编译原理实习　测试用例 2

注：下面列出的每个 testcase 后面列的标准输只是一种我们认为可以接受的输出，*并不是唯一正确的输出*，甚至不一定是所有正确的输出中最好的那一个，仅供参考。实际批改时许多其他的输出我们也都是认可的，并且错误信息的输出顺序不影响输出的正确性。

[Testcase1]

```
int main()
{
    int i;
    while (i < 10)
        j = i + 1;
}
```

Error type 1 at line 5

[Testcase2]

```
int main()
{
    int i, j;
    while (i < 10) inc(j);
    write(j);
}
```

Error type 2 at line 4
Error type 2 at line 5

[Testcase3]

```
int main()
{
    int i, j, k;



    int j;
    while (i < 10) j = j + 1;
}
```

Error type 3 at line 7

[Testcase4]

```
int abs(int x)
{
    if (x >= 0) return x;
    else return -x;
}
```

```
int main()
{
    int i, j, k;
    while (i < 10) j = j + 1;
}

int abs(int x)
{
    if (x <= 0) return -x;
    else return x;
}
```

Error type 4 at line 13

[Testcase5]

```
int abs(int x)
{
    if (x >= 0) return x;
    else return -x;
}

int main()
{
    int i, j, a[10][10];
    float k = 3;
    while (i < 10)
    {
        j = k;
        k = k + 1.0;

    }

    k = abs(j);
}
```

Error type 5 at line 10
Error type 5 at line 13
Error type 5 at line 18

[Testcase6]

```
int abs(int x)
{
    if (x >= 0)
        return x;
    else
        return -x;
}
```

```
int main()
{
    int i, j;
    int a[10][10];
    float k;
    while (i < 10)
    {
        1 = j;
        k = k + 1.0;

        a[i][j] + abs(i) = j;
    }
    abs(j) = i;

}
```

Error type 6 at line 16
Error type 6 at line 19
Error type 6 at line 21

[Testcase7]

```
int abs(int x)
{
    if (x >= 0)
        return x;
    else
        return -x;
}

int main()
{
    int i, j;
    int a[10][10], b[5];

    float k;

    while (i < 10)
    {
        k * a;
        i = i + abs(-1);
    }
    a[i] + j;

    a[j] - b[j];
}
```

Error type 7 at line 18
Error type 7 at line 21

Error type 7 at line 23

[Testcase8]

```
int abs(int x)
{
    float fl[10];
    if (x >= 0)
        return fl;
    else
        return -x;
}

int main()
{
    int i, j;
    int a[10][10];

    float k;

    while (i < 10)
    {
        j = j + 1;
        i = i + abs(-1);
    }

    j;
    return a;
}
```

Error type 8 at line 5
Error type 8 at line 24

[Testcase9]

```
int abs(int z)
{
    if (z >= 0) return z;
    else return -z;
}

int abs2(int x, int y)
{
    if (x-y >= 0) return x-y;
    else return y-x;
}

int main()
{
    int i, j, a[10][10];
```

```
    float k;

    i;
    if (i <= 10)
        j = abs(i, k);
    else
        j = abs2(i);

    while (i < 10)
    {
        k = k + abs(1.0);
    }

    i = i + abs(a[j]);
    j;
}
```

Error type 9 at line 20
Error type 9 at line 22
Error type 9 at line 26
Error type 9 at line 29
Error type 7 at line 26

[Testcase10]

```
int abs(int z)
{
    if (z >= 0) return z;
    else return -z;
}

int abs2(int x, int y)
{
    if (x-y >= 0) return x-y;
    else return y-x;
}

int main()
{
    int i, j, a[10][10];
    float k;

    i = 0;
    if (i[0] <= 10)
        j = abs2(i, 4);
    else
        j = abs(i);

    while (i < 10)
    {
```

```
        k = k + 1.0;
        j[5];
    }

    j;
}
```

Error type 10 at line 19
Error type 10 at line 27

[Testcase11]

```
int abs(int z)
{
    if (z >= 0) return z;
    else return -z;
}

int abs2(int x, int y)
{
    if (x-y >= 0) return x-y;
    else return y-x(5);
}

int main()
{
    int i, j, a[10][10];
    float k;

    i = 0;
    if (i <= 10)
        j = abs2(i, 4);
    else
        j = abs(i);

    while (i < 10)
    {
        k = k + 1.0;
        i(5);
    }

    j;
}
```

Error type 11 at line 10
Error type 11 at line 27

[Testcase12]

```
int abs(int z)
```

```
{
    if (z >= 0) return z;
    else return -z;
}

float abs2(int x, int y)
{
    if (x-y >= 0) return 1.0;
    else return -1.0;
}

int main()
{
    int i, j, a[10][10];
    float k;

    i = 0;
    if (i <= 10) j = abs(i);

    while (i < 10)
    {
        k = k + 1.0;
        a[i][k] = j;
    }

    a[abs2(i,j)][3] = 9;
    j;
}
```

Error type 12 at line 24
Error type 12 at line 27

[Testcase13]

```
struct Complex
{
    float real, image;
};

int abs(int y)
{
    if (y >= 0) return y;
    else return -y;
}

float abs2(struct Complex x)
{
    return x.real * x.real + x.image * x.image;
}
```

```
int main()
{
    int i, j, a[10][10];
    struct Complex k;

    i = 0;
    if (i <= 10) j.real = abs(i);

    while (i < 10)
    {
        j = j - 2;
        i = i + 1;
    }

    i.image;
}
```

Error type 13 at line 23
Error type 13 at line 31

[Testcase14]

```
struct Complex
{
    float real, image;
    struct Attribute
    {
        float magnitude;
    } attr;
};

int abs(int y)
{
    if (y >= 0) return y;
    else return -y;
}

float abs2(struct Complex x)
{
    if (x.real == x.magnitude) return 0.0;
    return x.attr.magnitude;
}

int main()
{
    int i, j, a[10][10];
    struct Complex k;

    i = 0;
    if (i <= 10) j = abs(i);
```

```
    while (i < 10)
    {
        j = j - 1;
        i = i + k.attr.image;
    }

    i;
}
```

Error type 14 at line 18
Error type 14 at line 33

[Testcase15]

```
struct Complex
{
    float real, image;
    int magnitude, real;
};

struct Complex2
{
    float angle;
    int mag;
    float angle;
    int extra = 3;
};

int main()
{
}
```

Error type 15 at line 4
Error type 15 at line 11
Error type 15 at line 12

[Testcase16]

```
struct Complex
{
    float real, image;
};

struct abs
{
    int f3;
};

int abs3(int y)
```

```
{
    if (y >= 0) return y;
    else return -y;
}

float abs2(struct Complex x)
{
    return x.real * x.real + x.image * x.image;
}

struct abs
{
    int f1, f2;
};

int main()
{
    int i, j, a[10][10];
    struct Complex k, a;

    i = 0;
    if (i <= 10) j = abs3(i);

    while (i < 10)
    {
        j = j - 2;
        i = i + 1;
    }

    i+1;
}
```

Error type 16 at line 22
Error type 3 at line 30

[Testcase17]

```
struct Complex
{
    float real, image;
    struct Attribute attr;
};

int abs(int y)
{
    if (y >= 0) return y;
    else return -y;
}

float abs2(struct Complex x)
```

```
{
    struct Complex2 z;
    return x.real * x.real + x.image * x.image;
}

int main()
{
    int i, j, a[10][10];
    struct Attribute
    {
        int mag;
    } k;

    i = 0;
    if (i <= 10) j = k.mag = abs(i);

    while (i < 10)
    {
        j = j - 2;
        i = i + 1;
    }

    k && k;
}
```

Error type 17 at line 4
Error type 17 at line 15
Error type 7 at line 36

[Testcase18]

```
struct Complex
{
    float real, image;
};

int abs(int y);
float abs2(struct Complex x);

float abs2(struct Complex x)
{
    struct Complex z;
    return x.real * x.real + x.image * x.image;
}
int abs(int y);

int main()
{
    int i, j, a[10][10];
    struct Complex k;
```

```
    i = 0;
    if (i <= 10) j = abs(i);

    while (i < 10)
    {
        j = j - 2;
        i = i + 1;
    }

    i*6;
}

int main();
float abs2(struct Complex x);
```

Error type 18 at line 6

[Testcase19]

```
struct Complex
{
    float real, image;
};
float abs2(struct Complex x);
int abs(float x);

float abs2(int x);

float abs2(struct Complex x)
{
    struct Complex2 z;
    return x.real * x.real + x.image * x.image;
}

int abs(int y)
{
    if (y >= 0) return y;
    else return -y;
}

int main()
{
    int i, j, a[10][10];

    i = 0;
    if (i <= 10) j = abs();

    while (i < 10)
    {
```

```
        j = j - 2;
        i = i + 1;
    }
}
```

Error type 19 at line 8
Error type 19 at line 16
Error type 17 at line 12
Error type 9 at line 27

[Testcase20]

```
struct Complex
{
    float real, image, i;
};

int abs(int x)
{
    if (x >= 0) return x;
    else return -x;
}

float abs2(struct Complex x)
{
    return x.real * x.real + x.image * x.image;
}

int write(int i)
{
    return 0;
}

int main()
{
    int i, j, a[10][10];
    struct Complex k;

    i = 0;
    if (i <= 10) j = abs(i);

    while (i < 10)
    {
        float j;
        j = i + 2;
        if (j >= 5.0)
        {
            int k = abs(j);
            k.real - 3;
        }
```

```
    }

    write(i);
}
```

Error type 5 at line 33
Error type 9 at line 36
Error type 13 at line 37

[Testcase21]

```
struct TempStruct
{
    int array1[100];
    float array2[10][10];
};

struct TempStruct2
{
    int array3[100];
    float array4[10][10];
};

struct TempStruct3
{
    int array5[100];
    float array6[4][25][1];
};

struct Complex
{
    float real, image;
    struct TempStruct field[5];
};

struct Complex2
{
    float q1;
    float q2;
    struct TempStruct2 field2[5];
};

struct Complex3
{
    float q3, q4;
    struct TempStruct3 field3[5];
};

int main()
{
```

```
    struct Complex c1;
    struct Complex2 c2;
    struct Complex3 c3;

    c1 = c2;
    c2 = c3;
    c3 = c1;
}
```

Error type 5 at line 45
Error type 5 at line 46