |
| (nonzero) (numbers/8(.)(numbers)( numbers/4 | decimallit |
| (“)(ascii)(ascii\*(“) | stringlit |
| (t/f)(r/a)(u/l)(e/s)(e/) | booleanlit |