The Tiny Language (Solution)

Letter = [_ | a – z | A – Z]
Digit = [0 – 9]
SignedNat = (+|-)? Digit⁺

Set_of_Statements = Comment_Statement | Assignment_Statement |
Declaration_Statement | Write_Statement | Read_Statement | Function_Call
Condition_Statement | If_Statement | Repeat_Statement | Return_Statement

Words with green color have been declared before.

1	Number = SignedNat	SignedNat (\. Digit⁺)
2	String = \" (Letter | Digit | Op)* \"
3	RW = int	float	string	read	write	repeat	until	if	else	elseif |else | then	return	endl	main
4	Comment_Statement = /* (digit | Letter)* */
5	ID = Letter (Letter | Digit)*
6	Function_Call = ID \((ε	ID ("," ID)*) \)
7	Term = Number	ID	Function_Call
8	Op = +	-	*	/
9	Br_Op = \(Term (Op Term)⁺ \) Equation = Term (Op Term)⁺	Br_Op (Op Br_Op	Op Term)*
10	Expression = String	Term	Equation
11	Assignment_Statement = ID := Expression
12	Datatype = int	float	string
13	Declaration = Datatype (ID | Assignment_Statement) (","(ID | Assignment_Statement))*

14	Write_Statement = write (Expression | endl) ;
15	Read_Statement = read ID ;
16	Return_Statement = return expression ;
17	Condition_Operator = < | > | = | <>
18	Condition = ID Condition_Operator Term
19	Boolean_Operator = && | "||"
20	Condition_Statement = Condition (Boolean_Operator Condition)*
21	If_Statement = if Condition_Statement then (Set_of_Statements)⁺ (Else_If_Statement | Else_Statement | end)
22	Else_If_Statement = elseif Condition_Statement then (Set_of_Statements)⁺ (Else_If_Statement | Else_Statement | end)
23	Else_Statement = else (Set_of_Statements)⁺ end
24	Repeat_Statement = repeat (Set_of_Statements)⁺ until Condition_Statement
25	Function_Name = ID
26	Parameter = Datatype ID
27	Function_Declaration = Datatype Function_Name \(ε | Parameter("," Parameter)* \)
28	Function_Body = "{" (Set_Of_Statements)* Return_Statement "}"
29	Function_Statement = Function_Declaration Function_Body
30	Main_Function = Datatype main "()" Function_Body
31	Program = (Function_Statement)* Main_Function