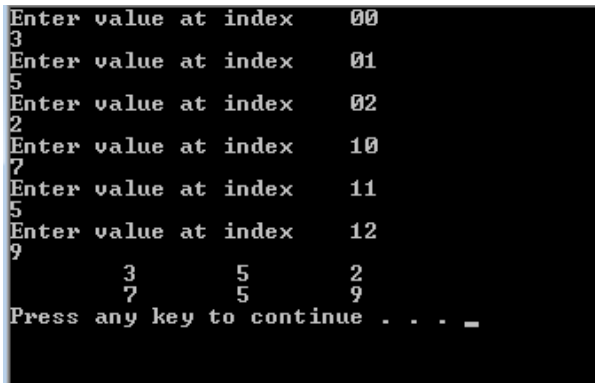
Task 1

Compile sample program to get familiar with syntax of 2D Arrays

Code:

```
#include <stdafx.h>
#include<iostream>
using namespace std;
int _tmain(int argc, _TCHAR* argv[])
{
int A[2][3];
for(int i=0;i<2;i++)
{
for(int j=0;j<3;j++)
{ cout<<"Enter value at index \t"<<i<<j<<endl;
cin>>A[i][j]; }}
for(int w=0;w<2;w++)
{
for(int x=0;x<3;x++)
{ cout<<"\t"<<A[w][x]; }
cout<<endl;
}
system("pause");
return 0;
}
```

Output:



Task 2

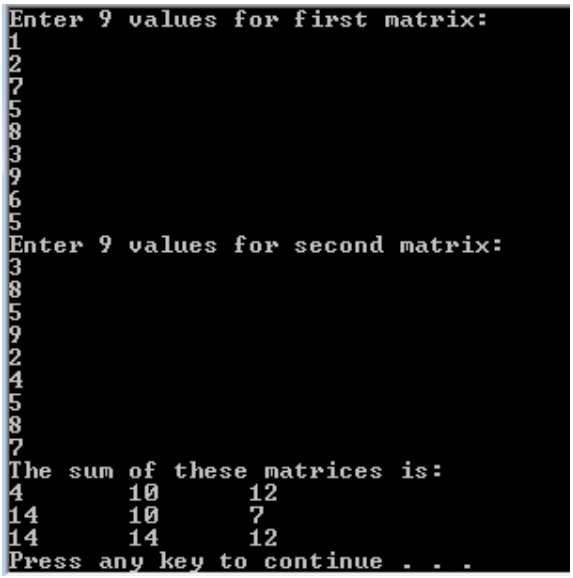
Create program which take two matrices of size 3x3 from the user your program should calculate the sum of both the matrices and display the result on the screen in the form of matrix

Code:

```
#include <stdafx.h>
#include<iostream>
```

```
using namespace std;
int _tmain(int argc, _TCHAR* argv[])
{
int a1[3][3],a2[3][3];
cout<<"Enter 9 values for first matrix: "<<endl;
for(int i=0;i<3;i++){
	for(int j=0;j<3;j++){
		cin>>a1[i][j];}}
cout<<"Enter 9 values for second matrix: "<<endl;
for(int i=0;i<3;i++){
	for(int j=0;j<3;j++){
		cin>>a2[i][j];}}
cout<<"The sum of these matrices is: \n";
for(int i=0;i<3;i++){
	for(int j=0;j<3;j++){
		cout<<a1[i][j]+a2[i][j]<<"\t";
	}
    cout<<endl;}
system("pause");
return 0;}
```

Output:



Task 3:

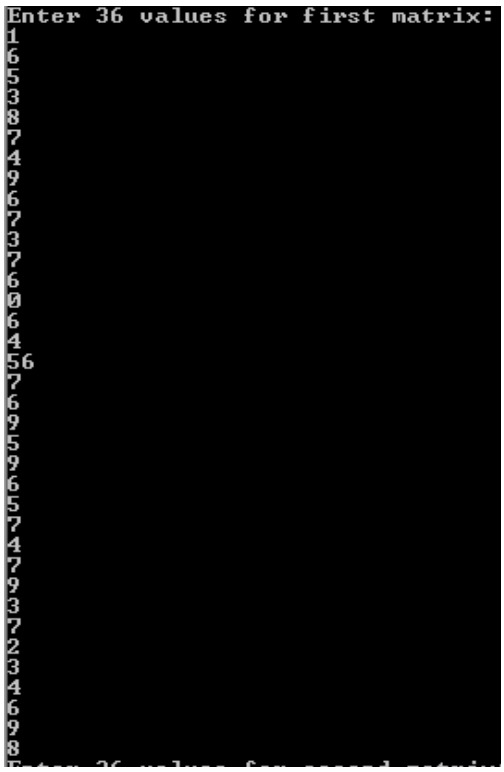
Create program which take two matrices of size 6x6 from the user your program should perform the subtraction of the matrices and display the result on the screen in the form of matrix

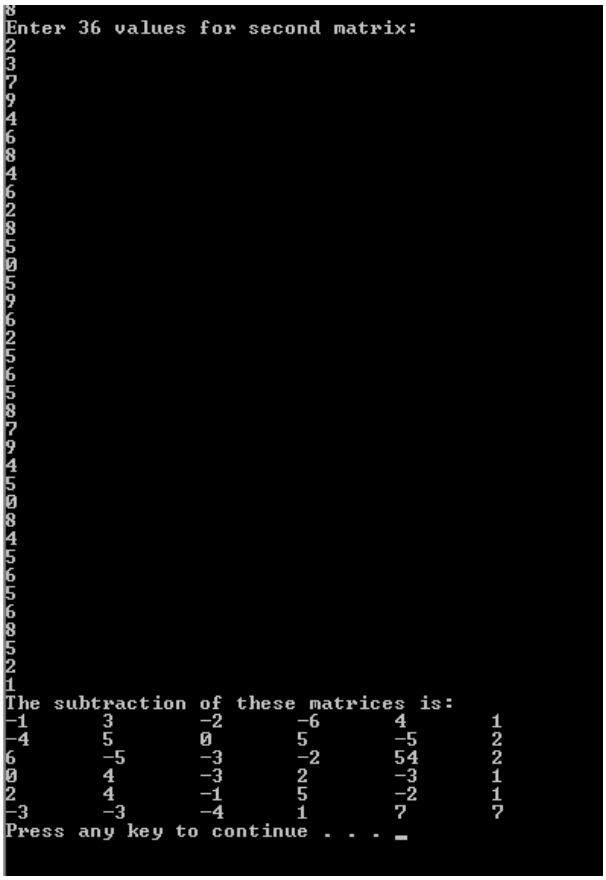
Code:

```
#include <stdafx.h>
#include<iostream>
using namespace std;
int _tmain(int argc, _TCHAR* argv[])
{
```

```
int a1[6][6],a2[6][6];
cout<<"Enter 36 values for first matrix: "<<endl;
for(int i=0;i<6;i++){
	for(int j=0;j<6;j++){
		cin>>a1[i][j];}}
cout<<"Enter 36 values for second matrix: "<<endl;
for(int i=0;i<6;i++){
	for(int j=0;j<6;j++){
		cin>>a2[i][j];}}
cout<<"The subtraction of these matrices is: \n";
for(int i=0;i<6;i++){
	for(int j=0;j<6;j++){
		cout<<a1[i][j]-a2[i][j]<<"\t";
	}
    cout<<endl;}
system("pause");
return 0;}
```

Output:





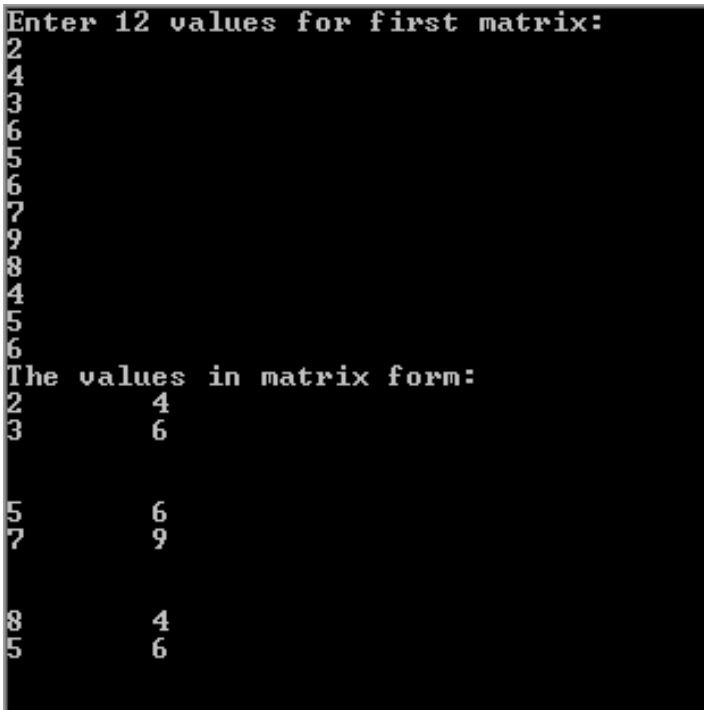
Task 4:

Create program to create a 3D Array having size [3][2][2] take values from user then display the values.

Code:

```
#include<iostream>
using namespace std;
int main()
{
int arr[3][2][2];
cout<<"Enter 12 values for first matrix: "<<endl;
for(int i=0;i<3;i++){
	for(int j=0;j<2;j++){
		for(int k=0;k<2;k++){
			cin>>arr[i][j][k];}}}
cout<<"The values in matrix form: \n";
for(int i=0;i<3;i++){
	for(int j=0;j<2;j++){
		for(int k=0;k<2;k++){
			cout<<arr[i][j][k]<<"\t";}
    cout<<endl;}
	cout<<endl<<endl;}
return 0;}
```

Output:


Enter 12 values for first matrix:
2
4
3
6
5
6
7
9
8
4
5
6
The values in matrix form:
2 4
3 6
5 6
7 9
8 4
5 6