语法分析测试报告

# 程序头program\_head部分

缺少关键字

program

关键字POGRAM 后缺少主程序名

标识符列表idlist 前缺少左括号（

标识符列表idlist 缺失或非法

标识符列表idlist 尾部缺少右括号）

程序头program\_head末尾缺少分号



；

## 缺少关键字

program

样例1：

test(input, output); begin

end.

运行结果：

syntax error, unexpected IDENTIFIER, expecting PROGRAM, location: line 1

## 关键字POGRAM 后缺少主程序名

样例1：

program (input, output); begin

end.

运行结果

syntax error, unexpected '(', expecting IDENTIFIER, location: line 1 Syntax error, missing PROGRAM name here, location: line 1

## 标识符列表idlist 前缺少左括号（

样例1：

program test input, output); begin

end.

运行结果

syntax error, unexpected IDENTIFIER, expecting '(', location: line 1 Syntax error, missing '(' here, location: line 1

## 标识符列表idlist 缺失或非法

样例1： idlis t缺失

program test(); begin

end.

运行结果

syntax error, unexpected ')', expecting IDENTIFIER, location: line 1 Syntax error, program identifier missing or illegal, location: line 1

样例2： idlis 非法

program test(, output); begin

end.

运行结果

syntax error, unexpected ',', expecting IDENTIFIER, location: line 1 Syntax error, program identifier missing or illegal, location: line 1

## 标识符列表idlist 尾部缺少右括号）

样例1：

program test(input, output; begin

end.

运行结果

syntax error, unexpected ';', expecting ')' or ',', location: line 1 Syntax error, missing '(' here, location: line 1

## 程序头program\_head末尾缺少分号



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样例1：

program test(input, output) begin

end.

运行结果

syntax error, unexpected \_BEGIN, expecting ';', location: line 2 Syntax error, missing ';' here, location: line 1

# 程序体program\_body部分

常量声明部分 const\_declarations 缺少关键字

const

常量声明部分 const\_declarations 缺少声明const\_declaration

常量声明部分 const\_declarations 末尾缺少分号多个常量声明 const\_declaration 之间缺少分号常量声明 const\_declaration 缺少标识符

常量声明 const\_declaration 缺少等号



=

常量声明 const\_declaration 的常量值非法或缺失类型声明type\_declarations 缺少关键字

type

类型声明type\_declarations 缺少声明

type\_declaration

类型声明type\_declarations 末尾缺少分号



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多个类型声明type\_declaration 之间缺少分号类型声明type\_declaration 内部缺少等号 =

类型声明type\_declaration 内部缺少类型名称type 记录类型 record 末尾缺少关键字

end

数组类型 array 缺少左括号数组类型 array 缺少右括号



[



]

数组类型 array 下标 periods 识别失败多个 period 字段间缺少逗号



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periods 中period 字段非法或缺失

period 字段内部缺少点号



.

period 字段内部const\_variable 字段非法或缺失数组类型 array 缺少关键字



of

数组类型 array 缺少类型名称type

变量声明部分 缺少关键字

var\_declarations

var

变量声明部分 var\_declarations 内 var\_declaration 字段非法或缺失变量声明部分 var\_declarations 末尾缺少分号 ;

多个 var\_declaration 之间缺少分号间隔

变量声明var\_declaration 内部 idlist 非法或缺失

变量声明var\_declaration 内部 idlist 后缺少冒号变量声明var\_declaration 内部 type字段非法或缺失子程序声明 subprogram\_declarations 末尾缺少分号



:

子程序头subprogram\_head 关键字 function 后缺少子程序名子程序头subprogram\_head 在字段standard\_type 前缺少冒号子程序头subprogram\_head 的字段standard\_type 非法或缺失子程序头subprogram\_head 末尾缺少分号

子程序头subprogram\_head 在关键字 PROCEDURE 后缺少过程名字段formal\_parameter 内部字段 parameter\_lists 非法

字段formal\_parameter 内部字段 parameter\_lists 前缺少左括号字段formal\_parameter 内部字段 parameter\_lists 后缺少右括号多个字段 parameter\_list 之间缺少分号分割

字段 parameter\_lists 内部字段 parameter\_list 非法或缺失不完整的参数引用列表

参数引用列表中缺少':'

参数引用列表中缺少基本类型关键字

参数引用列表中缺少':'及基本类型关键字缺少end 关键字

语句之间缺少分号

if-then-else语句缺少then 关键字

case-of语句缺少of 关键字case-of语句缺少end 关键字while-do语句缺少 do 关键字

repeat-until语句缺少until 关键字

for语句缺少赋值符号

for语句缺少to 或downto 关键字

for语句缺少do 关键字缺少右方括号']'

case-of语句之间缺少分号';'

procedure\_call缺少右括号')' expression\_list中间缺少逗号',' simple\_expression缺少操作数term缺少操作数

factor中缺少右括号')'

函数调用表达式列表缺失

###

**常量声明部分** const\_declarations **缺少关键字**

const

program test(input, output); x=1;

begin end.

运行结果

syntax error, unexpected IDENTIFIER, location: line 2 Syntax error, fatal error in program body, location: line 2

**常量声明部分** const\_declarations **缺少声明**

const\_declaration

program test(input, output); const ;

begin end.

运行结果

syntax error, unexpected ';', expecting IDENTIFIER, location: line 2 Syntax error, fatal error in const\_declaration, identifier may be illegal, location: line 2

**常量声明部分** const\_declarations **末尾缺少分号**

program test(input, output); const x=1

begin end.

运行结果

syntax error, unexpected \_BEGIN, expecting ';', location: line 3 Syntax error, missing ';' here, location: line 2

**多个常量声明** const\_declaration **之间缺少分号**

program test(input, output); const x=1y=2;

begin end.

运行结果

syntax error, unexpected IDENTIFIER, expecting ';', location: line 2 Syntax error, missing ';' here, location: line 2

**常量声明** const\_declaration **缺少标识符**

program test(input, output); const x=1;=2;

begin end.

运行结果

syntax error, unexpected EQUAL, location: line 2

Syntax error, identifier is illegal or missing , location: line 2

**常量声明** const\_declaration **缺少等号**



=

program test(input, output); const x=1;y 2;

begin end.

运行结果

syntax error, unexpected UINUM, expecting EQUAL, location: line 2 Syntax error, missing \_equal here, location: line 2

**常量声明** const\_declaration **的常量值非法或缺失**

program test(input, output); const x=;

begin end.

运行结果

syntax error, unexpected ';', location: line 2

Syntax error, fatal error in const\_variable, location: line 2

**类型声明**type\_declarations **缺少关键字**

type

样例1：

program test(input, output);

y=integer; begin

end.

运行结果

syntax error, unexpected IDENTIFIER, location: line 3 Syntax error, fatal error in program body, location: line 3

**类型声明**type\_declarations **缺少声明**

type\_declaration

样例1

program test(input, output); type ;

begin end.

运行结果

syntax error, unexpected ';', expecting IDENTIFIER, location: line 2

Syntax error, fatal error in type\_declaration, check whether identifiers is legal, location: line 2

**类型声明**type\_declarations **末尾缺少分号**

样例1

program test(input, output); type x=real

begin end.

运行结果

syntax error, unexpected \_BEGIN, expecting ';', location: line 3 Syntax error, missing ';' here, location: line 2

**多个类型声明**type\_declaration **之间缺少分号**

program test(input, output); type x=real y=integer;

begin end.

运行结果

syntax error, unexpected IDENTIFIER, expecting ';', location: line 2 Syntax error, missing ';' here, location: line 2

**类型声明**type\_declaration **内部缺少等号**



=

program test(input, output); type x real;

begin end.

运行结果

syntax error, unexpected REAL, expecting EQUAL, location: line 2 Syntax error, missing \_equal here, location: line 2

**类型声明**type\_declaration **内部缺少类型名称**

program test(input, output); type x =;

begin end.

运行结果

syntax error, unexpected ';', location: line 2 Syntax error, fatal error in type, location: line 2

**记录类型** record **末尾缺少关键字**

end

program test(input, output);

type x = record a:real;b:integer en; begin

end.

运行结果

syntax error, unexpected IDENTIFIER, expecting END or ';', location: line 2

**数组类型** array **缺少左括号**



[

program test(input, output); type x = array 0..4] of integer; begin

end.

运行结果

syntax error, unexpected UINUM, expecting '[', location: line 2 Syntax error, missing '[' here, location: line 2

**数组类型** array **缺少右括号**



]

program test(input, output); type x = array [0..4 of integer; begin

end.

运行结果

syntax error, unexpected OF, expecting ',' or ']', location: line 2 Syntax error, missing ']' here, location: line 2

## 数组类型

array **下标**

periods **识别失败**

program test(input, output);

type x = array [ ..4] of integer; begin

end.

运行结果

syntax error, unexpected '.', location: line 2

Syntax error, fatal error in periods, location: line 2

**数组类型** array **缺少关键字**

of

program test(input, output); type x = array [0..4] integer; begin

end.

运行结果

syntax error, unexpected INTEGER, expecting OF, location: line 2 Syntax error, missing keyword "OF", location: line 2

**数组类型** array **缺少类型名称type**

program test(input, output); type x = array [0..4] of ; begin

end.

运行结果

syntax error, unexpected ';', location: line 2 Syntax error, fatal error in type, location: line 2

**多个** period **字段间缺少逗号**



，

program test(input, output);

type x = array [0..1 2..3] of integer; begin

end.

运行结果

syntax error, unexpected UINUM, expecting ',' or ']', location: line 2 Syntax error, missing ',' here, location: line 2

periods **中**period **字段非法或缺失**

program test(input, output);

type x = array [0..1,] of integer; begin

end.

运行结果

syntax error, unexpected ']', location: line 2

Syntax error, fatal error in period, location: line 2

period **字段内部缺少点号**



.

program test(input, output);

type x = array [0 . 1] of integer; begin

end.

运行结果

syntax error, unexpected UINUM, expecting '.', location: line 2 Syntax error, missing '.' here, location: line 2

period **字段内部** const\_variable **字段非法或缺失**

program test(input, output);

type x = array [0.. ] of integer; begin

end.

运行结果

var

syntax error, unexpected ']', location: line 2

Syntax error, fatal error in const\_variable, location: line 2

## 变量声明部分

var\_declarations

样例1：

## 缺少关键字

program test(input, output);

y:integer; begin

end.

运行结果

syntax error, unexpected IDENTIFIER, location: line 3 Syntax error, fatal error in program body, location: line 3

## 变量声明或缺失

var\_declarations **内**

var\_declaration **字段非法**

program test(input, output); var ;

begin end.

运行结果

syntax error, unexpected ';', expecting IDENTIFIER, location: line 2 Syntax error, fatal error in var\_declaration, location: line 2

**变量声明部分** var\_declarations **末尾缺少分号**



**;**

program test(input, output); var x:real

begin end.

运行结果

syntax error, unexpected \_BEGIN, expecting ';', location: line 3 Syntax error, missing ';' here, location: line 2

**多个** var\_declaration **之间缺少分号间隔**

program test(input, output); var x:real y:integer;

begin end.

运行结果

syntax error, unexpected IDENTIFIER, expecting ';', location: line 2 Syntax error, missing ';' here. , location: line 2

**变量声明**var\_declaration **内部** idlist **非法或缺失**

program test(input, output); var :real;

begin end.

运行结果

syntax error, unexpected ':', expecting IDENTIFIER, location: line 2 Syntax error, fatal error in var\_declaration, location: line 2

**变量声明**var\_declaration **内部** idlist **后缺少冒号**



:

program test(input, output); var x,y real;

begin end.

运行结果

syntax error, unexpected REAL, expecting ',' or ':', location: line 2 Syntax error, missing ':' here, location: line 2

**变量声明**var\_declaration **内部 type字段非法或缺失**

program test(input, output); var x,y: ;

begin end.

运行结果

syntax error, unexpected ';', location: line 2 Syntax error, fatal error in type, location: line 2

**子程序声明** subprogram\_declarations **末尾缺少分号**

program test(input, output); var x,y: integer;

function swap(a,b: integer):integer var z:integer;

begin

z:=x;

x:=y;

y:=z; end;

begin

swap(x,y) end.

运行结果

syntax error, unexpected VAR, expecting ';', location: line 4 Syntax error, missing ';' here, location: line 3

**子程序头**subprogram\_head **关键字** function **后缺少子程序名**

program test(input, output); var x,y: integer;

function (a,b: integer):integer; var z:integer;

begin

z:=x;

x:=y;

y:=z; end;

begin

swap(x,y) end.

运行结果

syntax error, unexpected '(', expecting IDENTIFIER, location: line 3 Syntax error, identifier is ilegal or missing, location: line 3

**子程序头**subprogram\_head **在字段**standard\_type **前缺少冒号**

program test(input, output); var x,y: integer;

function swap(a,b: integer) integer; var z:integer;

begin

z:=x;

x:=y;

y:=z; end;

begin

swap(x,y) end.

运行结果

syntax error, unexpected INTEGER, expecting ':', location: line 3 Syntax error, missing ':' here, location: line 3

**子程序头**subprogram\_head **的字段**standard\_type **非法或缺失**

program test(input, output); var x,y: integer;

function swap(a,b: integer):int; var z:integer;

begin

z:=x;

x:=y;

y:=z; end;

begin

swap(x,y) end.

运行结果

syntax error, unexpected IDENTIFIER, expecting CHAR or INTEGER or REAL or BOOLEAN, location: line 3

Syntax error, fatal error in standard\_type, location: line 3

**子程序头**subprogram\_head **末尾缺少分号**

program test(input, output); var x,y: integer;

function swap(a,b: integer):integer var z:integer;

begin

z:=x;

x:=y;

y:=z; end;

begin

swap(x,y) end.

运行结果

syntax error, unexpected VAR, expecting ';', location: line 4 Syntax error, missing ';' here, location: line 3

**子程序头**subprogram\_head **在关键字** PROCEDURE **后缺少过程名**

program test(input, output); var x,y: integer;

procedure (a,b: integer); var z:integer;

begin

z:=x;

x:=y;

y:=z; end;

begin

swap(x,y) end.

运行结果

syntax error, unexpected '(', expecting IDENTIFIER, location: line 3 Syntax error, identifier is illegal or missing, location: line 3

**字段**formal\_parameter **内部字段** parameter\_lists **非法**

program test(input, output); var x,y: integer;

procedure swap(: integer); var z:integer;

begin

z:=x;

x:=y;

y:=z; end;

begin

swap(x,y) end.

运行结果

syntax error, unexpected ':', expecting VAR or IDENTIFIER, location: line 3 Syntax error, fatal error in parameter\_lists, location: line 3

**字段**formal\_parameter **内部字段括号**

parameter\_lists **前缺少左**

program test(input, output); var x,y: integer;

procedure swap x,y: integer); var z:integer;

begin

z:=x;

x:=y;

y:=z; end;

begin

swap(x,y) end.

运行结果

syntax error, unexpected IDENTIFIER, expecting '(' or ';', location: line 3 Syntax error, fatal error in formal\_parameter, location: line 3

**字段**formal\_parameter **内部字段括号**

parameter\_lists **后缺少右**

program test(input, output); var x,y,z: integer;

procedure swap (x,y: integer ; begin

z:=x;

x:=y;

y:=z; end;

begin

swap(x,y) end.

运行结果

syntax error, unexpected \_BEGIN, expecting VAR or IDENTIFIER, location: line 4 Syntax error, fatal error in parameter\_list, location: line 4

Syntax error, missing a base type keyword here, location: line 5 Syntax error, missing ';' here, location: line 4

Syntax error, missing a base type keyword here, location: line 5 Syntax error, missing ';' here, location: line 5

Syntax error, missing a base type keyword here, location: line 6 Syntax error, missing a base type keyword here, location: line 6 Syntax error, missing ';' here, location: line 6

Syntax error, missing a base type keyword here, location: line 7 Syntax error, missing a base type keyword here, location: line 7 Syntax error, missing ';' here, location: line 7

Syntax error, fatal error in parameter\_list, location: line 8 Syntax error, missing ')' here, location: line 8

syntax error, unexpected '.', expecting ';', location: line 11 Syntax error, missing ';' here, location: line 11

Syntax error, fatal error in compound\_statement, maybe missing keyword "begin", location: line 11

**多个字段** parameter\_list **之间缺少分号分割**

program test(input, output); var x,y,z: integer;

procedure swap (x: integer y:integer) ; begin

z:=x;

x:=y;

y:=z; end;

begin

swap(x,y) end.

运行结果

syntax error, unexpected IDENTIFIER, expecting ')' or ';', location: line 3 Syntax error, missing ';' here, location: line 3

**字段** parameter\_lists **内部字段** parameter\_list **非法或缺失**

program test(input, output); var x,y,z: integer;

procedure swap (x: integer;) ; begin

z:=x;

x:=y;

y:=z; end;

begin

swap(x,y) end.

运行结果

syntax error, unexpected ')', expecting VAR or IDENTIFIER, location: line 3 Syntax error, fatal error in parameter\_list, location: line 3

## var\_parameter部分

**不完整的参数引用列表**

program test(input,output); procedure pro(var );

begin

end; begin

end.

运行结果

syntax error, unexpected ')', expecting IDENTIFIER, location: 1 syntax error, incomplete refereced parameter list, location: line2~2

## 参数引用列表中缺少':'

program test(input,output); procedure pro(var a,b char); begin

end; begin

end.

运行结果

syntax error, unexpected CHAR, expecting ',' or ':', location: line 2 Syntax error, missing a colon ':' here, location: line 2

## 参数引用列表中缺少基本类型关键字

program test(input,output); procedure pro(var a,b: ); begin

end; begin

end.

运行结果

syntax error, unexpected ')', expecting CHAR or INTEGER or REAL or BOOLEAN, location: line 2

Syntax error, missing a base type keyword here, location: line 2

## 参数引用列表中缺少':'及基本类型关键字

program test(input,output); procedure pro(var a,b ); begin

end; begin

end.

运行结果

syntax error, unexpected ')', expecting ',' or ':', location: line 2

Syntax error, missing a colon ':' and a base type keyword here, location: line 2

**缺少**end **关键字**

program test(input,output); var a: char;

begin

.

运行结果

syntax error, unexpected '.', expecting END or ';', location: line 5 Syntax error, missing keyword "end" here, location: line 3

## 语句之间缺少分号

program test(input, output); var x,y: integer;

begin

read(x,y)

write(y); end.

运行结果

syntax error, unexpected IDENTIFIER, expecting END or ';', location: line 5 Syntax error, missing a semicolon ';' here, location: line 4

**if-then-else语句缺少**then **关键字**

program test(input, output); var x,y: integer;

begin

read(x,y); if x=0 y:=a else y:=y+1;

end.

运行结果

syntax error, unexpected IDENTIFIER, expecting THEN, location: line 5 Syntax error, missing keyword "then", location: line 5

## case-of语句缺少of 关键字

program test(input); begin

case x

'+' : c:=a+b;

'-' : c:=a-b end;

end.

运行结果

syntax error, unexpected LETTER, expecting OF, location: line 4 Syntax error, missing keyword "of", location: line 3

**case-of语句缺少**end **关键字**

program test(input); begin

case x of

'+' : c:=a+b;

'-' : c:=a-b

end.

运行结果

syntax error, unexpected '.', expecting END or ';', location: line 7 Syntax error, missing keyword "end", location: line 7

## while-do语句缺少do 关键字

program test(input, output); var x,y: integer;

begin

while x>0 y:=y-1

end.

运行结果

syntax error, unexpected IDENTIFIER, expecting DO, location: line 5 Syntax error, missing keywrod "do", location: line 4

**repeat-until语句缺少**until **关键字**

program test(input, output); var x,y: integer;

begin

repeat y:=y-1 x<0

end.

运行结果

syntax error, unexpected IDENTIFIER, expecting UNTIL or ';', location: line 5 Syntax error, missing keywrod "until", location: line 4

## for语句缺少赋值符号

program test(input, output); var x,y: integer;

begin

for x 1 to 5 do y:=y+1;

end.

运行结果

syntax error, unexpected UINUM, expecting ASSIGNOP, location: line 4 Syntax error, missing assignop ":=", location: line 4

**for语句缺少**to **或**downto **关键字**

program test(input, output); var x,y: integer;

begin

for x:=5 1 do y:=y+1;

end.

运行结果

syntax error, unexpected UINUM, expecting TO or DOWNTO, location: line 4 Syntax error, missing keyword "to" or "downto", location: line 4

**for语句缺少**do **关键字**

program test(input, output); var x,y: integer;

begin

for x:=5 downto 1 y:=y+1;

end.

运行结果

syntax error, unexpected IDENTIFIER, expecting DO, location: line 5 Syntax error, missing keywrod "do", location: line 4

## 缺少右方括号']'

program test(input, output);

var a: array[1..3,4..6] of integer; begin

repeat a[1,3:=99 until a=1;

end.

运行结果

syntax error, unexpected ASSIGNOP, expecting ',' or ']', location: line 4 Syntax error, missing a right bracket ']' here, location: line 4

## case-of语句之间缺少分号';'

program test(input); begin

case x

'+' : c:=a+b '-' : c:=a-b

end; end.

运行结果

syntax error, unexpected LETTER, expecting OF, location: line 4

syntax error, unexpected LETTER, expecting END or ';', location: line 5 Syntax error, missing a semicolon ';' here, location: line 3

Syntax error, missing keyword "of", location: line 3

## procedure\_call缺少右括号')'

program test(input,output); procedure pro(var x,y:real); begin

end; begin

pro(x,y; end.

运行结果

syntax error, unexpected ';', expecting ')' or ',', location: line 7 Syntax error, missing a right bracket ')' here, location: line 7

## expression\_list中间缺少逗号','

program test(input,output); procedure pro(var x,y:real); begin

end; begin

pro(x y); end.

运行结果

syntax error, unexpected IDENTIFIER, expecting ')' or ',', location: line 7 Syntax error, missing a comma ',' here, location: line 7

## simple\_expression缺少操作数

program test(input,output); var x,y,z: integer;

begin

read(x,y); z:=x+\*y;

end.

运行结果

syntax error, unexpected MULOP, location: line 5 Syntax error, missing operand, location: line 5

## term缺少操作数

program test(input,output); var x,y,z: integer;

begin

read(x,y);

z:=x\*-y; end.

运行结果

syntax error, unexpected ADDOP, location: line 5 Syntax error, missing operand, location: line 5

## factor中缺少右括号')'

syntax error, unexpected ';', expecting ')' or ',', location: line 8 Syntax error, missing a right bracket ')' here, location: line 8

运行结果

syntax error, unexpected ';', expecting ')' or ',', location: line 8 Syntax error, missing a right bracket ')' here, location: line 8

## 函数调用表达式列表缺失

program test(input,output); var a:real;

function fun(x,y:real):real; begin

end; begin

a:=fun(; end.

运行结果

syntax error, unexpected ';', location: line 8

Syntax error, missing actual parameter list of function call, location: line 8