词法分析结果及说明

根据“16061146\_test.txt”文件产生的结果附在最后，先对使用方法及输出格式、错误处理进行说明。

输出格式： 1. 行号 + 符号类别 + 相应的符号或值

例如： 2 COMMASY ,

3 STRINGSY "ss"

6 IDSY nextval

121 RBRACESY }

编码命名方式附在源程序最后

2. 报错信息

例如： more than one character in ''.(ACHARSY)

错误处理： 1.两个单引号之间多于一个字符

会忽略两处单引号，其余部分按照正常代码进行词法分析

例如： ‘ab’

输出如下：

more than one character in ''.(ACHARSY)

141 IDSY ab

illegal character or without end\_mark while dealing single char.(ACHARSY)

more than one character in ''.(ACHARSY)

对于标蓝句子的说明：

第二个单引号后是‘\t’，不在文法规定的字符范围内，故报错

2.单个字符只有前单引号没有后单引号

会报错并忽略单引号

3.单个字符只有后单引号没有前单引号

会报错并忽略单引号，可能会出现多个报错，但不影响正常词法分析

4.对于双引号字符串的错误处理

处理原则与单引号相同

5.其他错误类型

参考void err(int index)函数定义

测试结果：

please input a file path:

16061146\_test.txt 手动输入的文件名（包括路径）

successfully open the file

2 CONSTSY const

2 INTSY int

2 IDSY s\_len

2 EQUSY =

2 USINTSY 10

2 COMMASY ,

2 IDSY t\_len

2 EQUSY =

2 USINTSY 5

2 COMMASY ,

2 IDSY N

2 EQUSY =

2 USINTSY 100

2 SEMISY ;

3 CONSTSY const

3 CHARSY char

3 IDSY ss

3 EQUSY =

3 STRINGSY "ss"

3 COMMASY ,

3 IDSY zz

3 EQUSY =

3 STRINGSY "zz"

3 SEMISY ;

4 INTSY int

4 IDSY kmp\_ret

4 COMMASY ,

4 IDSY fun\_ret

4 SEMISY ;

6 VOIDSY void

6 IDSY get\_next

6 LPARSY (

6 CHARSY char

6 IDSY s

6 COMMASY ,

6 INTSY int

6 IDSY nextval

6 RPARSY )

6 LBRACESY {

7 INTSY int

7 IDSY len

7 EQUSY =

7 IDSY s\_len

7 SEMISY ;

8 INTSY int

8 IDSY i

8 EQUSY =

8 USINTSY 0

8 SEMISY ;

8 IDSY j

8 EQUSY =

8 MINUSSY -

8 USINTSY 1

8 SEMISY ;

10 IDSY nextval

10 LBRACSY [

10 USINTSY 0

10 RBRACSY ]

10 EQUSY =

10 MINUSSY -

10 USINTSY 1

10 SEMISY ;

12 WHILESY while

12 LPARSY (

12 IDSY i

12 LESSSY <

12 LPARSY (

12 IDSY len

12 MINUSSY -

12 USINTSY 1

12 RPARSY )

12 RPARSY )

12 LBRACESY {

13 IFSY if

13 LPARSY (

13 IDSY j

13 AEQUSY ==

13 MINUSSY -

13 USINTSY 1

13 RPARSY )

13 LBRACESY {

14 IDSY i

14 EQUSY =

14 IDSY i

14 PLUSSY +

14 USINTSY 1

14 SEMISY ;

15 IDSY j

15 EQUSY =

15 IDSY j

15 PLUSSY +

15 USINTSY 1

15 SEMISY ;

17 IFSY if

17 LPARSY (

17 IDSY s

17 LBRACSY [

17 IDSY i

17 RBRACSY ]

17 MOESY >=

17 IDSY s

17 LBRACSY [

17 IDSY j

17 RBRACSY ]

17 RPARSY )

17 LBRACESY {

18 IDSY nextval

18 LBRACSY [

18 IDSY i

18 RBRACSY ]

18 EQUSY =

18 IDSY j

18 SEMISY ;

19 RBRACESY }

19 ELSESY else

19 LBRACESY {

20 IDSY nextval

20 LBRACSY [

20 IDSY i

20 RBRACSY ]

20 EQUSY =

20 IDSY nextval

20 LBRACSY [

20 IDSY j

20 RBRACSY ]

20 SEMISY ;

21 RBRACESY }

22 RBRACESY }

22 ELSESY else

22 LBRACESY {

23 IFSY if

23 LPARSY (

23 IDSY s

23 LBRACSY [

23 IDSY i

23 RBRACSY ]

23 AEQUSY ==

23 IDSY s

23 LBRACSY [

23 IDSY j

23 RBRACSY ]

23 RPARSY )

23 LBRACESY {

24 IDSY i

24 EQUSY =

24 IDSY i

24 PLUSSY +

24 USINTSY 1

24 SEMISY ;

25 IDSY j

25 EQUSY =

25 IDSY j

25 PLUSSY +

25 USINTSY 1

25 SEMISY ;

27 IFSY if

27 LPARSY (

27 IDSY s

27 LBRACSY [

27 IDSY i

27 RBRACSY ]

27 MOESY >=

27 IDSY s

27 LBRACSY [

27 IDSY j

27 RBRACSY ]

27 RPARSY )

27 LBRACESY {

28 IDSY nextval

28 LBRACSY [

28 IDSY i

28 RBRACSY ]

28 EQUSY =

28 IDSY j

28 SEMISY ;

29 RBRACESY }

29 ELSESY else

29 LBRACESY {

30 IDSY nextval

30 LBRACSY [

30 IDSY i

30 RBRACSY ]

30 EQUSY =

30 IDSY nextval

30 LBRACSY [

30 IDSY j

30 RBRACSY ]

30 SEMISY ;

31 RBRACESY }

32 RBRACESY }

32 ELSESY else

32 LBRACESY {

33 IDSY j

33 EQUSY =

33 IDSY nextval

33 LBRACSY [

33 IDSY j

33 RBRACSY ]

33 SEMISY ;

34 RBRACESY }

35 RBRACESY }

36 RBRACESY }

38 RETSY return

38 SEMISY ;

39 RBRACESY }

41 INTSY int

41 IDSY kmp

41 LPARSY (

41 CHARSY char

41 IDSY s

41 COMMASY ,

41 CHARSY char

41 IDSY t

41 RPARSY )

41 LBRACESY {

42 INTSY int

42 IDSY k

42 EQUSY =

42 MINUSSY -

42 USINTSY 1

42 COMMASY ,

42 IDSY i

42 EQUSY =

42 USINTSY 0

42 COMMASY ,

42 IDSY j

42 EQUSY =

42 USINTSY 0

42 SEMISY ;

43 INTSY int

43 IDSY nextvak

43 LBRACSY [

43 IDSY N

43 RBRACSY ]

43 EQUSY =

43 USINTSY 0

43 SEMISY ;

43 DIVISY /

43 DIVISY /

43 IDSY to

43 IDSY be

43 IDSY modified

45 IDSY get\_next

45 LPARSY (

45 IDSY s

45 COMMASY ,

45 IDSY nextval

45 RPARSY )

45 SEMISY ;

46 PRINTSY printf

46 LPARSY (

46 STRINGSY "the content of nextval: "

46 RPARSY )

46 SEMISY ;

47 FORSY for

47 LPARSY (

47 IDSY k

47 EQUSY =

47 USINTSY 0

47 SEMISY ;

47 IDSY k

47 LESSSY <

47 IDSY N

47 SEMISY ;

47 IDSY k

47 EQUSY =

47 IDSY k

47 PLUSSY +

47 USINTSY 1

47 RPARSY )

47 LBRACESY {

48 PRINTSY printf

48 LPARSY (

48 STRINGSY " he content of nextval: "

48 COMMASY ,

48 IDSY nextval

48 LBRACSY [

48 IDSY k

48 RBRACSY ]

48 RPARSY )

48 SEMISY ;

49 RBRACESY }

51 INTSY int

51 IDSY cond1

51 EQUSY =

51 IDSY i

51 LESSSY <

51 IDSY t\_len

51 SEMISY ;

52 INTSY int

52 IDSY cond2

52 EQUSY =

52 IDSY j

52 LESSSY <

52 IDSY s\_len

52 SEMISY ;

53 INTSY int

53 IDSY cond3

53 EQUSY =

53 IDSY cond1

53 STARSY \*

53 IDSY cond2

53 SEMISY ;

54 WHILESY while

54 LPARSY (

54 IDSY cond3

54 RPARSY )

54 LBRACESY {

55 IDSY cond1

55 EQUSY =

55 IDSY j

55 AEQUSY ==

55 MINUSSY -

55 USINTSY 1

55 SEMISY ;

56 IDSY cond2

56 EQUSY =

56 IDSY t

56 LBRACSY [

56 IDSY i

56 RBRACSY ]

56 AEQUSY ==

56 IDSY s

56 LBRACSY [

56 IDSY j

56 RBRACSY ]

56 SEMISY ;

57 IDSY cond3

57 EQUSY =

57 IDSY cond1

57 PLUSSY +

57 IDSY cond2

57 SEMISY ;

58 IFSY if

58 LPARSY (

58 IDSY cond3

58 MOESY >=

58 USINTSY 1

58 RPARSY )

58 LBRACESY {

59 IDSY i

59 EQUSY =

59 IDSY i

59 PLUSSY +

59 USINTSY 1

59 SEMISY ;

60 IDSY j

60 EQUSY =

60 IDSY j

60 PLUSSY +

60 USINTSY 1

60 SEMISY ;

61 RBRACESY }

62 IDSY j

62 EQUSY =

62 IDSY nextval

62 LBRACSY [

62 IDSY j

62 RBRACSY ]

62 SEMISY ;

63 RBRACESY }

65 IDSY cond1

65 EQUSY =

65 IDSY i

65 LESSSY <

65 IDSY t\_len

65 SEMISY ;

66 IDSY cond2

66 EQUSY =

66 IDSY j

66 LESSSY <

66 IDSY s\_len

66 SEMISY ;

67 IDSY cond3

67 EQUSY =

67 IDSY cond1

67 STARSY \*

67 IDSY cond2

67 SEMISY ;

68 RBRACESY }

69 IFSY if

69 LPARSY (

69 IDSY j

69 MOESY >=

69 IDSY s

69 PLUSSY +

69 IDSY len

69 RPARSY )

69 LBRACESY {

70 IDSY kmp\_ret

70 EQUSY =

70 IDSY i

70 MINUSSY -

70 IDSY s\_len

70 SEMISY ;

71 RETSY return

71 LPARSY (

71 IDSY kmp\_ret

71 RPARSY )

71 SEMISY ;

72 RBRACESY }

72 ELSESY else

72 LBRACESY {

73 RETSY return

73 LPARSY (

73 MINUSSY -

73 USINTSY 1

73 RPARSY )

73 SEMISY ;

74 RBRACESY }

75 RBRACESY }

77 INTSY int

77 IDSY fun

77 LPARSY (

77 INTSY int

77 IDSY n

77 RPARSY )

77 LBRACESY {

78 IFSY if

78 LPARSY (

78 IDSY n

78 AEQUSY ==

78 USINTSY 1

78 RPARSY )

78 LBRACESY {

79 IDSY fun\_ret

79 EQUSY =

79 USINTSY 1

79 SEMISY ;

80 RETSY return

80 LPARSY (

80 USINTSY 1

80 RPARSY )

80 SEMISY ;

81 RBRACESY }

82 IFSY if

82 LPARSY (

82 IDSY n

82 AEQUSY ==

82 USINTSY 2

82 RPARSY )

82 LBRACESY {

83 RETSY return

83 LPARSY (

83 USINTSY 1

83 RPARSY )

83 SEMISY ;

84 IDSY fun\_ret

84 EQUSY =

84 USINTSY 1

84 SEMISY ;

85 RBRACESY }

86 IDSY fun

86 LPARSY (

86 IDSY n

86 MINUSSY -

86 USINTSY 1

86 RPARSY )

86 SEMISY ;

87 IDSY ret\_1

87 EQUSY =

87 IDSY fun\_ret

87 SEMISY ;

88 IDSY fun

88 LPARSY (

88 IDSY n

88 MINUSSY -

88 USINTSY 2

88 RPARSY )

88 SEMISY ;

89 IDSY ret\_2

89 EQUSY =

89 IDSY fun\_ret

89 SEMISY ;

90 IDSY fun\_ret

90 EQUSY =

90 IDSY ret\_1

90 PLUSSY +

90 IDSY ret\_2

90 SEMISY ;

91 RETSY return

91 LPARSY (

91 IDSY fun\_ret

91 RPARSY )

91 SEMISY ;

92 RBRACESY }

94 CHARSY char

94 IDSY do\_nothing

94 LPARSY (

94 RPARSY )

94 LBRACESY {

95 RETSY return

95 LPARSY (

95 STRINGSY "resultntent of nextval: "

95 RPARSY )

95 SEMISY ;

96 RBRACESY }

98 VOIDSY void

98 IDSY foo

98 LPARSY (

98 RPARSY )

98 LBRACESY {

99 INTSY int

99 IDSY k

99 EQUSY =

99 USINTSY 0

99 COMMASY ,

99 IDSY pi

99 EQUSY =

99 USINTSY 3

99 COMMASY ,

99 IDSY e

99 EQUSY =

99 USINTSY 2

99 SEMISY ;

100 IDSY k

100 EQUSY =

100 IDSY pi

100 MINUSSY -

100 IDSY e

100 SEMISY ;

101 IDSY k

101 EQUSY =

101 IDSY pi

101 STARSY \*

101 IDSY e

101 SEMISY ;

102 IDSY k

102 EQUSY =

102 IDSY k

102 DIVISY /

102 IDSY e

102 SEMISY ;

103 IFSY if

103 LPARSY (

103 IDSY e

103 LOESY <=

103 IDSY pi

103 RPARSY )

103 LBRACESY {

104 IFSY if

104 LPARSY (

104 IDSY pi

104 MORESY >

104 IDSY e

104 RPARSY )

104 LBRACESY {

105 IDSY k

105 EQUSY =

105 USINTSY 0

105 SEMISY ;

106 RBRACESY }

107 RBRACESY }

108 PRINTSY printf

108 LPARSY (

108 STRINGSY "+=\*/\_qwertyuiopasdfghjklzxcvbnm0123456789"

108 RPARSY )

108 SEMISY ;

109 PRINTSY printf

109 LPARSY (

109 STRINGSY " !#$%@QWERTYUIOPASDFGHJKLZCXVBNM][\]^`{|}~"

109 RPARSY )

109 SEMISY ;

110 PRINTSY printf

110 LPARSY (

110 STRINGSY ")('$%@QWERTYUIOPASDFGHJKLZCXVBNM][\]^`{|}~"

110 RPARSY )

110 SEMISY ;

112 INTSY int

112 IDSY number

112 EQUSY =

112 PLUSSY +

112 USINTSY 16061146

112 COMMASY ,

112 IDSY no

112 EQUSY =

112 MINUSSY -

112 USINTSY 65535

112 SEMISY ;

113 IDSY do\_nothing

113 LPARSY (

113 RPARSY )

113 SEMISY ;

114 RBRACESY }

116 VOIDSY void

116 MAINSY main

116 LPARSY (

116 RPARSY )

116 LBRACESY {

117 CHARSY char

117 IDSY s

117 LBRACSY [

117 IDSY N

117 RBRACSY ]

117 COMMASY ,

117 IDSY t

117 LBRACSY [

117 IDSY N

117 RBRACSY ]

117 COMMASY ,

117 IDSY tmp

117 SEMISY ;

118 FORSY for

118 LPARSY (

118 IDSY k

118 EQUSY =

118 USINTSY 0

118 SEMISY ;

118 IDSY k

118 LESSSY <

118 USINTSY 3

118 SEMISY ;

118 IDSY k

118 EQUSY =

118 IDSY k

118 PLUSSY +

118 USINTSY 1

118 RPARSY )

118 LBRACESY {

119 SCANFSY scanf

119 LPARSY (

119 IDSY tmp

119 RPARSY )

119 SEMISY ;

120 IDSY s

120 LBRACSY [

120 IDSY k

120 RBRACSY ]

120 EQUSY =

120 IDSY tmp

120 SEMISY ;

121 RBRACESY }

122 FORSY for

122 LPARSY (

122 IDSY k

122 EQUSY =

122 USINTSY 0

122 SEMISY ;

122 IDSY k

122 LESSSY <

122 USINTSY 10

122 SEMISY ;

122 IDSY k

122 EQUSY =

122 IDSY k

122 PLUSSY +

122 USINTSY 1

122 RPARSY )

122 LBRACESY {

123 SCANFSY scanf

123 LPARSY (

123 IDSY tmp

123 RPARSY )

123 SEMISY ;

124 IDSY t

124 LBRACSY [

124 IDSY k

124 RBRACSY ]

124 EQUSY =

124 IDSY tmp

124 SEMISY ;

125 RBRACESY }

126 IDSY kmp

126 LPARSY (

126 IDSY s

126 COMMASY ,

126 IDSY t

126 RPARSY )

126 SEMISY ;

127 PRINTSY printf

127 LPARSY (

127 STRINGSY "kmp\_ret = TYUIOPASDFGHJKLZCXVBNM][\]^`{|}~"

127 COMMASY ,

127 IDSY kmp\_ret

127 RPARSY )

127 SEMISY ;

129 IDSY fun

129 LPARSY (

129 USINTSY 4

129 RPARSY )

129 SEMISY ;

130 PRINTSY printf

130 LPARSY (

130 STRINGSY " fun\_ret = YUIOPASDFGHJKLZCXVBNM][\]^`{|}~"

130 COMMASY ,

130 IDSY fun\_ret

130 RPARSY )

130 SEMISY ;

132 IDSY foo

132 LPARSY (

132 RPARSY )

132 SEMISY ;

133 RBRACESY }

135 CONSTSY const

135 INTSY int

135 IDSY max

135 EQUSY =

135 PLUSSY +

135 USINTSY 0123456789

135 SEMISY ;

136 CONSTSY const

136 CHARSY char

136 IDSY plus

136 EQUSY =

more than one character in ''.(ACHARSY)

136 PLUSSY +

136 MINUSSY -

136 USINTSY 1

137 USINTSY 23

more than one character in ''.(ACHARSY)

137 SEMISY ;

138 INTSY int

138 IDSY result

138 COMMASY ,

138 IDSY i

138 COMMASY ,

138 IDSY fac\_i

138 COMMASY ,

138 IDSY n

138 COMMASY ,

138 IDSY AA

138 LBRACSY [

138 USINTSY 100

138 RBRACSY ]

138 SEMISY ;

139 USINTSY 5

illegal or unexpected character in code.

139 USINTSY 6

140 ACHARSY a

more than one character in ''.(ACHARSY)

141 IDSY as

illegal character or without end\_mark while dealing single char.(ACHARSY)

more than one character in ''.(ACHARSY)

141 IDSY as

141 IDSY ww

142 IDSY ssss

illegal character or without end\_mark while dealing single char.(ACHARSY)

142 STRINGSY "assdddsddsdYUIOPASDFGHJKLZCXVBNM][\]^`{|}~"

illegal character or without end\_mark while dealing string.(STRINGSY)

illegal '!='

more than one character in ''.(ACHARSY)

144 USINTSY 22

illegal character or without end\_mark while dealing single char.(ACHARSY)

144 ACHARSY 2

more than one character in ''.(ACHARSY)

145 IDSY a

146 IDSY ab

illegal character or without end\_mark while dealing single char.(ACHARSY)

more than one character in ''.(ACHARSY)

146 IDSY a

illegal character or without end\_mark while dealing single char.(ACHARSY)

147 ACHARSY ;

more than one character in ''.(ACHARSY)

148 USINTSY 233

148 SEMISY ;

148 USINTSY 3

illegal character or without end\_mark while dealing single char.(ACHARSY)

148 ACHARSY =

more than one character in ''.(ACHARSY)

149 IDSY abbbbb

149 SEMISY ;

151 IDSY adaadadadas

illegal character or without end\_mark while dealing string.(STRINGSY)

illegal character or without end\_mark while dealing string.(STRINGSY)

illegal or unexpected character in code.

successfully reach the end of program.