

## Lab Session: STL containers

## Bruno Guindani

Politecnico di Milano bruno.guindani@polimi.it



## The Problem

- Write a program that manages the list of players of an arcade video-game and their scores. Create a function that can find and return a player with a given username
- As a starting point, you are provided with the implementation based on vector to collect players. Also a binary\_search function has been implemented
- In the provided example, the search is profiled in case the player is in the vector or he/she is not
- Implement your solution once by using a set (ordered) to collect players, and another time using map (unordered)

## The Questions

Add to search.cc:

```
bool set_search (
    const std::set<Arcade::Player> & player_set,
    unsigned username );
bool map_search (
    const std::unordered_map<unsigned, Arcade::Player> &
    player_map,
    unsigned username);
```

 Implement stl\_binary\_search() for the initial vector-based solution, by relying on the STL binary\_search which is:

```
bool binary_search(
    player_vec_type::const_iterator first,
    player_vec_type::const_iterator last,
    const Arcade::Player & value);
```

Complete the main