



2D String Array

ELEC1006: ENGINEERING COMPUTING

2D String Array

- Use a two-dimensional array of characters as an array of strings:

```
const int NAMES = 3, SIZE = 10;  
char students[NAMES][SIZE] =  
    { "Ann", "Bill", "Cindy" };
```

- Each row contains one string
- Can use row subscript to reference the string in a particular row:

```
cout << students[i];
```

Example 1

```
1 // This program displays the number of days in each month.
2 #include <iostream>
3 using namespace std;
4
5 int main()
6 {
7     const int NUM_MONTHS = 12; // The number of months
8     const int STRING_SIZE = 10; // Maximum size of each string
9
10    // Array with the names of the months
11    char months[NUM_MONTHS][STRING_SIZE] =
12        { "January", "February", "March",
13          "April", "May", "June",
14          "July", "August", "September",
15          "October", "November", "December" };
16
17    // Array with the number of days in each month
18    int days[NUM_MONTHS] = {31, 28, 31, 30,
19                            31, 30, 31, 31,
20                            30, 31, 30, 31};
21
22    // Display the months and their numbers of days.
23    for (int count = 0; count < NUM_MONTHS; count++)
24    {
25        cout << months[count] << " has ";
26        cout << days[count] << " days.\n";
27    }
28    return 0;
29 }
```

Example 1 Output

Program Output

```
January has 31 days.  
February has 28 days.  
March has 31 days.  
April has 30 days.  
May has 31 days.  
June has 30 days.  
July has 31 days.  
August has 31 days.  
September has 30 days.  
October has 31 days.  
November has 30 days.  
December has 31 days.
```

More info

- [1] cplusplus.com: Arrays
<https://www.cplusplus.com/doc/tutorial/arrays/>
- [2] learncpp.com: 6.1 – Arrays (Part I)
<https://www.learncpp.com/cpp-tutorial/61-arrays-part-i/>
- [3] learncpp.com: 6.2 – Arrays (Part II)
<https://www.learncpp.com/cpp-tutorial/62-arrays-part-ii/>
- [4] learncpp.com: 6.3 – Arrays and loops
<https://www.learncpp.com/cpp-tutorial/63-arrays-and-loops/>