

# Assignment for Introduction to Tuples

## Instructions:

- Solve the following exercises related to tuples in Python.
- Write the solution code for each exercise.
- Include comments to explain your code where necessary.
- Test your functions with sample inputs to ensure correctness.
- Write the answers in a Python script file or a Jupyter Notebook.

## Exercises:

### Tuple Length:

Write a Python program to find the length of a tuple.

### Tuple Concatenation:

Create two tuples, `tuple1` containing integers from 1 to 3, and `tuple2` containing integers from 4 to 6. Concatenate both tuples and store the result in a new tuple named `concatenated_tuple`.

### Tuple Repetition:

Create a tuple named `repeated_tuple` containing the elements of `tuple1` repeated three times.

### Tuple Membership Testing:

Write a Python program that checks whether an element exists within a tuple. Prompt the user to enter an integer and check if it exists in the tuple `tuple1` created in Exercise 2. Print the result accordingly.

### Tuple Packing and Unpacking:

Write a Python program that demonstrates tuple packing and unpacking. Create a tuple named `packed_tuple` containing four elements: 'apple', 'banana', 'cherry', and 'date'. Unpack the elements of `packed_tuple` into individual variables `fruit1`, `fruit2`, `fruit3`, and `fruit4`, and print their values.