

# 编译原理第二次实验测试用例：目录

<b>1</b>	<b>A 组测试用例</b>	<b>3</b>
1.1	A-1 . . . . .	3
1.2	A-2 . . . . .	3
1.3	A-3 . . . . .	4
1.4	A-4 . . . . .	5
1.5	A-5 . . . . .	6
1.6	A-6 . . . . .	7
1.7	A-7 . . . . .	7
1.8	A-8 . . . . .	8
1.9	A-9 . . . . .	9
1.10	A-10 . . . . .	10
1.11	A-11 . . . . .	11
1.12	A-12 . . . . .	12
1.13	A-13 . . . . .	13
1.14	A-14 . . . . .	14
1.15	A-15 . . . . .	15
1.16	A-16 . . . . .	16
1.17	A-17 . . . . .	16
1.18	A-18 . . . . .	17
1.19	A-19 . . . . .	18
1.20	A-20 . . . . .	19
<b>2</b>	<b>B 组测试用例</b>	<b>20</b>
2.1	B-1 . . . . .	20
2.2	B-2 . . . . .	22
<b>3</b>	<b>C 组测试用例</b>	<b>24</b>
3.1	C-1 . . . . .	24
3.2	C-2 . . . . .	26
<b>4</b>	<b>D 组测试用例</b>	<b>28</b>
4.1	D-1 . . . . .	28

4.2	D-2	29
4.3	D-3	30
<b>5</b>	<b>E 组测试用例</b>	<b>32</b>
5.1	E2.1	32
5.2	E2.2	33
5.3	E2.3	35
<b>6</b>	<b>结束语</b>	<b>37</b>

## 1 A 组测试用例

本组测试用例共 20 个, 测试用例 1-17 分别对应语义错误 1-17, 之后三个测试用例对应于语义错误 7,9,15。每个用例仅在其中一行含有语义错误。某些语义错误可能会产生连锁反应。测试用例 A-i 对应的“本质错误”的错误类型是必须报出来的, 如果报出其他错误, 只要是由本质错误连带引发的 (包括但不限于下面明确给出的情况), 我们都不会扣分。错误编号和行号之后的说明文字不要求与给出的输出完全一致, 仅供助教理解使用, 不作为评分依据。

### 1.1 A-1

输入

```
1 int main(int x1, int x2) {  
2     int p = x1;  
3     int i = 3;  
4     int k = x2 + p;  
5     i = x1 + x3;  
6     return k;  
7 }
```

输出

```
1 Error type 1 at Line 5: Undefined variable "x3"
```

说明: 说明:  $i = x1 + x3$  这一句包含未定义的变量  $x3$ , 这里也可另外报出错误类型 5 (= 两边类型不匹配)。

### 1.2 A-2

输入

```
1 struct Student{  
2     int id;  
3     int weight;  
4     int grades;  
5 };  
6  
7 int newStudent(int a, int b) {
```

```

8      struct Student st;
9      st.id = a;
10     st.weight = b;
11     st.grades = 0;
12     return 0;
13 }
14
15 int main() {
16     int k = 3;
17     int p = 14;
18     newStdent(k, p);
19     return 0;
20 }

```

输出

```

1 Error type 2 at Line 18: Undefined function "newStdent"

```

说明：newStdent 未定义。

### 1.3 A-3

输入

```

1 struct Danger{
2     int what;
3     int up;
4 }d;
5
6 int main(){
7     struct Danger x1;
8     int x2 = 3;
9     float Danger = 1.2;
10    x1.what = x2;
11    x1.up = 0;
12    return x1.what;

```

13 }

输出

1 Error type 3 at Line 9: Redefined variable "Danger"

说明：重复定义的变量 Danger，如果在第一行报错也可以。

## 1.4 A-4

输入

```
1 int compare(int a, int b) {
2     if(a > b) {
3         return 1;
4     }
5     if(a == b) {
6         return 0;
7     }
8     return -1;
9 }
10
11 float compare(int x1, int x2) {
12     if(x1 > x2) {
13         return 1.0;
14     }
15     if(x2 == x1) {
16         return 0.0;
17     }
18     return -1.0;
19 }
20
21 int main() {
22     return compare(3,4);
23 }
```

输出

```
1 Error type 4 at Line 11: Redefined function "compare"
```

说明：重复定义的函数 `compare`。在第一行报错也可以。

## 1.5 A-5

输入

```
1 struct Cake{
2     int name;
3     float weight;
4     int size;
5 }c;
6
7 struct Candle{
8     struct Cake cc;
9     int number;
10    float length;
11 }can;
12
13 int main() {
14     int wei = 3;
15     int s = 2;
16     int num = 15;
17     float len = 1.2;
18     can.cc = c;
19     c.name = 0;
20     c.weight = wei;
21     c.size = s;
22     can.number = num;
23     can.length = len;
24     return 0;
25 }
```

输出

```
1 Error type 5 at Line 20: Type mismatched for assignment.
```

说明：第 20 行将 int 型赋值给 float 型。

## 1.6 A-6

输入

```
1 int add(int a, int b) {  
2     return a + b;  
3 }  
4  
5 int main() {  
6     int i = 10;  
7     int sum = 0;  
8     while (i > 0) {  
9         sum = add(sum, i);  
10        add(i, -1) = i;  
11    }  
12    return sum;  
13 }
```

输出

```
1 Error type 6 at Line 10: The left-hand side of an assignment must be  
a variable.
```

说明：第 10 行赋值语句左值为 int 型（函数调用返回结果），无法作为左值。

## 1.7 A-7

输入

```
1 struct IntArray{  
2     int id;  
3     int ia[10];  
4 };  
5
```

```

6 struct FloatArray{
7     int name;
8     float fa[10];
9 };
10
11 int main(){
12     struct IntArray inta;
13     struct FloatArray floa;
14     int i = 0;
15     int k = 1;
16     float p = 1.0;
17     while (i < 10) {
18         i = i + k;
19         inta.ia[i] = k;
20         k = k + 1;
21         floa.fa[i] = p;
22         p = p + 1;
23     }
24     return 0;
25 }

```

输出

```

1 Error type 7 at Line 22: Type mismatched for operands.

```

说明：第 22 行 p 为 float 型，1 为 int 型，无法匹配。也可以多报一个 5 型错误。

## 1.8 A-8

输入

```

1 int compareInt(int a, int b) {
2     if (a == b) {
3         return 0;
4     } else {
5         return -1;

```



```

6         }
7     }
8
9     float compareFloat(float aa, float bb) {
10         return aa - bb;
11     }
12
13     int main() {
14         int i = 3;
15         int j = 4;
16         float p = 1.2;
17         float k = 2.3;
18         if(i == 4) {
19             return compareInt(i, j);
20         } else {
21             return compareFloat(p, k);
22         }
23     }

```

输出

```

1 Error type 8 at Line 21: Type mismatched for return.

```

说明：第 21 行 compareFloat 返回 float 型，与 main 函数定义 return 类型冲突。

## 1.9 A-9

输入

```

1 int compareInt(int a, int b) {
2     if (a == b) {
3         return 0;
4     } else {
5         return -1;
6     }
7 }

```

```

8
9 float compareFloat(float aa, float bb) {
10     return aa - bb;
11 }
12
13 int main() {
14     int i = 3;
15     int j = 4;
16     float p = 1.2;
17     float k = 2.3;
18     if(i == 4) {
19         return compareInt(i, j);
20     } else {
21         return compareInt(j, k);
22     }
23 }

```

输出

```

1 Error type 9 at Line 21: Function arguments do not match.

```

说明：第 21 行函数调用第二个参数类型不符（应为 int，使用了 float）。

## 1.10 A-10

输入

```

1 struct Paper{
2     int name;
3     int words[100];
4 }pp;
5
6 int main() {
7     struct Paper papers[10][10];
8     int i = 0;
9     int j = 0;

```

```

10     while (i < 10) {
11         pp.words[i+j] = j;
12         while (j < 10) {
13             papers[i][j].words[i] = i + j;
14             j = j + 1;
15         }
16         i = i + 1;
17     }
18     return pp[i+j];
19 }

```

输出

```

1 Error type 10 at Line 18: Variable is not an array.

```

说明：第 18 行错误地对 pp 进行数组寻址。也可以多报一个 8 型错误。

## 1.11 A-11

输入

```

1 struct Pad{
2     int size;
3     int storage;
4 };
5
6 int iPad(int ss, int st) {
7     struct Pad ip;
8     ip.size = ss;
9     ip.storage = st;
10    return ss;
11 }
12
13 int miPad(int s, int t) {
14     struct Mi{
15         struct Pad core;

```

```

16         int brand;
17     }myMi;
18     myMi.core = myMi(s,t);
19     myMi.brand = 0;
20     return 0;
21 }
22
23 int main() {
24     return miPad(3,4);
25 }

```

输出

```

1 Error type 11 at Line 18: "myMi" is not a function.

```

说明：第 18 行对变量进行函数调用。也可以多报一个 5 型错误

## 1.12 A-12

输入

```

1 int main() {
2     int fib[100];
3     int i = 0, a = 1, b = 1;
4     int tem;
5     float floatFib[100];
6     float fa = 1.0, fb = 1.0;
7     float ftem;
8     while (i < 100) {
9         fib[i] = a + b;
10        tem = a + b;
11        a = b;
12        b = tem;
13        i = i + 1;
14    }
15    i = 0;

```

```

16     while (i < 100) {
17         ftem = fa + fb;
18         floatFib[ftem] = ftem;
19         fa = fb;
20         fb = ftem;
21         i = i + 1;
22     }
23     return i;
24 }

```

输出

```

1 Error type 12 at Line 18: Array index is not an integer.

```

说明：第 18 行使用 `ftem` 作为数组寻址，其为 `float` 型。

### 1.13 A-13

输入

```

1 struct Building{
2     struct base{
3         int size;
4         float height;
5     }b;
6     int bh;
7 }Yangzhou;
8
9 int main(){
10     struct Building newOne;
11     Yangzhou.b.size = 1;
12     Yangzhou.b.height = 3.4;
13     Yangzhou.bh = 100;
14     newOne.b.size = Yangzhou.b.size;
15     newOne.b.height = Yangzhou.b.height;
16     newOne.bh = Yangzhou.bh;

```

```
17     return 0;
18 }
```

输出

```
1 Error type 13 at Line 15: Illegal use of "."
```

说明：第 15 行对变量 bh 进行结构体访问。

## 1.14 A-14

输入

```
1 struct Javalin{
2     int head;
3     int shoulder;
4     float foot;
5     struct Pilot{
6         int gender;
7         int age;
8     }freelancer;
9 };
10
11 struct Anthem{
12     struct Javalin army[100];
13     int missions[100];
14 }game;
15
16 int main() {
17     int i = 0;
18     struct Javalin lin;
19     while(i < 100) {
20         game.army[i] = lin;
21         i = i + 1;
22         lin.head = i;
23         lin.shoulder = i * i;
```

```

24         lin.freelancer.gender = i / 2;
25         lin.age = i * 2;
26     }
27     return i;
28 }

```

输出

```

1 Error type 14 at Line 25: None-existent field "age".

```

说明：第 25 行错误访问结构体 Javalin 中不存在的域 age。

## 1.15 A-15

输入

```

1 struct Food {
2     int cal;
3     int name, price;
4     float name1;
5 };
6
7 int main() {
8     struct person {
9         struct Food burger;
10        int age;
11        float time, burger;
12    }p;
13    return 0;
14 }

```

输出

```

1 Error type 15 at Line 11: Invalid definition in structure.

```

说明：person 结构体定义时存在重名域 burger。

## 1.16 A-16

输入

```
1 struct Hammer{
2     int size;
3     int weight;
4     struct Price{
5         int amount;
6         float currency;
7     }p;
8 };
9
10 struct Thor{
11     struct Hammer hh;
12     int age;
13     struct Hammer{
14         int am;
15         float current;
16     }ww;
17 }avenger;
18
19 int main() {
20     avenger.age = 100;
21     return avenger.age;
22 }
```

输出

```
1 Error type 16 at Line 13: Duplicated name "Hammer".
```

说明：结构体名 `Hammer` 与之前定义的结构体重名。

## 1.17 A-17

输入



```

1 struct Spider {
2     int legs;
3     float weight;
4 }man;
5
6 struct Venom{
7     int height;
8     int gender;
9 }edi;
10
11 struct Carnage{
12     int number;
13     float sex;
14 }end;
15
16 int main() {
17     struct Spider p;
18     struct Venom vv;
19     struct Cranage cc;
20     return 0;
21 }

```

输出

```

1 Error type 17 at Line 19: Undefined structure "Cranage".

```

说明：第 19 行使用了未定义的结构体 Cranage。

## 1.18 A-18

输入

```

1 struct Apple {
2     int weight;
3     float round;
4 };

```

```

5
6 struct Pen {
7     int length;
8     int used;
9 };
10
11 int add(struct Apple a, struct Pen p) {
12     return a.weight + p.length;
13 }
14
15 int main() {
16     struct Apple aa;
17     struct Pen pp;
18     int sum;
19     aa.weight = 3;
20     pp.length = 12;
21     sum = add(aa, pp);
22     if(sum > 5) {
23         return aa / pp.length;
24     } else {
25         return 0;
26     }
27 }

```

输出

```

1 Error type 7 at Line 23: Type mismatched for operands.

```

说明：第 23 行使用结构体变量 aa 与 int 型进行除法，无法匹配。

## 1.19 A-19

输入

```

1 int compare1(int a, int b) {
2     if(a==b) {

```

```

3         return 0;
4     } else {
5         return 1;
6     }
7 }
8
9 int compare2(int aa, int bb, int cc) {
10     if(aa == bb) {
11         return 0;
12     } else if (bb == cc) {
13         return 1;
14     } else {
15         return -1;
16     }
17 }
18
19 int main() {
20     int i = 1, j = 3, k = 12;
21     return compare1(i,j,k);
22 }

```

输出

```

1 Error type 9 at Line 21: Function arguments do not match.

```

说明：第 21 行调用 `compare1` 是使用了过多的实参。也可以多报一个 8 型错误。

## 1.20 A-20

输入

```

1 struct Apple{
2     int size;
3     int price;
4 };
5

```

```

6 struct Apples{
7     struct Apple a[100];
8     struct Bucket{
9         struct base {
10             int s;
11             float t;
12         }bb;
13         int p;
14     }buck;
15 }lots;
16
17 int main() {
18     struct Product {
19         struct Apples app = lots;
20     }pro;
21     return 0;
22 }

```

输出

```

1 Error type 15 at Line 19: Invalid definition in structure.

```

说明：第 19 行结构体定义时对域进行赋值。

## 2 B 组测试用例

本组测试用例共 2 个，其中包含多个语义错误。每一行的语义错误会分别算分，同一个语义错误可能会有连锁反应，其处理方式与 A 类用例相同，只要是合理的（包括但不限于下面明确给出的情况），都不会影响得分。

### 2.1 B-1

输入

```

1 struct Leaf{
2     int number;

```

```

3         int isGreen;
4     };
5
6     struct Tree {
7         struct Leaf leaves[100];
8         int height;
9         float weight;
10        int hasFruit;
11    };
12
13    struct AppleTree {
14        struct Tree t;
15        int numberApple;
16        float priceApple;
17        int highQuality;
18    };
19
20    struct AppleTree newAppleTree() {
21        int i = 0;
22        int x = 1;
23        struct AppleTree at = x();
24        struct Tree tt;
25        struct Leaf sto[100];
26        while (i < 100) {
27            sto[i].number = x;
28            tt.leaves[i].number = sto[i].number;
29            sto[i].isGreen = 1;
30            tt.leaves[i].isGreen = sto[i].isGreen;
31            i = i + 1;
32        }
33        tt.height = 100;
34        tt.weight = 2.5;

```

```

35     tt.hasFruit = 0;
36     at.numberApple = 1;
37     at.priceApple = 1.2;
38     i = 0;
39     while(i < 100) {
40         at.t[i].leaves[i].number = tt.leaves[i].number;
41         at.t.leaves[i].isGreen = tt.leaves[i].isGreen;
42         i = i + 1;
43     }
44     at.t.height = tt.height;
45     at.t.weight = tt.weight;
46     at.hasFruit = 1;
47     at.highQuality = at.t.hasFruit * at.t.weight;
48     return at;
49 }
50
51 int main() {
52     struct AppleTree aat = newAppleTree();
53     return 0;
54 }

```

## 输出

```

1 Error type 11 at Line 23: "AppleTree" is not a function.
2 Error type 10 at Line 40: Variable is not an array.
3 Error type 14 at Line 46: None-existent field "hasFruit".
4 Error type 7 at Line 47: Type mismatched for operands.

```

说明：第 23 行错误地对结构体进行函数调用；第 40 行对结构体变量进行数组访问；第 46 行访问不属于 AppleTree 结构体地域 hasFruit；第 47 行使用 int 型与 float 型进行乘法操作，也可以多报一个 5 型错误。

## 2.2 B-2

### 输入

```

1 struct Actor{
2     int age;
3     int hair;
4 }Di;
5
6 struct Actress{
7     int height;
8     float cup;
9 }M;
10
11 struct Actor newGuy(int a, int h) {
12     struct Actor ac;
13     ac.age = a;
14     ac.hair = h;
15     return ac;
16 }
17
18 struct Actress newGal(int hh, float cc) {
19     struct Actress as;
20     as.height = hh;
21     as.cup = cc;
22     return cc;
23 }
24
25 struct Actor newGuy(int aa, int hhh, int bbb) {
26     struct Actor gay;
27     gay.age = aa + bbb;
28     gay.hair = hhh;
29 }
30
31 int numberOfHair(struct Actor random) {
32     return random.hair;

```

```

33 }
34
35 int main() {
36     struct Actor cap = newGuy(1, 2);
37     Di.age = cap.age;
38     Di.hair = cap.hair;
39     numberOfHair(Di) = 3;
40     return newGal(Di.age, 15).height;
41 }

```

输出

```

1 Error type 8 at Line 22: Type mismatched for return.
2 Error type 4 at Line 25: Redefined function "newGuy"
3 Error type 6 at Line 39: The left-hand side of an assignment must be
  a variable.
4 Error type 9 at Line 40: Function arguments do not match.

```

说明：第 22 行 return 语句返回 float 型，与方法 newGal 定义不符；第 25 行函数定义 newGuy 冲突，也可以报在第 11 行；第 39 行使用 int 型作为左值；第 40 行函数调用第二个参数类型不符。

### 3 C 组测试用例

本组测试用例共 2 个，不包含任何错误，不需要任何输出。

#### 3.1 C-1

输入

```

1 struct Leaf{
2     int number;
3     int isGreen;
4 };
5
6 struct Tree {

```



```

7      struct Leaf leaves[100];
8      int height;
9      float weight;
10     int hasFruit;
11 };
12
13 struct AppleTree {
14     struct Tree t;
15     int numberApple;
16     float priceApple;
17     int highQuality;
18 };
19
20 struct AppleTree newAppleTree() {
21     int i = 0;
22     int x = 1;
23     struct AppleTree at;
24     struct Tree tt;
25     struct Leaf sto[100];
26     while (i < 100) {
27         sto[i].number = x;
28         tt.leaves[i].number = sto[i].number;
29         sto[i].isGreen = 1;
30         tt.leaves[i].isGreen = sto[i].isGreen;
31         i = i + 1;
32     }
33     tt.height = 100;
34     tt.weight = 2.5;
35     tt.hasFruit = 0;
36     at.numberApple = 1;
37     at.priceApple = 1.2;
38     i = 0;

```

```

39     while(i < 100) {
40         at.t.leaves[i].number = tt.leaves[i].number;
41         at.t.leaves[i].isGreen = tt.leaves[i].isGreen;
42         i = i + 1;
43     }
44     at.t.height = tt.height;
45     at.t.weight = tt.weight;
46     at.t.hasFruit = 1;
47     at.highQuality = at.t.hasFruit * at.t.height;
48     return at;
49 }
50
51 int main() {
52     struct AppleTree aat = newAppleTree();
53     return 0;
54 }

```

输出

```

1 // 正常返回， 没有任何输出。

```

说明：测试用例 B-1 的正确版。

## 3.2 C-2

输入

```

1 struct Actor{
2     int age;
3     int hair;
4 }Di;
5
6 struct Actress{
7     int height;
8     float cup;
9 }M;

```

```

10
11 struct Actor newGuy(int a, int h) {
12     struct Actor ac;
13     ac.age = a;
14     ac.hair = h;
15     return ac;
16 }
17
18 struct Actress newGal(int hh, float cc) {
19     struct Actress as;
20     as.height = hh;
21     as.cup = cc;
22     return as;
23 }
24
25 struct Actor newGay(int aa, int hhh, int bbb) {
26     struct Actor gay;
27     gay.age = aa + bbb;
28     gay.hair = hhh;
29 }
30
31 int numberOfHair(struct Actor random) {
32     return random.hair;
33 }
34
35 int main(){
36     struct Actor cap = newGuy(1, 2);
37     Di.age = cap.age;
38     Di.hair = cap.hair;
39     return newGal(Di.age, 1.5).height;
40 }

```

输出

```
1 //正常返回， 没有任何输出。
```

说明：测试用例 B-2 的正确版。

## 4 D 组测试用例

本组测试用例共 3 个，针对不同分组进行测试。需要能够识别其语言特性，如果提示错误则不得分；其他分组的同学需要识别出其中的错误，如果没有报错，则将视为违规，将会倒扣分。

### 4.1 D-1

输入

```
1 struct Square{
2     int length;
3     int width;
4 };
5
6 int compare(int a, int b);
7
8 int generate(int t) {
9     return 5*3;
10 }
11
12 int compare(int a, int b){
13     return a * b;
14 }
15
16 struct Square newSquare(int l, int w);
17
18 int main(){
19     int aaa = 3;
20     int bbb = generate(12);
21     int tt = compare(aaa,bbb);
```

```

22     struct Square ss = newSquare(tt, aaa);
23     return 0;
24 }
25
26 struct Square newSquare(int l, int w);
27
28 struct Square newSquare(int l, int w){
29     struct Square sq;
30     sq.length = l;
31     sq.width = w;
32     return sq;
33 }

```

输出

```

1 // 正常返回， 没有任何输出。

```

说明：2.1 分组的同学应当没有任何输出，其他组同学应当在第 6、16、26 行报语法错误。

## 4.2 D-2

输入

```

1 struct Bio {
2     int id;
3     int list[100];
4     float price;
5 };
6
7 struct Bio newBio(int idd, float p){
8     struct Bio b;
9     int i = 0;
10    b.id = idd;
11    b.price = p;
12    while(i < 0) {
13        int j = i;

```

```

14         float i = 1.2;
15         b.list[j] = 0;
16         j = j + 1;
17     }
18     return b;
19 }
20
21 float main() {
22     struct Bio b = newBio(12,3.5);
23     float idd = 1.2;
24     int listt[100];
25     int i = 0;
26     while(i < 100) {
27         listt[i] = b.list[i];
28         i = i + 1;
29     }
30     return idd;
31 }

```

输出

```

1 // 正常返回， 没有任何输出。

```

说明：2.2 分组的同学应当没有任何输出，其他组同学应当在第 14、22、23、25 行报出 3 型错误。

### 4.3 D-3

输入

```

1 struct A{
2     int a;
3     int aArr[100][12];
4     struct AA{
5         float aType[12];
6     }aNode;

```

```

7  };
8
9  struct B{
10     int b;
11     int Barr[12][15];
12     struct BB{
13         float bType[26];
14     }bNode;
15 };
16
17 struct C{
18     int c;
19     float bArr[10][12][23];
20     struct CC{
21         int cType;
22     }cNode;
23 };
24
25 struct D{
26     int d;
27     float dArr[100][5][23];
28     struct DD{
29         int h;
30     }dNode;
31 };
32
33 int main(){
34     struct A tempA, tempA2;
35     struct B tempB, tempB2;
36     struct C tempC, tempC2;
37     struct D tempD, tempD2;
38     tempA = tempB;

```

```

39         tempC = tempD;
40         tempA2 = tempA;
41         tempD = tempD2;
42         return 0;
43     }

```

输出

```

1 // 正常返回， 没有任何输出。

```

说明：3.3 分组的同学应当没有任何输出，其他组同学应当在第 38 和 39 行报出 5 型错误。

## 5 E 组测试用例

本组测试用例共 3 个，针对不同分组进行测试。

### 5.1 E2.1

这组测试用例针对 2.1 分组的同学。

输入

```

1 struct Square{
2     int length;
3     int width;
4 };
5
6 int compare(int a, int b);
7
8 int generate(int t) {
9     return 5*3;
10 }
11
12 int compare(int a, int b){
13     return a * b;
14 }
15

```



```

16 struct Square ChangeSquare(int ttt, int kkk);
17
18 struct Square newSquare(int l, float w);
19
20 int main(){
21     int aaa = 3;
22     int bbb = generate(12);
23     int tt = compare(aaa,bbb);
24     struct Square ss = newSquare(tt, aaa);
25     return 0;
26 }
27
28 int newSquare(int l, int w);
29
30 struct Square newSquare(int l, int w){
31     struct Square sq;
32     sq.length = l;
33     sq.width = w;
34     return sq;
35 }

```

输出

```

1 Error type 19 at Line 28: Inconsistent declaration of function "
  newSquare".
2 Error type 19 at Line 30: Inconsistent declaration of function "
  newSquare".
3 Error type 18 at Line 16: Undefined function "changeSquare".

```

说明：2.1 分组同学需要测试，在第 16、28、30 行报错，16 行错也可以报在最后一行，也可以多报一个 newSquare 的 18 型错误。

## 5.2 E2.2

这组测试用例针对 2.2 分组的同学。

输入

```
1 struct Bio {
2     int id;
3     int list[100];
4     float price;
5 };
6
7 struct Bio newBio(int idd, float p){
8     struct Bio b;
9     struct Bio bb;
10    int i = 0;
11    float bb = 3.0;
12    b.id = idd;
13    b.price = p;
14    while(i < 0) {
15        b.list[i] = 0;
16        i = i + 1;
17    }
18    return b;
19 }
20
21 float main() {
22     struct Bio b = newBio(12,3.5);
23     float idd = 1.2;
24     int listt[100];
25     int i = 0;
26     while(i < 100) {
27         float i = 3.0;
28         listt[i] = b.list[i];
29         i = i + 1;
30     }
31     return idd;
```

32 }

输出

```
1 Error type 3 at Line 11: Redefined variable "bb"
2 Error type 12 at Line 28: Not an integer
3 Error type 7 at Line 29: Type mismatched for operands
```

说明：仅 2.2 分组的同学需要测试这个用例，需在第 11 行报 3 型错误，第 27 行不报错，但第 28 与 29 行报相应错误。

### 5.3 E2.3

这组测试用例针对 3.3 分组的同学。

输入

```
1 struct A{
2     int a;
3     int aArr[100][12];
4     struct AA{
5         float aType[12];
6     }aNode;
7 };
8
9 struct B{
10     int b;
11     int Barr[100][12];
12     struct BB{
13         int bType[12];
14     }bNode;
15 };
16
17 struct C{
18     int c;
19     float bArr[10][12][23];
20     struct CC{
```

```

21             int cType;
22         }cNode;
23     };
24
25     struct D{
26         int d;
27         float dArr[10][12][23];
28         struct DD{
29             int h;
30         }dNode[15];
31     };
32
33     struct E{
34         int e;
35         float eArr[10][12][23];
36         int eNode[15];
37     };
38
39     int main(){
40         struct A tempA, tempA2;
41         struct B tempB, tempB2;
42         struct C tempC, tempC2;
43         struct D tempD, tempD2;
44         struct E tempE;
45         tempA = tempB;
46         tempC = tempD;
47         tempA2 = tempA;
48         tempD = tempD2;
49         tempE = tempD;
50         return 0;
51     }

```

输出

```
1 Error type 5 at Line 45: Type mismatched.  
2 Error type 5 at Line 46: Type mismatched.  
3 Error type 5 at Line 49: Type mismatched.
```

说明：仅 2.3 分组的同学需要测试这个用例，须在第 45、46、49 行报 5 型错误。

## 6 结束语

如果对本测试用例有任何疑议，可以写邮件与王珏助教联系，注意同时抄送给许老师。