

# Write Algorithms Solutions

- What do `replace()` and `replace_if()` do?
  - `replace` changes all elements with a given value to have another value
  - `replace_if` changes all elements for which a predicate is true to have another value
- What arguments do they take?
  - `replace` takes an iterator range and the old and new values
  - `replace_if` takes an iterator range, the predicate function and the new value

- Write a simple program that uses these two functions
- Write the equivalent code without using `replace()` and `replace_if()`

- What does `for_each()` do?
  - `for_each` calls a given function on every element in the iterator range
- What arguments does `for_each()` take?
  - The iterator range and the function to call
- Write a simple program that uses this function
- Write the equivalent code without using `for_each()`

- When is it best to use a `for_each()` loop?
  - When we want to iterate over a sub-range of a container
  - We want to process each element once, and once only
  - When we want to be consistent with surrounding code that uses algorithm calls
- When is it best to use a range for loop?
  - When we want to iterate over an entire container
  - When we want to use `break`, `continue` or `return`