

<u>РБНФ</u>	<u>Код для перевірки РБНФ</u>
labeled_point = ident , ":";	labeled_point = ident >> tokenCOLON;
goto_label = "GOTO" , ident;	goto_label = tokenGOTO >> ident;
program_name = ident;	program_name = SAME_RULE(ident);
value_type = "Int_4";	value_type = SAME_RULE(tokenINTEGER16);
declaration_element = ident , ["[" , unsigned_value , "]"];	declaration_element = ident >> -(tokenLEFTSQUAREBRACKETS >> unsigned_value >> tokenRIGHTSQUAREBRACKETS);
other_declaration_ident = " , " , declaration_element;	other_declaration_ident = tokenCOMMA >> declaration_element;
declaration = value_type , declaration_element , {other_declaration_ident};	declaration = value_type >> declaration_element >> *other_declaration_ident;
index_action = "[" , expression , "]" ;	index_action = tokenLEFTSQUAREBRACKETS >> expression >> tokenRIGHTSQUAREBRACKETS;
unary_operator = "Not";	unary_operator = SAME_RULE(tokenNOT);
unary_operation = unary_operator , expression;	unary_operation = unary_operator >> expression;
binary_operator = "And" "Or" "Eg" "Ne" "Ge" "Le" "++" "Sub" "***" "Div" "Mod";	binary_operator = tokenAND tokenOR tokenEQUAL tokenNOTEQUAL tokenLESSOREQUAL tokenGREATEROREQUAL tokenPLUS tokenMINUS tokenMUL tokenDIV tokenMOD;
binary_action = binary_operator , expression;	binary_action = binary_operator >> expression;
left_expression = group_expression unary_operation ident , [index_action] value cond_block_with_optionally_return_value;	left_expression = group_expression unary_operation ident >> -index_action value cond_block_with_optionally_return_value;
expression = left_expression , {binary_action};	expression = left_expression >> *binary_action;
group_expression = "(" , expression , ")";	group_expression = tokenGROUPEXPRESSIONBEGIN >> expression >> tokenGROUPEXPRESSIONEND;
bind_expression = expression , "->" , ident , [index_action];	bind_left_to_right = expression >> tokenLRBIND >> ident >> -index_action;
if_expression = expression;	if_expression = SAME_RULE(expression);
body_for_true__with_optionally_return_value = block_statements__with_optionally_return_value;	body_for_true__with_optionally_return_value = SAME_RULE(block_statements__with_optionally_return_value);
false_cond_block_without_else__with_optionally_return_value = "ELSE" , "IF" , if_expression , body_for_true__with_optionally_return_value;	false_cond_block_without_else__with_optionally_return_value = tokenELSE >> tokenIF >> if_expression >> body_for_true__with_optionally_return_value;
body_for_false__with_optionally_return_value = "ELSE" , block_statements__with_optionally_return_value;	body_for_false__with_optionally_return_value = tokenELSE >> block_statements__with_optionally_return_value;

cond_block__with_optionally_return_value = "IF" , if_expression , body_for_true__with_optionally_return_value , {false_cond_block_without_else__with_optionally_return_value} , [body_for_false__with_optionally_return_value];	cond_block__with_optionally_return_value = tokenIF >> if_expression >> body_for_true__with_optionally_return_value >> *false_cond_block_without_else__with_optionally_return_value >> - body_for_false__with_optionally_return_value;
cond_block__with_optionally_return_value_and_optionally_bind = cond_block__with_optionally_return_value , [tokenLRBIND , ident , [index_action]];	cond_block__with_optionally_return_value_and_optionally_bind = cond_block__with_optionally_return_value >> -(tokenLRBIND >> ident >> - index_action);
input = "Scan" , (ident , [index_action] "(" , ident , [index_action] , ")");	input = tokenGET >> (ident >> -index_action tokenGROUPEXPRESSIONBEGIN >> ident >> -index_action >> tokenGROUPEXPRESSIONEND);
output = "Print" , expression;	output = tokenPUT >> expression;
statement = bind_left_to_right cond_block__with_optionally_return_value_and_optionally_bind labeled_point goto_label input output ";" ;	statement = bind_left_to_right cond_block__with_optionally_return_value_and_optionally_bind labeled_point goto_label input output tokenSEMICOLON;
block_statements = "{" , {statement} , "}" ;	block_statements = tokenBEGINBLOCK >> *statement >> tokenENDBLOCK;
block_statements__with_optionally_return_value = "{" , {statement} , [expression] , "}" ;	block_statements__with_optionally_return_value = tokenBEGINBLOCK >> *statement >> -expression >> tokenENDBLOCK;
program = "Program" , program_name , ";" , "Start" , "Var" , [declaration] , ";" , {statement} , "Finish" ;	program = BOUNDARIES >> tokenNAME >> program_name >> tokenSEMICOLON >> tokenBODY >> tokenDATA >> (-declaration) >> tokenSEMICOLON >> *statement >> tokenEND;
digit = "0" "1" "2" "3" "4" "5" "6" "7" "8" "9" ;	digit = digit_0 digit_1 digit_2 digit_3 digit_4 digit_5 digit_6 digit_7 digit_8 digit_9 ;
non_zero_digit = "1" "2" "3" "4" "5" "6" "7" "8" "9" ;	non_zero_digit = digit_1 digit_2 digit_3 digit_4 digit_5 digit_6 digit_7 digit_8 digit_9 ;
unsigned_value = (non_zero_digit , {digit}) "0" ;	unsigned_value = ((non_zero_digit >> *digit) digit_0) >> BOUNDARIES;
value = [sign] , unsigned_value ;	value = -sign >> unsigned_value >> BOUNDARIES;
letter_in_lower_case = "a" "b" "c" "d" "e" "f" "g" "h" "i" "j" "k" "l" "m" "n" "o" "p" "q" "r" "s" "t" "u" "v" "w" "x" "y" "z" ;	letter_in_lower_case = a b c d e f g h i j k l m n o p q r s t u v w x y z ;
letter_in_upper_case = "A" "B" "C" "D" "E" "F" "G" "H" "I" "J" "K" "L" "M" "N" "O" "P" "Q" "R" "S" "T" "U" "V" "W" "X" "Y" "Z" ;	letter_in_upper_case = A B C D E F G H I J K L M N O P Q R S T U V W X Y Z ;
ident = "_" , letter_in_upper_case , letter_in_upper_case ,	ident = tokenUNDERSCORE >> digit >> letter_in_upper_case >> letter_in_upper_case >>

letter_in_upper_case , letter_in_upper_case , letter_in_upper_case , letter_in_upper_case , letter_in_upper_case ;	STRICT_BOUNDARIES ;
ident = "_", digit , letter_in_upper_case , letter_in_upper_case ;	unary_minus = qi::char_(' - ') >> (qi::char_(' - ')) ;
unary_minus = "--" ;	digit_0 = '0' ;
	digit_1 = '1' ;
	digit_2 = '2' ;
	digit_3 = '3' ;
	digit_4 = '4' ;
	digit_5 = '5' ;
	digit_6 = '6' ;
	digit_7 = '7' ;
	digit_8 = '8' ;
	digit_9 = '9' ;
	tokenCOLON = ":" >> BOUNDARIES ;
	tokenINTEGER2 = "Int_4" >> STRICT_BOUNDARIES ;
	tokenCOMMA = "," >> BOUNDARIES ;
	tokenNOT = "Not" >> BOUNDARIES ;
	tokenAND = "And" >> BOUNDARIES ;
	tokenOR = "Or" >> BOUNDARIES ;
	tokenEQUAL = "Eg" >> BOUNDARIES ;
	tokenNOTEQUAL = "Ne" >> BOUNDARIES ;
	tokenLESS = "Ge" >> BOUNDARIES ;
	tokenGREATER = "Le" >> BOUNDARIES ;
	tokenPLUS = "++" >> BOUNDARIES ;
	tokenMINUS = "Sub" >> BOUNDARIES ;
	tokenMUL = "*" >> BOUNDARIES ;
	tokenDIV = "Div" >> STRICT_BOUNDARIES ;
	tokenMOD = "Mod" >> STRICT_BOUNDARIES ;
	tokenGROUPEXPRESSIONBEGIN = "(" >> BOUNDARIES ;
	tokenGROUPEXPRESSIONEND = ")" >> BOUNDARIES ;
	tokenBIND = "->" >> BOUNDARIES ;

	tokenELSE = "Else" >> STRICT_BOUNDARIES;
	tokenIF = "If" >> STRICT_BOUNDARIES;
	tokenDO = "Do" >> STRICT_BOUNDARIES;
	tokenGOTO = "Goto" >> STRICT_BOUNDARIES;
	tokenREAD = "Scan" >> STRICT_BOUNDARIES;
	tokenWRITE = "Write" >> STRICT_BOUNDARIES;
	tokenPROGRAM = "#Program" >> STRICT_BOUNDARIES;
	tokenVARIABLE = "Variable" >> STRICT_BOUNDARIES;
	tokenSTART = "Start" >> STRICT_BOUNDARIES;
	tokenSTOP = "Stop" >> STRICT_BOUNDARIES;
	tokenBEGINBLOCK = "{" >> BOUNDARIES;
	tokenENDBLOCK = "}" >> BOUNDARIES;
	tokenLEFTSQUAREBRACKETS = "[" >> BOUNDARIES;
	tokenRIGHTSQUAREBRACKETS = "]" >> BOUNDARIES;
	tokenSEMICOLON = ";" >> BOUNDARIES;
	STRICT_BOUNDARIES = (BOUNDARY >> *(BOUNDARY)) (!(qi::alpha qi::char_("_")));
	BOUNDARIES = (BOUNDARY >> *(BOUNDARY) NO_BOUNDARY);
	BOUNDARY = BOUNDARY_SPACE BOUNDARY_TAB BOUNDARY_CARRIAGE_RETURN BOUNDARY_LINE_FEED BOUNDARY_NULL;
	BOUNDARY_SPACE = " ";
	BOUNDARY_TAB = "\t";
	BOUNDARY_CARRIAGE_RETURN = "\r";
	BOUNDARY_LINE_FEED = "\n";
	BOUNDARY_NULL = "\0";
	NO_BOUNDARY = "";
	tokenUNDERSCORE = "_";
	A = "A";
	B = "B";
	C = "C";
	D = "D";
	E = "E";

	F = "F";
	G = "G";
	H = "H";
	I = "I";
	J = "J";
	K = "K";
	L = "L";
	M = "M";
	N = "N";
	O = "O";
	P = "P";
	Q = "Q";
	R = "R";
	S = "S";
	T = "T";
	U = "U";
	V = "V";
	W = "W";
	X = "X";
	Y = "Y";
	Z = "Z";