Grammar G

PROGRAM ->

"program" VAR\_DEFINITIONS; STATEMENTS "end" FUNC\_DEFINITIONS

VAR\_DEFINITIONS -> VAR\_DEFINITION VAR\_DEFINITIONS\_SUFFIX

VAR\_DEFINITIONS\_SUFFIX -> ε | **;** VAR\_DEFINITIONS

VAR\_DEFINITION -> TYPE VARIABLES\_LIST

TYPE -> "real" | "integer"

VARIABLES\_LIST -> VARIABLE VARIABLES\_LIST\_SUFFIX

VARIABLES\_LIST\_SUFFIX-> ε | **,** VARIABLE VARIABLES\_LIST\_SUFFIX

VARIABLE -> **id** VARIABLE\_SUFFIX

VARIABLE\_SUFFIX-> ε | **[** int\_number **]** /\* id is a variable name \*/

FUNC\_DEFINITIONS -> FUNC\_DEFINITION FUNC\_DEFINITIONS\_SUFFIX

FUNC\_DEFINITIONS\_SUFFIX-> ε | FUNC\_DEFINITION FUNC\_DEFINITIONS\_SUFFIX

FUNC\_DEFINITION -> RETURNED\_TYPE **id** **(** PARAM\_DEFINITIONS **)** BLOCK /\* id is a function name \*/

RETURNED\_TYPE -> "void" | TYPE

PARAM\_DEFINITIONS-> ε | VAR\_DEFINITIONS

STATEMENTS -> STATEMENT **;** STATEMENTS\_SUFFIX

STATEMENTS\_SUFFIX-> ε | STATEMENTS

STATEMENT -> BLOCK |

"return" RETURN\_SUFFIX |

**id** STATEMENT\_SUFFIX

STATEMENT\_SUFFIX -> VARIABLE\_SUFFIX = EXPRESSION | (PARAMETERS\_LIST)

RETURN\_SUFFIX -> ε | EXPRESSION

BLOCK -> **{** VAR\_DEFINITIONS; STATEMENTS **}**

PARAMETERS\_LIST -> ε | VARIABLES\_LIST

EXPRESSION -> int\_number | real\_number | VARIABLE | **id** ar\_op EXPRESSION