











# OUTPUT

```
C:\Windows\system32\cmd.exe

Length:
6

Perimeter= 24.00
Area= 36.00
Press (y/Y) to stop the program
y

Press any key to continue . . . █
```

```
C:\Windows\system32\cmd.exe

Length:
-7
Please enter a positive, (+) value
6

Perimeter= 24.00
Area= 36.00
Press (y/Y) to stop the program
Y

Press any key to continue . . . █
```

# COMPILATION ERROR

## Problems:

- ❖ No semicolon(;) & curly bracket({})
- ❖ Improper variable declaration

```
//sub program 1  
void value(float & length)  
{  
    cout << endl;  
    cout << "Length: " << endl;  
    cin >> Length;  
  
    if (length < 0)  
    {  
        cout << "Please enter a positive, (+) value" << endl;  
        cin >> lenght;  
    }  
    cout << endl;  
  
//sub program 2
```

Output

Show output from: Build

```
l>Compiling...  
l>testing_ground.cpp  
l>c:\users\asus\desktop\programming\testing_ground\testing_ground\testing_gr  
l>c:\users\asus\desktop\programming\testing_ground\testing_ground\testing_gr  
l>c:\users\asus\desktop\programming\testing_ground\testing_ground\testing_gr  
l>c:\users\asus\desktop\programming\testing_ground\testing_ground\testing_gr  
l>c:\users\asus\desktop\programming\testing_ground\testing_ground\testing_gr  
l>>c:\users\asus\desktop\programming\testing_ground\testing_ground\te  
l>c:\users\asus\desktop\programming\testing_ground\testing_ground\testing_gr  
l>>c:\users\asus\desktop\programming\testing_ground\testing_ground\te  
l>c:\users\asus\desktop\programming\testing_ground\testing_ground\testing_g  
l>Build log was saved at "file:///c:/Users/ASUS/Desktop/PROGRAMMING/testing_g  
l>testing_ground - 5 error(s), 2 warning(s)  
===== Rebuild All: 0 succeeded, 1 failed, 0 skipped =====
```

## Solutions:

- ❖ Proper programming format  
[(semicolon,;) & (curly bracket, {})]
- ❖ Improper variable declaration

```
//sub program 1
void value(float & length)
{
    cout << endl;
    cout << "Length: " << endl;
    cin >> length;

    if (length < 0)
    {
        cout << "Please enter a positive, (+) value" << endl;
        cin >> length;
    }
    cout << endl;
}

//sub program 2
```

Output

Show output from: Build

1>testing\_ground.cpp

1>c:\users\asus\desktop\programming\testing\_ground\testing\_ground\testing\_gr

1>c:\users\asus\desktop\programming\testing\_ground\testing\_ground\testing\_gr

1>Compiling manifest to resources...

1>Microsoft (R) Windows (R) Resource Compiler Version 6.1.6723.1

1>Copyright (C) Microsoft Corporation. All rights reserved.

1>Linking...

1>LINK : C:\Users\ASUS\Desktop\PROGRAMMING\testing\_ground\Debug\testing\_grou

1>Embedding manifest...

1>Microsoft (R) Windows (R) Resource Compiler Version 6.1.6723.1

1>Copyright (C) Microsoft Corporation. All rights reserved.

1>Build log was saved at "file:///c:/Users/ASUS/Desktop/PROGRAMMING/testing\_g

1>testing\_ground - 0 error(s), 2 warning(s)

===== Rebuild All: 1 succeeded, 0 failed, 0 skipped =====

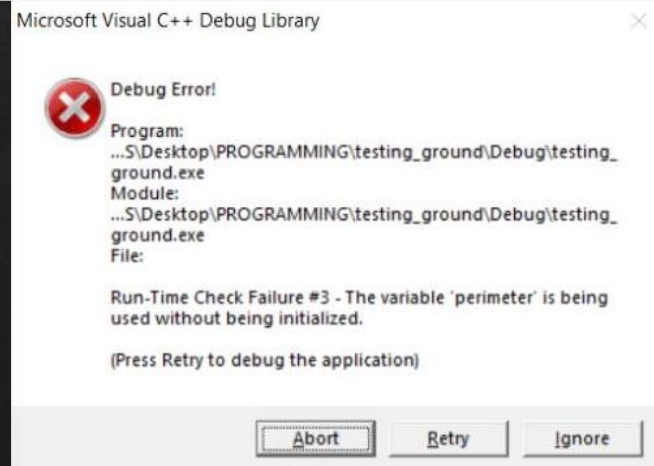
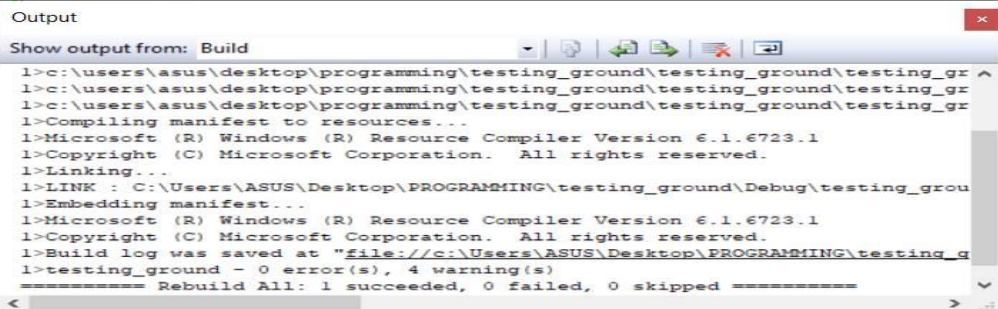
# RUN-TIME ERROR

## Problems:

- ❖ Program cannot run properly even no error is detected

```
void value(float&);
float Area(float, float);
float Perimeter(float, float);

int main()
{
    char y;
    float length;
    float area;
    float perimeter;
}
```

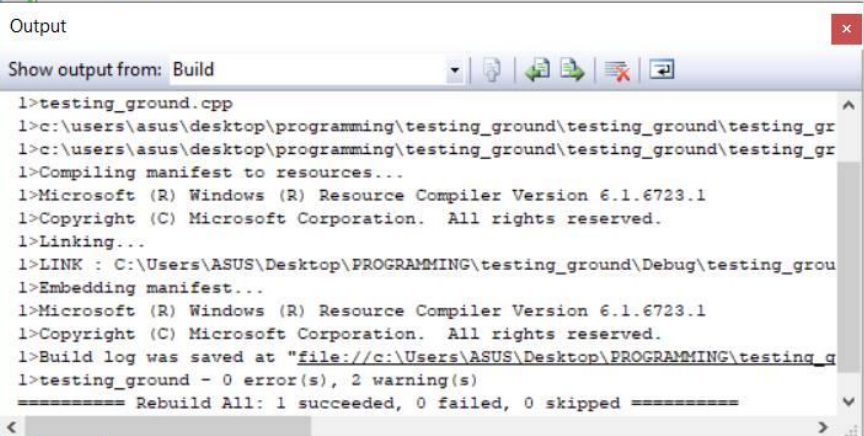


## Solutions:

- ❖ Use dummy number at the variable

```
void value(float&);
float Area(float, float);
float Perimeter(float, float);

int main()
{
    char y;
    float length = 1;
    float area = 2;
    float perimeter = 3;
}
```





# LOGICAL ERROR

## Problems:

- ❖ Output does not same as calculation

```
//sub program 2
float Perimeter(float length, float perimeter)
{
    perimeter = length + 4;
    return perimeter;
}

//sub program 3
float Area(float length, float area)
{
    area = length / length;
    return area;
}
```

Output

Show output from: Build

```
1>testing_ground.cpp
1>c:\users\asus\desktop\programming\testing_ground\testing_ground\testing_gr
1>c:\users\asus\desktop\programming\testing_ground\testing_ground\testing_gr
1>Compiling manifest to resources...
1>Microsoft (R) Windows (R) Resource Compiler Version 6.1.6723.1
1>Copyright (C) Microsoft Corporation. All rights reserved.
1>Linking...
1>LINK : C:\Users\ASUS\Desktop\PROGRAMMING\testing_ground\Debug\testing_grou
1>Embedding manifest...
1>Microsoft (R) Windows (R) Resource Compiler Version 6.1.6723.1
1>Copyright (C) Microsoft Corporation. All rights reserved.
1>Build log was saved at "file:///c:/Users/ASUS/Desktop/PROGRAMMING/testing_g
1>testing_ground - 0 error(s), 2 warning(s)
===== Rebuild All: 1 succeeded, 0 failed, 0 skipped =====
```

```
C:\Windows\system32\cmd.exe

Length:
4

Perimeter= 8.00
Area= 1.00
Press (y/Y) to stop the program
```

## Solutions:

- ❖ Use proper mathematical formula

```
//sub program 2
float Perimeter(float length, float perimeter)
{
    perimeter = length * 4;
    return perimeter;
}

//sub program 3
float Area(float length, float area)
{
    area = length * length;
    return area;
}
```

Output

Show output from: Build

```
1>testing_ground.cpp
1>c:\users\asus\desktop\programming\testing_ground\testing_ground\testing_gr
1>c:\users\asus\desktop\programming\testing_ground\testing_ground\testing_gr
1>Compiling manifest to resources...
1>Microsoft (R) Windows (R) Resource Compiler Version 6.1.6723.1
1>Copyright (C) Microsoft Corporation. All rights reserved.
1>Linking...
1>LINK : C:\Users\ASUS\Desktop\PROGRAMMING\testing_ground\Debug\testing_grou
1>Embedding manifest...
1>Microsoft (R) Windows (R) Resource Compiler Version 6.1.6723.1
1>Copyright (C) Microsoft Corporation. All rights reserved.
1>Build log was saved at "file:///c:/Users/ASUS/Desktop/PROGRAMMING/testing_g
1>testing_ground - 0 error(s), 2 warning(s)
===== Rebuild All: 1 succeeded, 0 failed, 0 skipped =====
```

```
C:\Windows\system32\cmd.exe

Length:
6

Perimeter= 24.00
Area= 36.00
Press (y/Y) to stop the program
y

Press any key to continue . . .
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