```
    program
    typeDefinition_s
    typeDefinition
    TK_GLOBAL|TK_FUNCTION|TK_MAIN
    TK_VAR
```

4. fieldDefinition_s TK_ENDRECORD

5. fieldDefinition TK_VAR6. moreField_ID TK_SEM

7. moreFields TK ENDRECORD

8. primitiveDatatype TK_ID|TK_ARRAYID|TK_MAPID

9. globalStatements TK_FUNCTION|TK_MAIN

10. globalDeclare TK_ASSIGN|TK_FUNCTION|TK_MAIN

11. globalAssign TK_FUNCTION|TK_MAIN|

12. var TK_SEM13. otherFunctions TK_MAIN

14. functions TK_FUNCTION|TK_MAIN

15. input_par TK_OUTPUT

16. output_par TK_VAR|TK_ARRAY|TK_MAP|TK_ASSIGN|TK_WHILE|TK_IF| TK_GET|TK_PUTS|TK_CALL| TK_MAPINSERT|TK_MAPREMOVE|TK_ENDFUNCTION

17. parameter_list TK_SQR
18. dataType TK_ID
19. constructedDatatype TK_ID
20. remaining_list TK_SQR
21. mainFunction \$

22. stmt_s TK_ENDMAIN|TK_ENDFUNCTION 23. declaration_s TK_ASSIGN|TK_WHILE|TK_IF|

TK_GET|TK_PUT|TK_PUTS|TK_CALL|

TK MAPINSERT|TK MAPREMOVE|TK ENDMAIN|TK ENDFUNCTION

24. all_declaration TK_VAR|TK_ARRAY|TK_MAP|TK_ASSIGN|TK_WHILE|TK_IF|

TK_GET|TK_PUT|TK_PUTS|TK_CALL|

TK_MAPINSERT|TK_MAPREMOVE|TK_ENDMAIN|TK_ENDFUNCTION

25. declaration TK_VAR|TK_ARRAY|TK_MAP|TK_ASSIGN|TK_WHILE|TK_IF|

TK GET|TK PUT|TK PUTS|TK CALL|

TK_MAPINSERT|TK_MAPREMOVE|TK_ENDMAIN|TK_ENDFUNCTION

26. array_declaration TK_VAR|TK_ARRAY|TK_MAP|TK_ASSIGN|TK_WHILE|TK_IF|
TK GET|TK PUT|TK PUTS|TK CALL|

TK MAPINSERT|TK MAPREMOVE|TK ENDMAIN|TK ENDFUNCTION

27. map_declaration TK_VAR|TK_ARRAY|TK_MAP|TK_ASSIGN|TK_WHILE|TK_IF|

TK GET|TK PUT|TK PUTS|TK CALL|

TK_MAPINSERT|TK_MAPREMOVE|TK_ENDMAIN|TK_ENDFUNCTION

28. moreMapID TK_SEM
29. more_array_IDs TK_SEM
30. more_IDs TK_SEM

31. otherStmts TK_ENDMAIN|TK_ENDFUNCTION|TK_ENDWHILE|

TK ELSEIF|TK ELSE|TK ENDIF

32. stmt TK ASSIGN|TK WHILE|TK IF|

TK_GET|TK_PUT|TK_PUTS|TK_CALL| TK_MAPINSERT|TK_MAPREMOVE|

TK_ENDMAIN|TK_ENDFUNCTION|TK_ENDWHILE|TK_ELSEIF|TK_ELSE|TK_ENDIF

33. assignmentStmt TK_ASSIGN|TK_WHILE|TK_IF| TK GET|TK PUT|TK PUTS|TK CALL| TK MAPINSERT|TK MAPREMOVE| TK ENDMAIN|TK_ENDFUNCTION|TK_ENDWHILE|TK_ELSEIF|TK_ELSE|TK_ENDIF 34. SingleOrRecOrArrayId TK ASSIGNOP 35. arithmeticExpression TK SEM|TK CL 36. more_variables TK_SEM|TK_CL 37. operator TK OP | TK ID | TK NUM | TK RNUM | TK CHR | TK ARRAYID|TK RECORDID|TK MAPID|TK SEM|TK CL 38. funCallStmt TK_ASSIGN|TK_WHILE|TK_IF| TK GET|TK PUT|TK PUTS|TK CALL| TK MAPINSERT|TK MAPREMOVE| TK ENDMAIN|TK ENDFUNCTION|TK ENDWHILE|TK ELSEIF|TK ELSE|TK ENDIF 39. idList TK SQR 40. more ids TK SQR 41. iterativeStmt TK ASSIGN|TK WHILE|TK IF| TK GET|TK PUT|TK PUTS|TK CALL| TK MAPINSERT|TK MAPREMOVE| TK ENDMAIN|TK ENDFUNCTION|TK ENDWHILE|TK ELSEIF|TK ELSE|TK ENDIF TK ASSIGN|TK WHILE|TK IF| 42. conditionalStmt TK GET|TK PUT|TK PUTS|TK CALL| TK MAPINSERT|TK MAPREMOVE| TK ENDMAIN|TK ENDFUNCTION|TK ENDWHILE|TK ELSEIF|TK ELSE|TK ENDIF 43. else&elseif TK ENDIF 44. elseifs TK ELSE|TK ENDIF 45. elseif TK_ELSEIF|TK_ELSE|TK_ENDIF 46. else TK ENDIF 47. ioStmt TK_ASSIGN|TK_WHILE|TK_IF| TK GET|TK PUT|TK PUTS|TK CALL| TK MAPINSERT|TK MAPREMOVE| TK_ENDMAIN|TK_ENDFUNCTION|TK_ENDWHILE|TK_ELSEIF|TK_ELSE|TK_ENDIF 48. allVar TK_SEM 49. numorid TK SQR 50. booleanExpression TK_CL| TK_LT | TK_LE | TK_EQ | TK_GT | TK_GE | TK_NE| TK_AND | TK_OR | TK_ASSIGN | TK_WHILE | TK_IF | TK_GET | TK_PUT | TK_PUTS | TK_CALL | TK MAPINSERT|TK MAPREMOVE 51. bExp TK CL| TK LT | TK LE | TK EQ | TK GT | TK GE | TK NE | TK AND | TK OR | TK ASSIGN | TK WHILE | TK IF | TK GET | TK PUT | TK PUTS | TK CALL | TK MAPINSERT|TK MAPREMOVE 52. Op TK OP | TK ID | TK NUM | TK RNUM | TK CHR | TK ARRAYID|TK RECORDID|TK MAPID |TK NOT 53. variable TK OP | TK ID | TK NUM | TK RNUM | TK CHR | TK ARRAYID|TK RECORDID|TK MAPID| TK PLUS | TK MUL |TK_MINUS|TK_DIV|TK_MOD|TK_SEM|TK_CL|TK_LT | TK_LE | TK_EQ |TK_GT | TK_GE | TK NE| TK AND | TK OR | TK ASSIGN | TK WHILE | TK IF | TK GET | TK PUT | TK PUTS | TK CALL | TK MAPINSERT|TK MAPREMOVE 54. logicalOp TK_OP | TK_ID | TK_NUM | TK_RNUM | TK_CHR | TK ARRAYID|TK RECORDID|TK MAPID |TK NOT TK_OP| TK_ID | TK_NUM | TK_RNUM | TK_CHR| 55. relationalOp TK_ARRAYID|TK_RECORDID|TK_MAPID|TK_NOT TK_ASSIGN|TK_WHILE|TK_IF| 56. mapStmt

TK_GET|TK_PUT|TK_PUTS|TK_CALL| TK_MAPINSERT|TK_MAPREMOVE|
TK_ENDMAIN|TK_ENDFUNCTION|TK_ENDWHILE| TK_ELSEIF|TK_ELSE|TK_ENDIF

- 57. mapAdd TK_ASSIGN|TK_WHILE|TK_IF|
 TK_GET|TK_PUT|TK_PUTS|TK_CALL| TK_MAPINSERT|TK_MAPREMOVE|
 TK_ENDMAIN|TK_ENDFUNCTION|TK_ENDWHILE| TK_ELSEIF|TK_ELSE|TK_ENDIF
- 58. mapDelete TK_ASSIGN|TK_WHILE|TK_IF|
 TK_GET|TK_PUT|TK_PUTS|TK_CALL| TK_MAPINSERT|TK_MAPREMOVE|
 TK_ENDMAIN|TK_ENDFUNCTION|TK_ENDWHILE| TK_ELSEIF|TK_ELSE|TK_ENDIF