

# Scala SCS 2204 - Functional Programming

## Scala Tutorial – 10

1. Write a Scala function called `calculateAverage` that takes a list of temperatures as input and uses the `map` function to convert each temperature to Fahrenheit, and then uses the `reduce` function to calculate the average Fahrenheit temperature. The formula to convert Celsius to Fahrenheit is:  $(C * 9/5) + 32$ .

Example:

**Input:** [0, 10, 20, 30]

**Output:** Average Fahrenheit temperature: 68.0

Implement the `calculateAverage` function using the `map` and `reduce` methods.

2. Write a Scala function called `countLetterOccurrences` that takes a list of words as input and uses the `map` function to transform the words into their respective lengths (number of letters), and then uses the `reduce` function to calculate the total count of letter occurrences in all the words combined.

Example:

**Input:** ["apple", "banana", "cherry", "date"]

**Output:** Total count of letter occurrences: 24

Implement the `countLetterOccurrences` function using the `map` and `reduce` methods.