

Gramatica

BNF



<ini> ::= <instructions>

<instructions> ::= <instructions> <instruction>

| <instruction>

<instruction> ::= <block>

| <statement>

| <assignment>

| <function>

| <ddl>

| <dml>

<block> ::= "begin" <instructions> "end" ";"

<statement> ::= "declare" <variables> ";"

<variables> ::= <variables> "," <variable>

| <variable>

<variable> ::= "@" "id" <type>

| "@" "id" <type> "default" <expression>

<assignment> ::= "set" "@" "id" "=" <expression> ";"

<function> ::= <print>

| <lower>

| <upper>

| <round>

| <len>

| <truncate>

| <typeof>

<print> ::= "print" <expression> ";"

<lower> ::= "select" "lower" "(" <expression> ")" ";"

<upper> ::= "select" "upper" "(" <expression> ")" ";"

<round> ::= "select" "round" "(" <expression> "," <expression> ")" ";"

```

<len> ::= "select" "len" "(" <expression> ")" ";"
<truncate> ::= "select" "truncate" "(" <expression> "," <expression> ")" ";"
<typeof> ::= "select" "typeof" "(" <expression> ")" ";"
<ddl> ::= <createTable>
        | <alterTable>
        | <dropTable>
<createTable> ::= "create" "table" "id" "(" <attributes> ")" ";"
<alterTable> ::= "alter" "table" "id" "add" <attributes> ";"
        | "alter" "table" "id" "drop" "column" <expression> ";"
        | "alter" "table" "id" "rename" "to" <expression> ";"
        | "alter" "table" "id" "rename" "column" "id" "to" <expression> ";"
<attributes> ::= <attributes> "," <attribute>
        | <attribute>
<attribute> ::= <id> <type>
<dropTable> ::= "drop" "table" <id> ";"
<dml> ::= <insert>
        | <select>
        | <update>
        | <truncate>
        | <delete>
<insert> ::= "insert" "into" <id> "(" <id_list> ")" "values" "(" <values> ")" ";"
<select> ::= "select" <id_list> "from" <id> ";"
        | "select" "*" "from" <id> ";"
        | "select" <id_list> "from" <id> "where" <expression> ";"
<id_list> ::= <id_list> "," <id>
        | <id>
<update> ::= "update" <id> "set" <columns> "where" <expression> ";"

```

```

<columns> ::= <columns> "," <column>
           | <column>
<column> ::= <id> "=" <expression>
<truncate> ::= "truncate" "table" <id> ";"
<delete> ::= "delete" "from" <id> "where" <expression> ";"
<expression> ::= <arithmetic>
               | <relational>
               | <logical>
               | <value>
               | "(" <expression> ")"
<arithmetic> ::= <expression> "+" <expression>
               | <expression> "-" <expression>
               | <expression> "*" <expression>
               | <expression> "/" <expression>
               | <expression> "%" <expression>
               | "-" <expression>
<logical> ::= <expression> "and" <expression>
           | <expression> "or" <expression>
           | "not" <expression>
<relational> ::= <expression> ">" <expression>
              | <expression> "<" <expression>
              | <expression> ">=" <expression>
              | <expression> "<=" <expression>
              | <expression> "=" <expression>
              | <expression> "!=" <expression>
<type> ::= "int"
          | "double"

```

| "date"

| "varchar"

| "boolean"

<values> ::= <values> "," <value> | <value>

<value> ::= <integer>

| <decimal>

| <time>

| <text>

| "true"

| "false"

| <id>

| "null"

<integer> ::= [0-9]+

<decimal> ::= [0-9]+ "." [0-9]+

<decimal> ::= [0-9]{4} "-" [0-9]{2} "-" [0-9]{2}

<text> ::= "\"" [a-zA-Z][a-zA-Z_0-9]+ "\""

<id> ::= [a-zA-Z][a-zA-Z_0-9]+