Topic 7 - Tuples, Placeholder Syntax, Closures, Tail Recursion Optimization

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1 Tuples

Write a function that takes an array of strings and returns the shortest string and its index in the array.

Call the function and store the returned values in separate variables.

Note: You may assume that the array contains at least one string.

2 Placeholder syntax, Closures

Write a function literal that adds the absolute value of numbers in `List(-7, 14, 4, 12, -18, -10)` with an absolute value less than 10 to a captured variable.

3 Tail Recursion Optimization

Write a recursive function for calculating the factorial of a non-negative integer that utilizes tail recursion optimization.

Hint: You can verify this by throwing an exception when called with 0.

Hint: You will need two functions.