

# Searching Multimaps Exercises

# Lower and Upper Bound

- Describe the `lower_bound()` and `upper_bound()` member functions of `std::multimap` and `std::multiset`
- What are the results of calling `upper_bound()` and `lower_bound()` with a key that is not in the container?
- Write a simple program to demonstrate the use of `lower_bound()` and `upper_bound()`

# Lower and Upper Bound Example

- Write a program which
  - Calls `lower_bound()` and `upper_bound()`
  - Uses a loop to find an element which has a given key and value
  - Displays the element's key and value

# equal\_range()

- Describe the `equal_range()` member function
  - `equal_range` returns a pair of iterators
  - The first iterator in the pair is the result of calling `lower_bound()` and the second iterator is the result of calling `upper_bound()`
- Write a program which
  - Uses `equal_range()` to find all the elements which have a given key and value
  - Calls an algorithm function to store these elements in a vector
  - Displays the contents of the vector