Advance Python Programming & Application

Functions programs

Practices

- **Task:** Write a Python function called `greet` that prints "Hello, World!" when called.

- **Task:** Write a Python function called `add_numbers` that takes two integers as parameters and returns their sum.

- **Task:** Write a Python function called `power` that takes two parameters: a number and an exponent (with a default value of 2). The function should return the result of raising the number to the given exponent.

- **Task:** Write a Python function called `average` that takes any number of arguments and returns the average of those numbers.

- **Task:** Write a Python function called `create_person` that takes the parameters `name`, `age`, and `city` as keyword arguments and returns a dictionary representing a person with those attributes.

- **Task**: Write a Python function called `factorial` that calculates the factorial of a given non-negative integer using recursion.

- **Task:** Write a Python function called `sum_list` that takes a list of integers as a parameter and returns the sum of all the elements in the list.

- **Task:** Write a Python function called `min_max` that takes a list of integers as a parameter and returns the minimum and maximum values in the list as a tuple.

- **Task:** Write a Python function called `square_list` that takes a list of numbers as a parameter and returns a new list where each element is the square of the corresponding element in the input list, using a lambda expression.

- **Task:** Write a Python function named `calculate_area` that takes the radius of a circle as input and returns the area of the circle.

- **Task:** Define a function called `is_even` that takes an integer as input and returns `True` if the number is even, otherwise `False`.

- **Task:** Create a function named `count_vowels` that takes a string as input and returns the count of vowels (a, e, i, o, u) in the string.

- **Task:** Implement a function called `reverse_string` that takes a string as input and returns the reverse of the input string.

- **Task:** Define a function called `find_max` that takes a list of numbers as input and returns the maximum value in the list.

- **Task:** Define a function called `merge_lists` that takes two lists as input and returns a new list containing all the elements from both input lists.