

Read-only Algorithms

Solutions

- Write a program which uses a loop to display the number of 1's in the vector {3, 1, 4, 1, 5, 9}
- Write a program which performs the same task without calling a standard algorithm function
- Alter your programs to display the number of 3's in the vector

- What is the difference between `count()` and `count_if()`?
 - `count` returns the total number of elements in the container
 - `count_if` returns the number of elements for which some condition is true
- What arguments does `count_if()` take?
 - Iterator range, plus a predicate function

- Write a program which uses a loop to display the number of elements in the vector {3, 1, 4, 1, 5, 9} which are odd
- Write a program which performs the same task by calling a standard algorithm function
- Alter your programs to display elements whose value is greater than or equal to 3

- What is the difference between `find()` and `find_if()`?
 - `find` returns an iterator to the first element with a given value
 - `find_if` returns an iterator to the first element for which some condition is true
- What arguments does `find_if()` take?
 - Iterator range, plus a predicate function

- Write a program which uses a loop to display the first element in the vector { "a", "collection", "of", "words", "with", "varying", "lengths" } which contains more than 5 characters
- Write a program which performs the same task by calling a standard algorithm function

- What does `equal()` do?
 - `equal` compares two containers. If all the corresponding elements are equal, it returns `true`, otherwise `false`
- What arguments does `equal()` take?
 - Two iterator ranges, one for each container (C++14)
 - An iterator range for the first container and the “start” iterator for the second container

- Write a program that uses a loop to compare the vectors {3, 1, 4, 1, 5, 9} and {3, 1, 4, 1, 5, 9}
- Write a program which performs the same task by calling a standard algorithm function
- What are the results of comparing the vectors {3, 1, 4, 1, 5, 9, 2} and {3, 1, 4, 1, 5} ?