

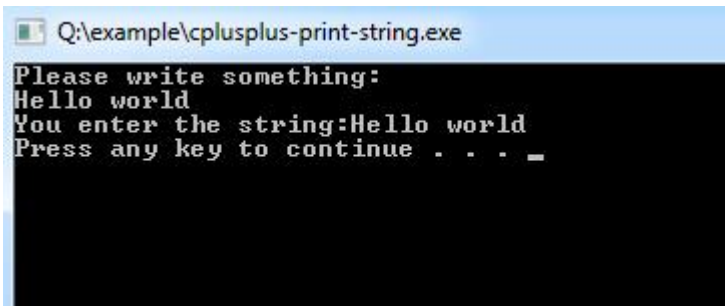
## C++ PRACTICE PROGRAM

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### 1. TO PRINT GIVEN STRING INPUT BY THE USER ON THE SCREEN

PROGRAM:

```
#include<iostream>
using namespace std;
int main()
{
    /* variable definition and initialization */
    char stringArray[100];
    /* Take user input and assign to variable */
    cout << "Please write something:" << endl;
    //cin >> stringArray;
    cin.getline(stringArray,80);
    /* Print */
    cout << "You enter the string:" << stringArray
    <<endl;
    system("PAUSE");
    return 0; }
```



```
Q:\example\cplusplus-print-string.exe
Please write something:
Hello world
You enter the string:Hello world
Press any key to continue . . . _
```

### 2. PROGRAM TO CHECK WHETHER THE GIVEN NUMBER IS A PRIME

PROGRAM

```
#include<iostream>
using namespace std;
int main()
{
    /* variable definition and initialization */
    int n, i, c = 0;
    /* Get user input */
```

```

cout << "Enter any number n: "; cin>>n;
/*logic*/
for (i = 1; i <= n; i++)
{
if (n % i == 0)
{
c++;
}
}
if (c == 2)
{
cout << "n is a Prime number" << endl;
}
else { cout << "n is not a Prime number" << endl;
}
system("PAUSE");
return 0;
}

```

```

Q:\example\cplusplus-check-whether-the-given-number-i
Enter any number n: 7
n is a Prime number
Press any key to continue . . . _

```

### 3. PROGRAM TO SWAPPING TWO NUMBERS USING A TEMPORARY VARIABLE

PROGRAM:

```

#include<iostream>
using namespace std;
int main()
{
int x, y, temp;
cout << "Enter the value of x and y:" << endl;
cin >> x >> y;
cout << "Before swapping x=" << x << ", y=" << y <<
endl;
/*Swapping logic */

```

```

temp = x;
x = y;
y = temp;
cout << "After swapping x=" << x << ", y=" << y <<
endl;
system("PAUSE");
return 0;
}
}

```

```

Q:\example\swap-two-numbers-without-using-temporary-variable.exe
Enter the value of x and y:
4
6
Before swapping x=4, y=6
After swapping x=6, y=4
Press any key to continue . . .

```

#### 4. PROGRAM TO CREATE A PYRAMID

PROGRAM:

```

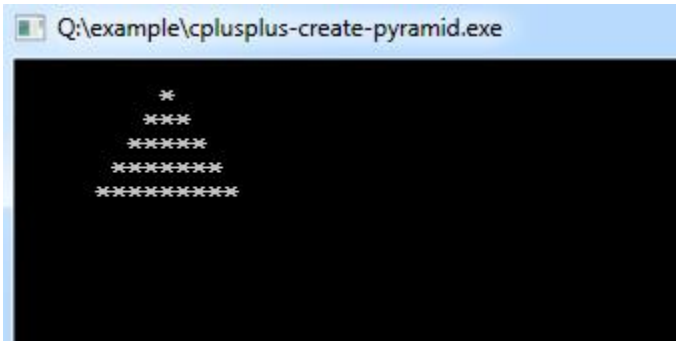
#include<iostream>
using namespace std;
int main()
{
int i,j,k,space=10;
// to print the pyramid in center, you can also
//increase the # of spaces
for (int i=0;i<=5;i++)
{
for (int k=0;k<space;k++)
{
cout<<" ";
}
for (int j=0;j<2*i-1;j++)
{
cout<<"*";
}
space--;
}
}

```

```

    cout<<endl;
}
cin.get();
/*use this to wait for a keypress*/
}

```



#### 5. PROGRAM TO FIND PERFECT NUMBER.

PROGRAM:

```

#include<iostream>
#include<cctype>
using namespace std;
int main()
{
int n,i=1,sum=0;
cout << "Enter a number: ";
cin >> n;
while(i<n)
{
if(n%i==0)
sum=sum+i;
i++;
}
if(sum==n)
cout << i << " is a perfect number\n";
else
cout << i << " is not a perfect number\n";
system("pause");
return 0;
}

```

## 6. PROGRAM TO CHECK WHETHER GIVEN STRING IS PALINDROME .

PROGRAM:

```
#include<iostream>
using namespace std;
int main()
{
char string1[20];
int i, length;
int flag = 0;
cout << "Enter a string: ";
cin >> string1;
length = strlen(string1);
for(i=0;i < length ;i++)
{
if(string1[i] != string1[length-i-1])
{
flag = 1;
break;
}
}
if (flag)
{
cout << string1 << " is not a palindrome" << endl;
}
else
{
cout << string1 << " is a palindrome" << endl;
}
system("pause");
return 0;
}
```

```
Q:\example\cplusplus-check-palindrome-string.exe
Enter a string: lol
lol is a palindrome
Press any key to continue . . . _
```

## 7. PROGRAM TO PRINT FLOYD TRIANGLE

PROGRAM:

```
#include<iostream>
using namespace std;
int main()
{
int n, i, c, a = 1;
cout << "Enter the number of rows of Floyd's triangle
to print: ";
cin >> n;
for (i = 1; i <= n; i++)
{
for (c = 1; c <= i; c++)
{
cout << a; a++;
}
cout << endl;
}
return 0;
}
```

```
Q:\example\cplusplus-floyds-triangle.exe
Enter the number of rows of Floyd's triangle to print: 10
1
23
456
78910
1112131415
161718192021
22232425262728
2930313233343536
373839404142434445
46474849505152535455
Press any key to continue . . .
```

## 8. PROGRAM TO IMPLEMENT MANIPULATORS

PROGRAM:

```
#include <iostream>

#include <iomanip>

using namespace std;

int main() {

    float basic, ta, da, gs;

    basic=10000; ta=800; da=5000;

    gs=basic+ta+da;

    cout<<setw(10)<<"Basic"<<setw(10)<<basic<<endl

        <<setw(10)<<"TA"<<setw(10)<<ta<<endl

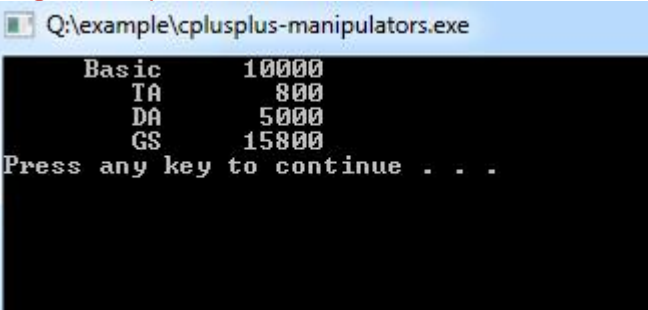
        <<setw(10)<<"DA"<<setw(10)<<da<<endl

        <<setw(10)<<"GS"<<setw(10)<<gs<<endl;

    return 0;

}
```

Program Output:

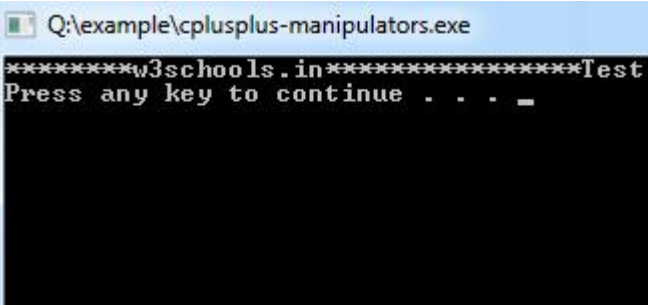


```
Q:\example\cplusplus-manipulators.exe
Basic 10000
TA 800
DA 5000
GS 15800
Press any key to continue . . .
```

## setfill Manipulator

This is used after setw manipulator. If a value does not entirely fill a field, then the character specified in the setfill argument of the manipulator is used for filling the fields.

```
#include <iostream>
#include <iomanip>
using namespace std;
int main()
{
cout << setw(20) << setfill('*') << "w3schools.in" << set
w(20) << setfill('*')<<"Test"<< endl;
}
```



```
Q:\example\cplusplus-manipulators.exe
*****w3schools.in*****Test
Press any key to continue . . . _
```