

GROUP 19			Rajat Payghan (2021A7PS2218P)			
			Rudra Goyal (2021A7PS0708P)			
			Samraddh Saxena (2021A7PS1455P)			
			Aditya Patel (2021A7PS2433P)			
			Bhagwati Iyer (2021A7PS0685P)			
			Jai Bothra (2021A7PS0015P)			
	Non Terminals				First Set	Follow Set
	<program>	\====	<otherFunctions> <mainFunction>	Original	TK_FUNID	\$
	<mainFunction>	\====	TK_MAIN <stmts> TK_END	Original	TK_MAIN	\$
	<otherFunctions>	\====	<function><otherFunctions> eps	Original	TK_FUNID	TK_MAIN
	<function>	\====	TK_FUNID <input_par> <output_par> TK_SEM <stmts> TK_END	Original	TK_FUNID	TK_FUNID, TK_MAIN
	<input_par>	\====	TK_INPUT TK_PARAMETER TK_LIST TK_SQL <parameter_list> TK_SQR	Original	TK_INPUT	TK_OUTPUT, TK_SEM
	<output_par>	\====	TK_OUTPUT TK_PARAMETER TK_LIST TK_SQL <parameter_list> TK_SQR eps	Original	TK_OUTPUT	TK_SEM
	<parameter_list>	\====	<dataType> TK_ID <remaining_list>	Original	TK_INT, TK_REAL, TK_RECORD, TK_UNION, TK_RUID	TK_SQR
	<dataType>	\====	<primitiveDatatype> <constructedDatatype>	Original	TK_INT, TK_REAL, TK_RECORD, TK_UNION, TK_RUID	TK_COLON, TK_ID
	<primitiveDatatype>	\====	TK_INT TK_REAL	Original	TK_INT, TK_REAL	TK_COLON, TK_ID
	<constructedDatatype>	\====	TK_RECORD TK_RUID TK_UNION TK_RUID TK_RUID	New & Edited	TK_RECORD, TK_UNION, TK_RUID	TK_COLON, TK_ID
	<remaining_list>	\====	TK_COMMA <parameter_list> ∈	Original	TK_COMMA	TK_SQR
	<stmts>	\====	<typeDefinitions> <declarations> <otherStmts><returnStmt>	Original	TK_RECORD, TK_TYPE, TK_ID, TK_RECORD_ID, TK_WHILE, TK_IF, TK_READ, TK_WRITE, TK_SQL, TK_CALL,TK_RETURN	TK_END
	<typeDefinitions>	\====	<typeDefinition><typeDefinitions> ∈ <definetypestmt><typeDefinitions>	New & Edited	TK_RECORD, TK_UNION	TK_TYPE
	<typeDefinition>	\====	TK_RECORD TK_RUID <fieldDefinitions> TK_ENDRECORD	Original	TK_RECORD	TK_RECORD
	<typeDefinition>	\====	TK_UNION TK_RUID <fieldDefinitions> TK_ENDUNION	Original	TK_UNION	TK_UNION
	<fieldDefinitions>	\====	<fieldDefinition><fieldDefinition><moreFields>	Original	TK_TYPE	TK_ENDRECORD, TK_ENDUNION
	<fieldDefinition>	\====	TK_TYPE <datatype> TK_COLON TK_FIELDID TK_SEM <typedefinition><fielddefinition>	New & Edited	TK_TYPE	TK_TYPE, TK_ENDRECORD, TK_ENDUNION
	<moreFields>	\====	<fieldDefinition><moreFields> ∈	Original	TK_TYPE	TK_ENDRECORD, TK_ENDUNION
	<declarations>	\====	<declaration><declarations> ∈	Original	TK_TYPE	TK_ID, TK_RECORDID, TK_WHILE, TK_IF, TK_READ, TK_WRITE, TK_SQL, TK_CALL, TK_RETURN
	<declaration>	\====	TK_TYPE <dataType> TK_COLON TK_ID <global_or_not> TK_SEM	New & Edited	TK_TYPE	TK_ID, TK_RECORD_ID, TK_WHILE, TK_IF, TK_READ, TK_WRITE, TK_SQL, TK_CALL
	<global_or_not>	\====	TK_COLON TK_GLOBAL ∈	New & Edited	TK_COLON	TK_SEM
	<otherStmts>	\====	<stmt><otherStmts> ∈	Original	TK_ID, TK_RECORDID, TK_WHILE, TK_IF, TK_READ, TK_WRITE, TK_SQL, TK_CALL	TK_RETURN, TK_ENDIF, TK_ELSE, TK_ENDWHILE
	<stmt>	\====	<assignmentStmt> <iterativeStmt> <conditionalStmt> <ioStmt> <funCallStmt>	Original	TK_ID, TK_WHILE, TK_IF, TK_READ, TK_WRITE, TK_SQL, TK_CALL	TK_ID, TK_WHILE, TK_IF, TK_READ, TK_WRITE, TK_SQL, TK_CALL, TK_ENDWHILE, TK_ELSE, TK_ENDIF, TK_RETURN

				Original	TK_ID	TK_ID, TK_WHILE, TK_IF, TK_READ, TK_WRITE, TK_SQL, TK_CALL, TK_ENDWHILE, TK_ELSE, TK_ENDIF, TK_RETURN
<assignmentStmt>	\====>	<SingleOrRecId> TK_ASSIGNOP <arithmeticExpression> TK_SEM				
				New & Edited	TK_ID	TK_ASSIGNOP
<singleOrRecId>	\====>	TK_ID <SorRecHelper>				
				New & Edited	TK_DOT, eps	TK_ASSIGNOP, TK_MUL, TK_DIV, TK_SEM, TK_CL, TK_PLUS, TK_MINUS
<SorRecHelper>	\====>	eps TK_DOT TK_FIELDID				
				New & Edited	TK_SQL, TK_CALL	TK_ID, TK_WHILE, TK_IF, TK_READ, TK_WRITE, TK_SQL, TK_CALL, TK_ENDWHILE, TK_ELSE, TK_ENDIF, TK_RETURN
<funCallStmt>	\====>	<outputParameters> TK_CALL TK_FUNID TK_WITH TK_PARAMETERS <inputParameters>TK_SEM				
<outputParameters>	\====>	TK_SQL <idList> TK_SQR TK_ASSIGNOP eps		Original	TK_SQL	TK_CALL
<inputParameters>	\====>	TK_SQL <idList> TK_SQR		Original	TK_SQL	TK_SEM
				Original		TK_ID, TK_WHILE, TK_IF, TK_READ, TK_WRITE, TK_SQL, TK_CALL, TK_ENDWHILE, TK_ELSE, TK_ENDIF, TK_RETURN
<iterativeStmt>	\====>	TK_WHILE TK_OP <booleanExpression> TK_CL <stmt> <otherStmts> TK_ENDWHILE			TK_WHILE	
				New & Edited	TK_IF	TK_ID, TK_WHILE, TK_IF, TK_READ, TK_WRITE, TK_SQL, TK_CALL, TK_ENDWHILE, TK_ELSE, TK_ENDIF, TK_RETURN
<conditionalStmt>	\====>	TK_IF TK_OP <booleanExpression> TK_CL TK_THEN <stmt><otherStmts> <elsePart>				
				New & Edited	TK_ELSE	TK_ID, TK_WHILE, TK_IF, TK_READ, TK_WRITE, TK_SQL, TK_CALL, TK_ENDWHILE, TK_ELSE, TK_ENDIF, TK_RETURN
<elsePart>	\====>	TK_ELSE <stmt><otherStmts> TK_ENDIF TK_ENDIF				
				Original	TK_READ	TK_ID, TK_WHILE, TK_IF, TK_READ, TK_WRITE, TK_SQL, TK_CALL, TK_ENDWHILE, TK_ELSE, TK_ENDIF, TK_RETURN
<ioStmt>	\====>	TK_READ TK_OP <var> TK_CL TK_SEM TK_WRITE TK_OP <var> TK_CL TK_SEM				
<arithmeticExpression>	\====>	<Term><Expr'>		New & Edited	TK_OP,TK_ID,TK_RNUM,TK_NUM	TK_SEM, TK_CL
<Expr'>	\====>	TK_PLUS <Term> <Expr'> TK_MINUS <Term> <Expr'> eps		New & Edited	eps,TK_PLUS,TK_MINUS	TK_SEM, TK_CL
<Term>	\====>	<Factor><Term'>		New & Edited	TK_OP,TK_ID,TK_RNUM,TK_NUM	TK_SEM, TK_CL, TK_PLUS, TK_MINUS
<Term'>	\====>	TK_MUL<Factor><Term'> TK_DIV<Factor><Term'> eps		New & Edited	TK_MUL, TK_DIV, eps	TK_SEM, TK_CL, TK_PLUS, TK_MINUS
<Factor>	\====>	TK_OP <arithmeticExpression> TK_CL <var>		New & Edited	TK_ID, TK_NUM, TK_RNUM, TK_OP	TK_MUL, TK_DIV, TK_SEM, TK_CL, TK_PLUS, TK_MINUS
<booleanExpression>	\====>	TK_OP <booleanExpression> TK_CL <logicalOp> TK_OP <booleanExpression> TK_CL		Original	TK_OP	TK_CL
<booleanExpression>	\====>	<var> <relationalOp> <var>		Original	TK_ID, TK_NUM, TK_RNUM	TK_CL
<booleanExpression>	\====>	TK_NOT TK_OP <booleanExpression> TK_CL		Original	TK_NOT	TK_CL
<var>	\====>	TK_ID <SorRecHelper> TK_NUM TK_RNUM		New & Edited	TK_ID, TK_NUM, TK_RNUM	TK_MUL, TK_DIV, TK_SEM, TK_CL, TK_PLUS, TK_MINUS
<logicalOp>	====>	TK_AND TK_OR		Original	TK_AND, TK_OR	TK_OP

	<relationalOp>	===>	TK_LT TK_LE TK_EQ TK_GT TK_GE TK_NE	Original	TK_LT ,TK_LE ,TK_EQ ,TK_GT , TK_GE ,TK_NE	TK_ID, TK_NUM, TK_RNUM
	<returnStmt>	===>	TK_RETURN <optionalReturn> TK_SEM	Original	TK_RETURN	TK_END
	<optionalReturn>	===>	TK_SQL <idList> TK_SQR ∈	Original	TK_SQL, eps	TK_SEM
	<idList>	\===>	TK_ID <more_ids>	Original	TK_ID	TK_SQR
	<more_ids>	\===>	TK_COMMA <idList> eps	Original	TK_COMMA, eps	TK_SQR
	<definetypestmt>	\===>	TK_DEFINETYPE <A> TK_RUID TK_AS TK_RUID	Original	TK_DEFINETYPE	TK_RECORD, TK_UNION
	<A>	\===>	TK_RECORD TK_UNION	Original	TK_RECORD, TK_UNION	TK_RUID