



Accessing an Array

Learn how to access and update the elements stored in an array.

We'll cover the following



- Array traversal
 - Example program
 - Print all elements of an array using for loop
- Array updation

Array traversal

We can access the elements stored in an array by writing the array name, which is followed by its index in the square brackets.

ArrayName [**Index**] ;

The first element of an array is stored at index **0**, and the last element is stored at index **size-1**. **Array[0]** refers to the first element in an array. **Array[1]** refers to the second element, and so on.


Example program#

Suppose there are 5 elements in an array. The index value of this array will range from **0 to 4**.

```
1 #include <iostream>
2
3 using namespace std;
4
5 int main(){
6
7     int Roll_Number[5] = {100, 101, 102, 103, 104};
8
9     cout << Roll_Number[4];
10 }
```



The code given above accesses the element at an index of four, which is the 5th element of an array.

 If you try to access an index that is greater than the size of an array, the compiler won't generate an error, but may give you an unexpected output.

Print all elements of an array using for loop#

Accessing each and every element in an array and then printing its value is a repetitive task. Let's write a code that prints all the elements of an array using the for loop.

```
1 #include <iostream>
2
3 using namespace std;
4
5 int main() {
6
7     int size = 5;
8     //Initialize array
9     int Roll_Number[] = {100, 101, 102, 103, 104};
10
11     //Print Array
12     for (int i = 0; i < size; i++) {
```



```

13     // Access element at index i
14     cout << Roll_Number[i] << " ";
15 }
16 cout << endl;
17 }

```



Line No. 9: Initializes an array `Roll_Number` that can store 5 values.

Line No. 12: The `for` loop iterates from `i = 0` to `i = size-1`. In the loop body, we are printing the array `Roll_Number` element at index `i`.

Array updation#

We can change the value of the elements in an array by accessing its index and assigning a new value to that array index.

```

1  #include <iostream>
2
3  using namespace std;
4
5  int main() {
6
7      int size = 5;
8      // Initialize array
9      int Roll_Number[size] = {100, 101, 102, 103, 104};
10
11     cout << "Values of array before updation: " << endl;
12     // Print values of array
13     for (int i = 0; i < size; i++) {
14         // Accesss elements of array at index i
15         cout << Roll_Number[i] << " ";
16     }
17     cout << endl;
18     // Update values of array element at index 3 and 4
19     Roll_Number[3] = 22222;

```



```

20 Roll_Number[4] = 33333;
21 cout << "Values of array after updation: " << endl;
22 // Print updated values of array
23 for (int i = 0; i < size; i++) {
24     // Access elements of array at index i
25     cout << Roll_Number[i] << " ";
26 }
27 cout << endl;
28 }

```



Output

0.88s

```

Values of array before updation:
100 101 102 103 104
Values of array after updation:
100 101 102 22222 33333

```

In the code above:

Line No. 9: Initializes array Roll_Number that can store 5 elements

Line No. 13: The for loop prints the elements of an array.

Line No. 19: Updates the value of array Roll_Number at index 3 to 22222

Line No. 20: Updates the value of array Roll_Number at index 4 to 33333

Line No. 23: The for loop prints the updated values of an array.



(/learn)



Q What is the output of the following code?

what is the output of the following code?



```
int main() {  
    int size = 5;  
    int number[size] = {1,2,3,4,5};  
    number[3] = -6;  
    for (int i = 0; i < size; i++) {  
        cout << number[i] << " ";  
    }  
}
```

☐ A) 1 2 3 4 5

Your Answer



☒ B) 1 2 3 -6 5

Explanation

In the code above, we have updated the value of an array element at index 3 . Then, we have used for loop to print the updated array.

☐ C) Error

☐ D)

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Arrays and Functions

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