

The range-based for loop

- **Syntax:**

```
for (Declaration: Sequence) { . . .
```

- **Sequence:** initializer list, C array, C++ string, or STL container

```
std::vector<int> vec{1, 2, 3, 4, 5};  
for (auto v: vec) std::cout << v << " ";           // 1 2 3 4 5
```

- **You must take the arguments by reference if you want to modify them.**

```
int array[5]={1, 2, 3, 4, 5};  
for (auto& a: array) a *=2;  
for (auto a: array) std::cout << a << " ";           // 2 4 6 8 10
```