

C++ Programming

Range-based for loop

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Auto

```
9
10 void what_is_auto()
11 {
12     int x1 = 10;
13     auto x2 = 10;           // c++ deduces int
14     auto x3 = 10.0;         // double
15     auto x4 = "mostafa";    // string
16     // There are more details. This is good for now
17     // Auto: No conversions / clean code
18 }
```

C++11 iterating style

```
10 int main() {  
11     int arr[] { 1, 2, 3 };  
12  
13     for (auto val : arr)  
14         cout << val << " ";    // 1 2 3  
15     cout << "\n";  
16  
17     deque<int> q { 1, 2, 3, 4, 5 };  
18  
19     for (const auto &val : q)  
20         cout << val << " ";    // 1 2 3 4 5  
21     cout << "\n";  
22  
23     for (auto val : { 1, 2, 3, 4, 5 })  
24         cout << val << " ";    // 1 2 3 4 5  
25     cout << "\n";  
26  
27     for (auto val : "hello")  
28         cout << val;           // hello  
29     cout << "\n";  
30 }
```

“Acquire knowledge and impart it to the people.”

“Seek knowledge from the Cradle to the Grave.”