

Python Programming Assignment

Instructions

Answer all questions.

Submit your Python files along with this assignment.

Total Marks: 50

Time: 1 hour

Part A: Theory Questions (10 points)

1. What is the difference between a list and a tuple in Python?
2. Explain the concept of a Python function with an example.
3. What is the purpose of using 'if __name__ == "__main__"' in Python?

Part B: Coding Questions (30 points)

1. Write a Python program to check whether a number is prime or not.
2. Create a Python function that accepts a list and returns the list sorted in ascending order without using the built-in sort().
3. Write a Python program that reads a file and counts the number of words in it.

Part C: Mini Project (10 points)

Python Programming Assignment

Create a small project using Python that simulates a basic calculator.

The calculator should be able to perform the following operations:

- Addition
- Subtraction
- Multiplication
- Division

The user should be able to input two numbers and choose an operation.

Bonus: Add error handling for invalid input.