**测试用例**

1.1 数据类型测试

1.1.1 字符型

program project2(input,output);

var x:char;

begin

x := 'a';

write(x);

end.

预期输出：正确通过

1.1.2 整型

program Project(input,output);

var x:integer;

begin

x := 0;

x := x + 1;

write(x);

end.

预期输出：正确通过

1.1.3 整型运算

1.1.3.1 加法

program Project(input,output);

var x:integer;

y:integer;

begin

x := 0;

x := x + 1;

y := y + x;

write(y);

end.

预期输出：正确通过

目标生成

1.1.3.2 减法

program Project(input,output);

var x:integer;

y:integer;

begin

x := 9;

y := 1;

y := y - x;

write(y);

end.

预期输出：正确通过

1.1.3.3 除法

program Project(input,output);

var x:integer;

y:integer;

begin

x := 3;

y := 5;

y := y / x;

end.

预期输出：有误，得到一个浮点型结果，无法赋值给一个整型

1.1.3.5 取模

program Project(input,output);

var x:integer;

y:integer;

begin

x := 0;

y := 5;

x := x + 3;

y := y mod x;

write(y);

end.

预期输出：正确通过

1.1.3.6 或运算

program Project(input,output);

var x:integer;

y:integer;

begin

x := 0;

y := 5;

x := x + 3;

y := y or x;

write(y);

end.

预期输出：正确通过

1.1.3.7 与运算

program Project(input,output);

var x:integer;

y:integer;

begin

x := 0;

y := 2;

x := x + 1;

y := y and x;

write(y);

end.

预期输出：正确通过

1.1.4 浮点数

1.1.4.1 赋值调用

program Project(input,output);

const Pi=3.1415926;

var x:real;

begin

x :=Pi ;

write(x);

end.

预期输出：正确通过

1.1.4.2 取模

program Project(input,output);

var x:real;

y:real;

begin

x := 0;

y := 2;

x := x + 1;

y := y mod x;

write(y);

end.

预期输出：两浮点数不能做mod运算

1.1.4.3 除法

program Project(input,output);

var x:real;

y:real;

begin

x := 0;

y := 2;

x := x + 1;

y := y / x;

write(y);

end.

预期输出：正确通过

1.1.4.4 乘法

program Project(input,output);

var x:real;

y:real;

begin

x := 3;

y := 2.5;

y := y \* x;

write(y);

end.

预期输出：正确通过

1.1.4.5 取整

program Project(input,output);

var x:real;

y:real;

begin

x := 2.2;

y := 2;

y := y div x;

write(y);

end.

预期输出：div不能用于real

program Project(input,output);

var x:real;

y:real;

begin

x := 5.2;

y := 2;

y := y and x;

write(y);

end.

预期输出：and 不能用于real

program Project(input,output);

var x:real;

y:real;

begin

x := 6.2;

y := 2;

y := y or x;

write(y);

end.

预期输出：or不能用于real

1.1.5 浮点数和整型数之间的混合运算

program Project(input,output);

var x:integer;

y:real;

begin

x := 6;

y := 2.2;

y := y + x;

write(y);

end.

预期输出：正确通过

program Project(input,output);

var x:integer;

y:real;

begin

x := 6;

y := 2.2;

x := y + x;

write(x);

end.

预期输出：浮点型不能给整型赋值

program Project(input,output);

var x:integer;

y:real;

begin

x := 6;

y := 2.2;

y := y \* x;

write(y);

end.

预期输出：正确通过

program Project(input,output);

var x:integer;

y:real;

begin

x := 6;

y := 2.2;

y := y / x;

write(y);

end.

预期输出：正确通过

1.2 boolean类型

program Project(input,output);

var x: boolean;

a:integer;

begin

a := 0;

x := true;

x := x and (a>1);

write(x);

end.

预期输出：正确通过

program Project(input,output);

var x: boolean;

a:integer;

begin

a := 0;

x := true;

x := x or (a>1);

write(x);

end.

预期输出：正确通过

1.3 记录和数组

1.3.1 记录

program Project(input,output);

type

Date = Record

year:integer;

month:integer;

day:integer;

end;

var x:Date;

begin

x.year := 2017;

x.month := 3;

x.day := 28;

write(x.year);

write(x.month);

write(x.day);

end.

预期输出：正确通过

program Project(input,output);

type

Date = Record

year:integer;

day:integer;

end;

var x:Date;

begin

x.year := 2017;

x.month := 3;

x.day := 28;

write(x.year);

write(x.month);

write(x.day);

end.

预期结果：记录中不存在该成员

1.3.2 数组

program Project(input,output);

var x:array[1..10] of integer;

begin

x[1] := 10;

write(x[1]);

end.

预期输出：正确通过

program Project(input,output);

var x:arrary[1..10] of integer;

begin

x[1] := 10;

write(x[1]);

x[0] := 11;

write(x[0]);

end.

预期输出：错误，arrary不是一个类型

1.3.3 结构体数组

program Project(input,output);

type

Date = Record

year:integer;

month:integer;

day:integer;

end;

var x:array[1..10] of Date;

a:char;

begin

x[1].year := 2017;

x[1].month := 3;

x[1].day := 28;

write(x[1].year);

write(x[1].month);

write(x[1].day);

read(a);

end.

预期输出：正确通过

program Project(input,output);

type

Date = Record

year:integer;

month:integer;

end;

var x:array[1..10] of Date;

a:char;

begin

x[1].year := 2017;

x[1].month := 3;

x[1].day := 28;

write(x[1].year);

write(x[1].month);

write(x[1].day);

read(a);

end.

预期输出：错误，不存在该元素

1.4 控制流

program Project(input,output);

var a:integer;

begin

a := 1;

if a>=1 then a:=a+1;

write(a);

end.

预期输出：正确通过

program Project(input,output);

var a,b:integer;

begin

a := 1;

b := 2;

if a>b then write(a) else write(b);

end.

预期输出：正确通过

program Project(input,output);

var a:integer;

begin

a := 1;

if a then a:=a+1;

write(a);

end.

预期输出：错误，if后面要跟一个boolean型

program Project(input,output);

var a,b:integer;

begin

a := 1;

b := 2;

if a>b then write(a); else write(b);

end.

预期输出：若是if-then-else then后面不能有;

1.5 过程

1.5.1 传值

program Project(input,output);

var m:integer;

Procedure num(a:integer);

var b,c:integer;

begin

b := 1;

c := 2;

if a=1 then write(b) else write(c);

end;

begin

m := 1;

num(m);

end.

预期输出：正确通过

program Project(input,output);

var m:integer;

Procedure num(a:integer);

var b,c:integer;

begin

b := 1;

c := 2;

if a=1 then write(b) else write(c);

end;

begin

m := 1;

num;

end.

预期输出：错误，参数列表不匹配

1.5.2 传引用

program Project(input,output);

var x,y,z:integer;

procedure add(var a:integer);

begin

a := a + 1;

end;

begin

x := 33;

write(x);

add(x);

write(x);

end.

预期输出：正确通过

1.6 函数

program Project(input,output);

var m,n:integer;

function max(a,b:integer):integer;

var c:integer;

begin

if a>b then c:=a else c:=b;

max := c;

end;

begin

m := 10;

n := 11;

write(max(m,n));

end.

预期输出：正确通过

1.7 While

program Project(input,output);

var a:integer;

b:integer;

begin

a := 0;

b := 0;

while a<12 do begin

a := a+1;

b := b+a;

end;

write(b);

end.

预期输出：正确通过

program Project(input,output);

var a:integer;

b:integer;

begin

a := 0;

b := 0;

while a do begin

a := a+1;

b := b+a;

end;

write(b);

end.

预期输出：while后面要跟boolean型

1.8 Repeat….until

program Project(input,output);

var a:integer;

b:integer;

begin

a := 0;

b := 0;

repeat

a := a+1;

b := b+a;

until a>=100;

write(b);

end.

预期输出：正确通过

program Project(input,output);

var a:integer;

b:integer;

begin

a := 0;

b := 0;

repeat

a := a+1;

b := b+a;

until a;

write(b);

end.

预期输出：until后要跟boolean型

1.9 For

program Project(input,output);

var a:integer;

begin

for a := 1 to 5 do begin

write(a);

end;

end.

预期输出：正确通过

program Project(input,output);

var a:integer;

begin

for a := 9 down 5 do begin

write(a);

end;

read(a);

end.

预期输出：没有down这个关键字

1.10 Case of

program Project(input,output);

var a:integer;

begin

a := 1;

case a of

1:a:=a+1;

2:a:=a-1;

else a:=0;

end;

write(a);

end.

预期输出：错误，不能出现else

program Project(input,output);

var a:integer;

begin

a := 1;

case a of

1:a:=a+1;

'a':a:=a-1;

else a:=0;

end;

write(a);

end.

预期输出：case内类型不匹配

快排

program Project(input,output);

var arr:array[0..5] of integer;

i:integer;

ch:char;

function partition(var arr:array of integer;low:integer;high:integer):integer;

var key:integer;

begin

key:=arr[low];

if low<high then begin

while low<high do begin

while (low<high)and(arr[high]>=key) do begin

high:=high-1;

end;

if low<high then arr[low]:=arr[high];

if low<high then low:=low+1;

while (low<high)and(arr[low]<=key) do begin

low:=low+1;

end;

if low<high then arr[high]:=arr[low];

if low<high then high:=high-1;

end;

arr[low]:=key;

partition:=low;

end;

end;

procedure quicksort(var arr:array of integer;sortstart,sortend:integer);

var pos:integer;

begin

if sortstart<sortend then begin

pos:=partition(arr,sortstart,sortend);

quicksort(arr,sortstart,pos-1);

quicksort(arr,pos+1,sortend);

end;

end;

begin

ch:=' ';

arr[2]:=6;

arr[3]:=2;

arr[4]:=7;

arr[5]:=8;

arr[1]:=3;

arr[0]:=5;

for i:=0 to 5 do begin

write(arr[i]);

write(ch);

end;

quicksort(arr,0,5);

for i:=0 to 5 do begin

write(arr[i]);

write(ch);

end;

read(i);

end.