Consider the example,

**while ( x > 1) y = 23.00**;

**RE for identifiers and integers:**

|  |  |
| --- | --- |
| Token | RE |
| While -> keyword | ‘w’‘h’‘i’’l’‘e’ => ‘while’ |
| X -> identifier | ‘x’ |
| 1 -> Integer | ‘1’ => digit\* for multiple digits |
| Y -> identifier | ‘y’ |
| 23.00 -> real number | ‘2’’3’’.’0’0’ |

RE for identifiers: letter(letter+digit)\*

RE for integers: digitdigit\* = digit+

**FSA:**

**FSA for integers:**

Example: Σ = {0, 1}

Diagram, shape

Description automatically generated

**FSA for identifiers:**

FSA consumes a character of input, every time it makes a transition.