

# Homework 10

## 1

Write a Python function to multiply all the numbers in a list.

- function name: list\_mul
- function input parameter: a python list
- function output: a number representing the result by multiplying each of the items in the list
- Sample List : (8, 2, 3, -1, 7)
- Expected Output : -336

## 2

Write a Python function to check whether a number is in a given range of 18 to 65.

- function name: is\_in\_range
- function input parameter: a number
- function output: True if the number is between 18 and 65 inclusively.
- Sample input: 17, sample output: False
- Sample input: 25, sample output: True

## 3

Write a Python function that accepts a string and calculate the number of upper case letters and lower case letters

- function name: string\_count
- function input parameter: a string
- function output: number of upper case letters, number of lower case letters, ignore space in the string
- Sample input: "Python Is Very Cool"
- Sample output: 4, 12

## 4

Write a Python program to return a list with only the even numbers from a given list.

- function name: get\_event\_numbers
- function input parameter: a list of positive integers
- function output: a list with only the even numbers in the input list
- Sample input: [11, 15, 24, 80, 8, 12, 17, 6]
- Sample output: [24, 80, 8, 12, 6]

## 5

Write a Python function to merge two Python dictionaries.

- function name: dict\_merge
- function input parameter: two dictionaries
- function output: a new dictionary that contains all of the items (keys and values) from both input dictionaries.
- Sample input:
- dict1: {'English':'A', 'Chinese':'B+', 'US History':'A-'}
- dict2: {'Physics':'A', 'Biology':'B', 'PE':'A+'}
- Sample output:

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{'English':'A', 'Chinese':'B+', 'US History':'A-', 'Physics':'A', 'Biology':'B', 'PE':'A+'}
```

Hint: please go through our previous class presentations for more information about dictionary

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