

Day 4 Assignment

1. Write a Python program that finds the longest word in a list of strings. Use `map()` to calculate the length of each word, and `filter()` to get the word with the maximum length.

- `words = ["python", "functional", "programming", "is", "powerful"]`

2. Write a Python program to double all numbers in a given list of integers. Use Python `map`, `lambda` function.

- `list1 = [1,2,3,4,5,6,7,8,9]`

3. Write a Python program to convert a given list of integers and a tuple of integers into a list of strings. Use Python `map`.

4. Write a Python program that calculates the sum of the squares of all odd numbers in a list of integers using `map()` and `filter()`.

- `numbers = [1, 2, 3, 4, 5, 6, 7, 8, 9]`

5. Write a Python program that adds two lists element-wise using the `map()` function.

- **Input:**

- `list1 = [1, 2, 3, 4, 5]`

- `list2 = [5, 4, 3, 2, 1]`

- **Expected Output:**

- `[6, 6, 6, 6, 6]`

6. Write a Python program that filters out all strings that have more than 5 characters from a list of strings using the `filter()` function.

- **Input:**

- `words = ['Red', 'Green', 'Yellow', 'Purple', 'Orange']`

- **Output:**

- `['Yellow', 'Purple', 'Orange']`

7. Write a Python program that filters out numbers greater than 10 from a list of numbers using the `filter()` function.

- **Input:**

- `numbers = [5, 12, 3, 18, 9, 20, 22, 21]`

- **Output:**

- `[12, 18, 20, 22, 21]`