

Map Exercises

Map

- What is the main difference between a set and a map?
- What is the function of the "key" and the "value" in a map?

Adding and removing elements

- Which member function is called to add elements to an `std::map`?
- What happens if the element we want to add is already present in the map?
- How can we find out whether this has happened?

Adding and Removing Elements

- Write a simple program that populates an `std::map`
- Add an element to the map with the same key as an element which is already in the map
- Does this succeed? If not, why not?
- Erase the original element with this key and try again
- Does this succeed? If not, why not?

Finding Elements

- Write a simple program that populates an `std::map` object
- Use the `find()` and `count()` member functions to check whether an element with a given key is in the map
- Make sure your program works correctly if the element is not present

std::map and Algorithms

- What type of algorithms from the Standard Library can be used with a map?
- Why can we not use other algorithms?

std::map Pros and Cons

- Give some examples of programming problems where std::map could be useful