Primitive Types

$\langle singleQuote \rangle ::= \text{ '}$

$\langle doubleQuote \rangle ::= \text{ ''}$

$\langle int \rangle ::= [\text{ integer }]$

$\langle bool \rangle ::= \text{ 'true'} \mid \text{'false'}$

$\langle char \rangle ::= \langle singleQuote \rangle[\text{ character }]\langle singleQuote \rangle$

$\langle string \rangle ::= \langle doubleQuote \rangle[\text{ character* }]\langle doubleQuote \rangle$

$\langle null \rangle ::= \text{ 'null'}$

Algebraic Data Types and Type-Traits

$\langle adt \rangle ::= \text{ 'type'} \langle ident \rangle \text{ '\{'}[\langle ident \rangle\text{':'}\langle type \rangle[\text{','} \langle ident \rangle\text{':'}\langle type \rangle]\text{*]'\}'}$

$\langle trait \rangle ::= \text{ 'trait'} \text{ '\{'}\langle type \rangle[\text{','} \langle type \rangle]\text{*'\}'}$

Arithmetic and Boolean Operators

$\langle arithOp \rangle ::= \text{ '+'} \mid \text{'-'} \mid \text{'*'} \mid \text{'/'} \mid \text{'\%'}$

$\langle boolOp \rangle ::= \text{ '<'} \mid \text{'>'} \mid \text{'<='} \mid \text{'>='} \mid \text{'!'} \mid \text{'!='} \mid \text{'=='} \mid \text{'\&\&'} \mid \text{'||'}$

$\langle op \rangle ::= \langle arithOp \rangle \mid \langle boolOp \rangle$

Functions

$\langle prog \rangle ::= [\text{'fn'} \langle ident \rangle[\text{'['}\langle type \rangle[\text{','} \langle type \rangle]\text{*']'}]\text{'('}[\langle arg \rangle [\text{','} \langle arg \rangle]\text{*]')'}\text{'->'}\langle type \rangle]\text{'='}\langle smp \rangle\text{';'}]\text{*}$