

Declaring Array & Vector

- **C-Style Arrays**

```
int a[10]; // Declares an array of 10 integers
```

- **std::array**

```
#include <array>
```

```
std::array<int, 10> a; // Declares an array of 10 integers using std::array
```

- **std::vector**

```
#include <vector>
```

```
std::vector<int> a; // Declares a dynamic array of integers using std::vector
```

Examples

- **C-Style Arrays Example**

```
int main() {  
    int a[5] = {1, 2, 3, 4, 5}; // Initialize the array  
    for(int i = 0; i < 5; ++i) {  
        std::cout << a[i] << " ";  
    }  
    return 0;  
}
```

- **std::array Example**

```
#include <iostream>  
#include <array>  
int main() {  
    std::array<int, 5> a = {1, 2, 3, 4, 5}; // Initialize the array  
    for(const auto& elem : a) {  
        std::cout << elem << " ";  
    }  
    return 0;  
}
```

- **std::vector Example**

```
#include <iostream>  
#include <vector>  
int main() {  
    std::vector<int> a = {1, 2, 3, 4, 5}; // Initialize the vector  
    for(const auto& elem : a) {  
        std::cout << elem << " ";  
    }  
    return 0;  
}
```