**程序说明**

本次程序采用递归子程序分析法，由于时间稍紧，完成了符号表的定义和方法实现，但是并未与语法分析结合形成语义分析，稍有遗憾。

本次作业为了将结果显示得更清晰，将大型语句或语句组的递归子程序做了输出，剩下的比如IDENT、INT等简单单词未进行输出。

前两行表示递归子程序的起始行和列，便于进行结果比对。

错误处理，对于不符合文法的地方会进行报错，并写入error\_log.txt文件以供查看。

**程序使用说明**

程序通过控制台输入决定路径即可，或者将输入和打开文件部分注释掉，则选择工程文件下15071054\_test.txt进行读取，方便操作。

**程序结果**

1 7 : This is Const Definition.

2 7 : This is Const Definition.

3 7 : This is Const Definition.

4 7 : This is Const Definition.

1 1 : This is Const Declare. Const Definition is Over.

6 1 : This is Var Def.

6 1 : This is Var Declare. Var Definition is Over.

9 13 : This is An Expression.

9 5 : This is Return Statement.

9 5 : This is Statement List. Over.

9 5 : This is Complex Statements. Over.

8 1 : This is Return Function Definition. Over.

12 9 : This is Para List.

13 13 : This is An Expression.

13 5 : This is Return Statement.

13 5 : This is Statement List. Over.

13 5 : This is Complex Statements. Over.

12 1 : This is Return Function Definition. Over.

16 15 : This is Para List.

17 11 : This is Const Definition.

18 11 : This is Const Definition.

19 11 : This is Const Definition.

17 5 : This is Const Declare. Const Definition is Over.

21 8 : This is An Expression.

21 12 : This is An Expression.

21 8 : This is Condition.

22 15 : This is An Expression.

22 15 : This is Val Para List.

22 9 : This is Return Function Call.

24 12 : This is An Expression.

24 16 : This is An Expression.

24 12 : This is Condition.

25 19 : This is An Expression.

25 19 : This is Val Para List.

25 13 : This is Return Function Call.

27 16 : This is An Expression.

27 20 : This is An Expression.

27 16 : This is Condition.

28 23 : This is An Expression.

28 23 : This is Val Para List.

28 17 : This is Return Function Call.

30 20 : This is An Expression.

30 20 : This is Condition.

31 33 : This is An Expression.

31 46 : This is An Expression.

31 53 : This is An Expression.

31 46 : This is Val Para List.

31 36 : This is Return Function Call.

31 36 : This is An Expression.

31 33 : This is Val Para List.

31 29 : This is Return Function Call.

31 29 : This is An Expression.

31 21 : This is Return Statement.

33 29 : This is An Expression.

33 21 : This is Return Statement.

30 17 : This is If Statement.

27 13 : This is If Statement.

24 9 : This is If Statement.

21 5 : This is If Statement.

21 5 : This is Statement List. Over.

17 5 : This is Complex Statements. Over.

16 1 : This is Return Function Definition. Over.

36 12 : This is Para List.

37 12 : This is An Expression.

39 9 : This is Printf String.

38 5 : This is Case State.

41 9 : This is Printf String.

40 5 : This is Case State.

43 9 : This is Printf String.

42 5 : This is Default Statement.

37 5 : This is Switch Statement.

46 5 : This is Return Statement.

37 5 : This is Statement List. Over.

37 5 : This is Complex Statements. Over.

36 1 : This is Return Function Definition. Over

50 5 : This is Printf String.

51 5 : This is Return Statement.

50 5 : This is Statement List. Over.

50 5 : This is Complex Statements. Over.

49 1 : This is Return Function Definition. Over.

55 10 : This is An Expression.

55 2 : This is Return Statement.

55 2 : This is Statement List. Over.

55 2 : This is Complex Statements. Over.

54 1 : This is Return Function Definition. Over.

58 13 : This is Para List.

59 9 : This is An Expression.

59 2 : This is Printf Expression.

60 10 : This is An Expression.

60 2 : This is Return Statement.

59 2 : This is Statement List. Over.

59 2 : This is Complex Statements. Over.

58 1 : This is Return Function Definition. Over.

64 5 : This is Var Def.

65 5 : This is Var Def.

66 5 : This is Var Def.

67 5 : This is Var Def.

64 5 : This is Var Declare. Var Definition is Over.

69 16 : This is An Expression.

69 5 : This is Become Statement.

70 16 : This is An Expression.

70 5 : This is Become Statement.

71 16 : This is An Expression.

71 5 : This is Become Statement.

72 16 : This is An Expression.

72 5 : This is Become Statement.

73 16 : This is An Expression.

73 5 : This is Become Statement.

74 17 : This is An Expression.

74 5 : This is Become Statement.

75 17 : This is An Expression.

75 5 : This is Become Statement.

76 13 : This is An Expression.

76 18 : This is An Expression.

76 5 : This is Become Statement.

77 13 : This is An Expression.

77 18 : This is An Expression.

77 5 : This is Become Statement.

78 13 : This is An Expression.

78 18 : This is An Expression.

78 5 : This is Become Statement.

81 12 : This is An Expression.

81 5 : This is Printf Expression.

82 20 : This is An Expression.

82 12 : This is An Expression.

82 5 : This is Printf Expression.

69 5 : This is Statement List. Over.

64 5 : This is Complex Statements. Over.

63 1 : This is Return Function Definition. Over.

89 5 : This is Var Def.

90 5 : This is Var Def.

91 5 : This is Var Def.

92 5 : This is Var Def.

89 5 : This is Var Declare. Var Definition is Over.

94 5 : This is Scanf Statement.

95 5 : This is Scanf Statement.

97 9 : This is An Expression.

97 5 : This is Become Statement.

100 16 : This is An Expression.

100 31 : This is An Expression.

100 33 : This is An Expression.

100 31 : This is Val Para List.

100 21 : This is Return Function Call.

100 21 : This is An Expression.

100 9 : This is Become Statement.

101 11 : This is An Expression.

101 11 : This is Condition.

99 5 : This is Do While Statement.

103 9 : This is An Expression.

103 5 : This is Become Statement.

105 16 : This is An Expression.

105 31 : This is An Expression.

105 38 : This is An Expression.

105 31 : This is Val Para List.

105 21 : This is Return Function Call.

105 21 : This is An Expression.

105 9 : This is Become Statement.

106 13 : This is An Expression.

106 9 : This is Become Statement.

105 9 : This is Statement List. Over.

107 12 : This is An Expression.

107 16 : This is An Expression.

107 12 : This is Condition.

104 5 : This is Do While Statement.

109 20 : This is An Expression.

109 5 : This is Printf String Expression.

110 20 : This is An Expression.

110 5 : This is Printf String Expression.

111 5 : This is Printf String.

112 19 : This is An Expression.

112 12 : This is An Expression.

112 5 : This is Printf Expression.

113 12 : This is An Expression.

113 5 : This is Printf Expression.

115 29 : This is An Expression.

115 5 : This is Printf String Expression.

117 6 : This is Statement List. Over.

118 8 : This is Statement List. Over.

118 6 : This is Statement List. Over.

121 16 : This is An Expression.

121 16 : This is Val Para List.

121 9 : This is Return Function Call.

121 9 : This is An Expression.

121 5 : This is Become Statement.

122 9 : This is An Expression.

122 5 : This is Become Statement.

123 5 : This is Non Return Function Call.

124 5 : This is Non Return Function Call.

94 5 : This is Statement List. Over.

89 5 : This is Complex Statements. Over.

87 1 : This is Main Definition. Over.