PATTERN	TOKEN	PURPOSE
=	TK_ASSIGNOP	Assignment operator
~	TK_COMMENT	Comment open/close
[a-z|A-Z][a-z|A-Z|0-9]*	TK_IDEN	Function/Variable Identifier
0 |[-|+|∈] [1-9][0-9]*	TK_NUMBER	Numeric Literal
[0-9][0-9]* .[0-9][0-9]	TK_FLOAT	Floating point literal
["][A-Z|a-z|0-9|_|!|#|@|$|%|^|&|*|(|) {|[|]|}|;|:|”|’|,|.|/|-]* ["]	TK_STRING	String literal
[A-Z|a-z|0-9|_|!|#|@|$| %|^|&|*|(|) {|[|]|}|;|:|”|’|,|.|/|-]*	TK_TEXT	Comment text
{	TK_LEFT_BR	Left angular bracket
}	TK_RIGHT_BR	Right angular bracket
[	TK_LSQ	Left square bracket
]	TK_RSQ	Right square bracket
(	TK_LPAREN	Left parenthesis
)	TK_RPAREN	Right parenthesis
;	TK_SEMICOLON	Semicolon
,	TK_COMMA	Comma
YADI	TK_IF	Keyword if
ATHVA	TK_ELSE	Keyword else
PADHO	TK_READ	Keyword read
LIKHO	TK_WRITE	Keyword write
ANK	TK_INT	Integer literal
DMLV	TK_FLOAT	Floating literal
VARNA	TK_CHAR	Char literal
AAKAR	TK_STRUCTURE	Structure data type
NAMASKAR	TK_HELLO	Start of program
ALVIDA	TK_BYE	End of program
AVYUH	TK_ARRAY	Array data type
+	TK_PLUS	Plus operator
-	TK_MINUS	Subtraction operator
*	TK_MUL	Multiplication operator
/	TK_DIV	Division operator
=	TK_ASSIGN	Assignment operator
KE_LIYE	TK_LOOP	Loop keyword
BADHAT	TK_INCR	Increment keyword
SE	TK_FROM	From keyword
TAK	TK_TILL	Till keyword
MUKHYA	TK_MAIN	Main function keyword
JAARI	TK_CONTINUE	Continue keyword
NIKAAS	TK_BREAK	Break keyword
SATYA	TK_TRUE	True keyword
ASATYA	TK_FALSE	False keyword

&	TK_AND	And operator
|	TK_OR	Or operator
!	TK_NOT	Not operator
==	TK_EQUAL	Equality check operator
<	TK_LS	Less than operator
>	TK_GR	Greater than operator
<=	TK_LE	Less than equal to operator
>=	TK_GE	Greater than equal to operator
!=	TK_NE	Not equal operator
<<	TK_LAD	Left angular double bracket
>>	TK_RAD	Right angular double bracket
^	TK_EXP	Exponentiation operator
%	TK_MODULO	Modulus Operator
ULTA	TK_REVERSE	Array reverse
LAMBAI	TK_LENGTH	Array length

The starting symbol of the grammar is **<namaskar_tag>**.

Namaskar_tag> -> tk_HELLO tk_SEMICOLON FuncDefinition> tk_MAIN tk_LAD Statement_list> tk_RAD tk_BYE tk_SEMICOLON .

FuncDefinition> -> TK_IDEN tk_LSQ Formal_parameter_list> tk_RSQ tk_LAD Statement_list> tk_RAD | .

Type> -> PrimitiveTypes> | tk_ARRAY .

Formal_parameter_list> -> Type> tk_IDEN Rem_formal_parameter_list> .

Rem_formal_parameter_list> -> tk_COMMA Type> tk_IDEN Rem_formal_parameter_list> | .

Statement_list> -> Statement> Statement_list> | .

Statement> -> Declaration_statement> | Control_statement> | Loop_statement> | Input_output_statement> | CommentStatement> | tk_IDEN OtherStatements> | BreakCont> .

BreakCont> -> tk_continue tk_SEMICOLON | tk_break tk_SEMICOLON .

OtherStatements> -> tk_IDEN Other2> .

Other2> -> Assignment_statement> | tk_LPAREN Function_statement> .

CommentStatement> -> tk_COMMENT tk_TEXT tk_COMMENT .

PrimitiveTypes> -> tk_INT | tk_FLOAT | tk_STRING | tk_CHAR .

Declaration_statement> -> PrimitiveTypes> tk_IDEN Variable_list> tk_SEMICOLON | DerivedTypeDeclaration> | AakarDeclaration> .

AakarDeclaration> -> tk_STRUC tk_IDEN tk_LEFT_BR Formal_parameter_list> tk_RIGHT_BR tk_SEMICOLON .

DerivedTypeDeclaration> -> tk_ARRAY tk_LEFT_BR PrimitiveTypes> tk_COMMA Literal> tk_RIGHT_BR tk_IDEN tk_SEMICOLON .

Variable_list> -> tk_COMMA tk_IDEN Variable_list> | .

Assignment_statement> -> Index> tk_ASSIGN RHS> tk_SEMICOLON .

Index> -> tk_LSQ Literal> tk_RSQ | .

RHS> -> tk_IDEN RHS2> | Inbuilt_funcs> | tk_EXTRACT tk_IDEN tk_SEMICOLON .

RHS2> -> ArithmeticExpr> tk_SEMICOLON | tk_LSQ Function_statement> .

Control_statement> -> tk_IF tk_LPAREN BooleanExpr> tk_RPAREN tk_LAD Statement_list> tk_RAD tk_ELSE tk_LAD Statement_list> tk_RAD .

Loop_statement> -> tk_LOOP tk_LPAREN tk_IDEN tk_ASSIGN Literal> tk_FROM Literal> tk_TILL tk_INCR Literal> tk_RPAREN tk_LAD Statement_list> tk_RAD .

Input_output_statement> -> tk_READ tk_IDEN tk_SEMICOLON | tk_WRITE ToBeWritten> tk_SEMICOLON .

ToBeWritten> -> tk_IDEN | tk_STRING .

Function_statement> -> Actual_Parameter_list> tk_RSQ tk_SEMICOLON .

Actual_Parameter_list> -> Literal> Rem_actual_Parameter_list> | .

Rem_actual_Parameter_list> -> tk_COMMA Literal> Rem_actual_Parameter_list> | .

ArithmeticExpr> -> HighPrec> RemArith> .

RemArith> -> tk_PLUS HighPrec> RemArith>| tk_MINUS HighPrec> RemArith> | .

HighPrec> -> Base> RemHighPrec> .

RemHighPrec> -> Ops> Base> RemHighPrec> | .

Ops> -> tk_MUL | tk_DIV | tk_EXP | tk_MODULO .

Base> -> tk_LPAREN ArithmeticExpr> tk_RPAREN | Trinity> .

Trinity> -> tk_IDEN Index> | tk_FLOAT | tk_NUMBER .

Literal> -> tk_IDEN | tk_NUMBER .

BooleanExpr> -> tk_TRUE | tk_FALSE| ArithmeticExpr> ComparableArith> .

ComparableArith> -> BooleanOps> ArithmeticExpr> .

BooleanOps> -> tk_EQUAL | tk_NE | tk_LS | tk_GR | tk_LE | tk_GE .

Inbuilt_funcs> -> Reverse> | Length> .

Reverse> -> tk_REVERSE tk_LPAREN tk_IDEN tk_RPAREN tk_SEMICOLON .

Length> -> tk_LENGTH tk_LPAREN tk_IDEN tk_RPAREN tk_SEMICOLON .