

# C++ Programming

## STL Pair

**Mostafa S. Ibrahim**

*Teaching, Training and Coaching since more than a decade!*

*Artificial Intelligence & Computer Vision Researcher*

*PhD from Simon Fraser University - Canada*

*Bachelor / Msc from Cairo University - Egypt*

*Ex-(Software Engineer / ICPC World Finalist)*



# Pair

```
10
11 int main() {
12     pair<int, string> p = make_pair(10, "mostafa");
13     cout<<p.first<<" "<<p.second<<"\n";
14
15     stack< pair<int, string> > s;
16     s.push(p);
17     s.push(p);
18
19     pair<int, pair<int, string> > my_p = make_pair(10, make_pair(20, "ali"));
20     my_p = make_pair(10, p);
21
22     return 0;
23 }
```

# Pair: Comparison

- Let's say we have `pair<int, pair<string, int> >`
  - `P1 = (10, (mostafa, 35))`
  - `P2 = (7, (ali, 15))`
  - `P3 = (10, (ziad, 17))`
  - `P4 = (10, (mostafa, 20))`
- Comparing pair order on first element, then on second element

*“Acquire knowledge and impart it to the people.”*

*“Seek knowledge from the Cradle to the Grave.”*