

LAB 08

Summary

Items	Description
Course Title	Programming Fundamentals
Lab Title	Multi dimensional Arrays
Duration	3 Hours
Operating System /Tool/Language	Visual Studio
Objective	To get familiar with multi Dimensional Arrays in C++

Syntax: for 2D Array

```
type name [rows][columns];
```

```
for accessing : name [index] [index]
```

Multidimensional arrays can be described as "arrays of arrays". For example, a bidimensional array can be imagined as a two-dimensional table made of elements, all of them of a same uniform data type.

Sample program #01 :

```
// pf8_1.cpp : Defines the entry point for the console application.  
//
```

```
#include "stdafx.h"  
#include<iostream>  
using namespace std;
```

```
int _tmain(int argc, _TCHAR* argv[])  
{
```

```
int A[2][3];  
// taking input in 2D array from user  
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];      }}

//Display value stored in 2D Array
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;
}

```

LAB TASKS

TASK # 01

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

TASK # 02

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

TASK # 03

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

TASK # 04

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