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1)
#include <iostream>
#include <iomanip>
#include <vector>
using namespace std;

void printArray(char a[], int size)
{
    char b[6];
    for (int i = 0; i < size; i++)
    {
        cout << a[i] << left;
    }
}

int main()
{
    char arr1[] = "object";

    for (int i = 0, w_string = 6, width = 1; i < 6; i++, arr1[w_string] = '\0', w_string--, width = width + 2)
    {
        int j = 0;
        for (j = 0; j < w_string; j++)
        {
            cout << arr1[j];
        }

        cout.width(width);
        cout << right;

        for (int k = j - 1; k >= 0; k--)
        {
            cout << arr1[k];
        }

        if (i == 4)
        {
            cout.fill('*');
        }
        if (i == 5)
        {
            cout.fill(' ');
        }
        cout << endl;
    }
    char arr[] = "object";
    for (int i = 0, width = 9; i < 5; i++, width = width - 2)
    {
        int j = 0;
        for (j = 0; j <= i + 1; j++)
        {
            cout << arr[j];
        }
        cout.width(width);
        cout << right;
    }
}

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        for (int k = j - 1; k >= 0; k--)
        {
            cout << arr[k] << left;
        }
        cout << endl;
    }
}

```

O/P :

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Received Output:
objecttcejbo
objec cejbo
obje cejbo
obj  jbo
ob  bo
o*****o
ob  bo
obj  jbo
obje cejbo
objec cejbo
objecttcejbo

```

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2)
#include <iostream>
#include <string.h>
using namespace std;
int main()
{
    char a[20];
    int b, c = 0;
    cout << "Enter the Text" << endl;
    cin.getline(a, 20);
    cout.setf(ios::left, ios::adjustfield);
    cout.width(20);
    cout << "Number of Lines";
    cout.width(20);
    cout << "Number of words";
    cout.width(25);
    cout << "Number of characters" << endl;
    cout.setf(ios::right, ios::adjustfield);
    cout.width(10);
    cout << "1";
    b = strlen(a);
    for (int i = 0; i < b; i++)
    {
        if (a[i] == ' ')
            c++;
    }
    cout.width(15);
    cout << c + 1;
    cout.width(20);
    cout << b;
}

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o/p:

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Input:
abcdef ghi
Expected Output:
Enter the Text
Number of Lines    Number of words    Number of characters
1                  2                  10

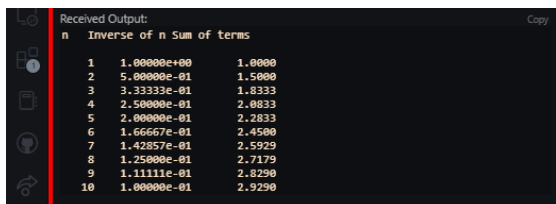
```

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3)
#include <iostream>
#include <iomanip>
using namespace std;
int main()
{
    double sum = 0, term;
    cout.setf(ios::showpoint);
    cout << setw(5) << "n" << setw(15) <<
    "Inverse of n" << setw(15) << "Sum of
    terms\n\n";
    for (int i = 1; i <= 10; i++)
    {
        term = 1.0 / float(i);
        sum = sum + term;
        cout << setw(5) << i <<
        setiosflags(ios::scientific) << setprecision(5)
        << setw(15) << term << setw(13) <<
        resetiosflags(ios::scientific) << sum << endl;
    }
}

```

o/P :



n	Inverse of n	Sum of terms
1	1.00000e+00	1.00000
2	5.00000e-01	1.50000
3	3.33333e-01	1.83333
4	2.50000e-01	2.08333
5	2.00000e-01	2.28333
6	1.66667e-01	2.45000
7	1.42857e-01	2.59290
8	1.25000e-01	2.71790
9	1.11111e-01	2.82900
10	1.00000e-01	2.92900