**此法分析结果作业**

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符号（Symbol）：

* ‘;’ : SEMICOLON
* ‘,’ : COMMA
* ‘=’ : EQL
* ‘(‘ : LPAREN
* ‘)’ : RPAREN
* ‘[‘ : LBRACKETS
* ‘]’ : RBRACKETS
* ‘/’ : DIV
* ‘\*’ : TIMES
* ‘-‘ : MINUS
* ‘+’ : PLUS
* ‘>’ : GTR
* ‘<’ : LSS
* ‘:’ : COLON
* ‘\’’ : QUOTE
* ‘:=’ : BECOMES
* ‘>=’ : BEQ
* ‘<=’ : LEQ
* ‘<>’ : NEQ

保留字（Reserved Words）：22

* BEGIN
* END
* CONST
* VAR
* PROC
* FUNCT
* IF
* THEN
* WHILE
* FOR
* REPEAT
* UNTIL
* DO
* READ
* WRITE
* PROG
* BOOLEAN
* OF
* ELSE
* TO
* DOWNTO
* TYPE

类型：

* INT
* REAL
* CHAR
* STRING
* BOOLEAN
* ARRAY

整数，实数， 字符串，其他为标识符

**测试结果符合预期!**

test-1.pas

1 PROGSYM program

2 IDEN testPL0

3 SEMICOLON ;

4 CONSTSYM const

5 IDEN year

6 EQL =

7 INT 1998

8 SEMICOLON ;

9 IDEN foo

10 EQL =

11 MINUS -

12 INT 10

13 SEMICOLON ;

14 IDEN achar

15 EQL =

16 QUOTE '

17 STRING a

18 QUOTE '

19 SEMICOLON ;

20 IDEN ninenum

21 EQL =

22 QUOTE '

23 STRING 9

24 QUOTE '

25 SEMICOLON ;

26 TYPESYM type

27 IDEN name

28 EQL =

29 STRTYPE string

30 SEMICOLON ;

31 VARSYM var

32 IDEN ch

33 COLON :

34 CHARTYPE char

35 SEMICOLON ;

36 IDEN bdate

37 COLON :

38 INTTYPE integer

39 SEMICOLON ;

40 IDEN i

41 COLON :

42 INTTYPE integer

43 SEMICOLON ;

44 IDEN line

45 COLON :

46 ARRTYPE array

47 LBRACKETS [

48 UNKNOWN 1..81

49 RBRACKETS ]

50 OFSYM of

51 CHARTYPE char

52 SEMICOLON ;

53 IDEN sfile

54 COLON :

55 STRTYPE string

56 SEMICOLON ;

57 IDEN yesno

58 COLON :

59 BOOLTYPE boolean

60 SEMICOLON ;

61 IDEN firstname

62 COMMA ,

63 IDEN surname

64 COLON :

65 IDEN name

66 SEMICOLON ;

67 PROCSYM procedure

68 IDEN times

69 SEMICOLON ;

70 BEGINSYM begin

71 IDEN i

72 BECOMES :=

73 INT 1

74 SEMICOLON ;

75 WRITESYM writeln

76 LPAREN (

77 QUOTE '

78 STRING i=

79 QUOTE '

80 COMMA ,

81 IDEN i

82 RPAREN )

83 SEMICOLON ;

84 IDEN i

85 TIMES \*

86 EQL =

87 INT 10

88 SEMICOLON ;

89 WRITESYM writeln

90 LPAREN (

91 QUOTE '

94 STRING i times 10=

95 QUOTE '

96 COMMA ,

97 IDEN i

98 RPAREN )

99 SEMICOLON ;

100 ENDSYM end

101 PROCSYM procedure

102 IDEN myname

103 SEMICOLON ;

104 BEGINSYM begin

105 WRITESYM writeln

106 LPAREN (

107 QUOTE '

112 STRING Please enter your first name:

113 QUOTE '

114 RPAREN )

115 SEMICOLON ;

116 READSYM readln

117 LPAREN (

118 IDEN firstname

119 RPAREN )

120 SEMICOLON ;

121 WRITESYM writeln

122 LPAREN (

123 QUOTE '

127 STRING Please enter your surname:

128 QUOTE '

129 RPAREN )

130 SEMICOLON ;

131 READSYM readln

132 LPAREN (

133 IDEN surname

134 RPAREN )

135 SEMICOLON ;

136 WRITESYM writeln

137 LPAREN (

138 QUOTE '

142 STRING Please enter your birthdate:

143 QUOTE '

144 RPAREN )

145 SEMICOLON ;

146 READSYM readln

147 LPAREN (

148 IDEN bdate

149 RPAREN )

150 SEMICOLON ;

151 WRITESYM writeln

152 SEMICOLON ;

153 WRITESYM writeln

154 LPAREN (

155 IDEN message

156 COMMA ,

157 QUOTE '

157 STRING

158 QUOTE '

159 COMMA ,

160 IDEN firstname

161 COMMA ,

162 QUOTE '

162 STRING

163 QUOTE '

164 COMMA ,

165 IDEN surname

166 RPAREN )

167 SEMICOLON ;

168 WRITESYM writeln

169 LPAREN (

170 QUOTE '

173 STRING I born in

174 QUOTE '

175 COMMA ,

176 IDEN bdate

177 COMMA ,

178 QUOTE '

178 STRING ,

179 QUOTE '

180 COMMA ,

181 IDEN year

182 RPAREN )

183 SEMICOLON ;

184 ENDSYM end

185 PROCSYM procedure

186 IDEN conditions

187 SEMICOLON ;

188 BEGINSYM begin

189 IFSYM if

190 LPAREN (

191 INT 1

192 NEQ <>

193 INT 0

194 RPAREN )

195 THENSYM then

196 WRITESYM writeln

197 LPAREN (

198 QUOTE '

202 STRING Not equal working well

203 QUOTE '

204 RPAREN )

205 SEMICOLON ;

206 IFSYM if

207 LPAREN (

208 INT 0

209 EQL =

210 INT 0

211 RPAREN )

212 WRITESYM writeln

213 LPAREN (

214 QUOTE '

217 STRING Equal working well

218 QUOTE '

219 RPAREN )

220 SEMICOLON ;

221 IFSYM if

222 LPAREN (

223 INT 2

224 BEQ >=

225 INT 1

226 RPAREN )

227 WRITESYM writeln

228 LPAREN (

229 QUOTE '

235 STRING Bigger or equal than working well

236 QUOTE '

237 RPAREN )

238 SEMICOLON ;

#################################################

test-2.pas

1 IFSYM if

2 LPAREN (

3 IDEN bdate

4 GTR >

5 INT 15

6 RPAREN )

7 WRITESYM writeln

8 LPAREN (

9 QUOTE '

9 STRING My birthdate is after the 15th of the month

10 QUOTE '

11 RPAREN )

12 SEMICOLON ;

13 ELSESYM else

14 IFSYM if

15 LPAREN (

16 IDEN bdate

17 LSS <

18 INT 15

19 RPAREN )

20 WRITESYM writeln

21 LPAREN (

22 QUOTE '

22 STRING My birtdate is before the 15th of the month

23 QUOTE '

24 RPAREN )

25 SEMICOLON ;

26 ELSESYM else

27 WRITESYM writeln

28 LPAREN (

29 QUOTE '

29 STRING My birthdate is at the 15th of the month

30 QUOTE '

31 RPAREN )

32 SEMICOLON ;

33 ENDSYM end

34 FUNCTSYM function

35 IDEN times

36 LPAREN (

37 IDEN i

38 COLON :

39 INTTYPE integer

40 RPAREN )

41 COLON :

42 INTTYPE integer

43 SEMICOLON ;

44 VARSYM var

45 IDEN it

46 COLON :

47 INTTYPE integer

48 SEMICOLON ;

49 BEGINSYM begin

50 IDEN it

51 BECOMES :=

52 INT 50

53 SEMICOLON ;

54 IDEN it

55 PLUS +

56 EQL =

57 IDEN i

58 SEMICOLON ;

59 WRITESYM writeln

60 LPAREN (

61 QUOTE '

61 STRING i=

62 QUOTE '

63 COMMA ,

64 IDEN i

65 RPAREN )

66 SEMICOLON ;

67 IDEN it

68 MINUS -

69 EQL =

70 IDEN i

71 SEMICOLON ;

72 WRITESYM writeln

73 LPAREN (

74 QUOTE '

74 STRING i=

75 QUOTE '

76 COMMA ,

77 IDEN i

78 RPAREN )

79 SEMICOLON ;

80 IDEN it

81 TIMES \*

82 EQL =

83 IDEN i

84 SEMICOLON ;

85 WRITESYM writeln

86 LPAREN (

87 QUOTE '

87 STRING i=

88 QUOTE '

89 COMMA ,

90 IDEN i

91 RPAREN )

92 SEMICOLON ;

93 IDEN it

94 DIV /

95 EQL =

96 IDEN i

97 SEMICOLON ;

98 WRITESYM writeln

99 LPAREN (

100 QUOTE '

100 STRING i=

101 QUOTE '

102 COMMA ,

103 IDEN i

104 RPAREN )

105 SEMICOLON ;

106 IDEN times

107 BECOMES :=

108 IDEN it

109 ENDSYM end

110 SEMICOLON ;

111 PROCSYM procedure

112 IDEN repeatthis

113 SEMICOLON ;

114 VARSYM var

115 IDEN a

116 COLON :

117 INTTYPE integer

118 SEMICOLON ;

119 BEGINSYM begin

120 IDEN a

121 BECOMES :=

122 INT 10

123 SEMICOLON ;

124 REPEATSYM repeat

125 WRITESYM writeln

126 LPAREN (

127 QUOTE '

127 STRING value of a:

128 QUOTE '

129 COMMA ,

130 IDEN a

131 RPAREN )

132 SEMICOLON ;

133 IDEN a

134 BECOMES :=

135 IDEN a

136 PLUS +

137 INT 1

138 UNTILSYM until

139 IDEN a

140 EQL =

141 INT 20

142 SEMICOLON ;

143 ENDSYM end

144 PROCSYM procedure

145 IDEN forloop

146 SEMICOLON ;

147 VARSYM var

148 IDEN a

149 COLON :

150 INTTYPE integer

151 SEMICOLON ;

152 BEGINSYM begin

153 FORSYM for

154 IDEN a

155 BECOMES :=

156 INT 10

157 TOSYM to

158 INT 20

159 DOSYM do

160 BEGINSYM begin

161 WRITESYM writeln

162 LPAREN (

163 QUOTE '

163 STRING value of a:

164 QUOTE '

165 COMMA ,

166 IDEN a

167 RPAREN )

168 SEMICOLON ;

169 ENDSYM end

170 SEMICOLON ;

171 ENDSYM end

172 BEGINSYM begin

173 IDEN myname

174 SEMICOLON ;

175 IDEN mathfunc

176 SEMICOLON ;

177 IDEN conditions

178 SEMICOLON ;

179 WRITESYM writeln

180 LPAREN (

181 IDEN times

182 LPAREN (

183 INT 2

184 RPAREN )

185 RPAREN )

186 SEMICOLON ;

187 IDEN repeatthis

188 SEMICOLON ;

189 IDEN forloop

190 SEMICOLON ;

191 IDEN end.