

HIT 137

Group Assignment 1 (10% Mark)

Please submit one .py file for each question and ensure the file contains the following information:

Group Name: [Your Group Name]

Group Members:

[Member 1 Name] - [Member 1 ID]

[Member 2 Name] - [Member 2 ID]

[Member 3 Name] - [Member 3 ID]

[Member 4 Name] - [Member 4 ID]

This is a Group Assignment, each group only needs to submit once on the LearnLine.

Please ZIP ALL your .py files and submit the ZIP file.

Question 1

Write a program that asks the user to input a password and checks its strength.

- Weak: Less than 6 characters
- Medium: 6-10 characters and contains at least one digit
- Strong: More than 10 characters and contains at least one digit and at least one uppercase letter

Example:

Input: "hello123"

Output: "Medium password"

Question 2

Write a program that finds all prime numbers up to a given limit (maximum 100), and display:

- the total count of prime numbers found
- the smallest and largest prime number in the range
- the sum of all prime numbers found

Example:

Input: 20

Output:

Prime numbers found: 2 3 5 7 11 13 17 19

Total primes found: 8

Largest prime: 19

Smallest prime: 2

Sum of all primes: 77

Question 3

Write a program that asks the user how many students are in the class (minimum 3, maximum 10). For each student, input their name and score (0-100). Calculate and display:

- Each student's grade (HD: 85-100, D: 75-84, C: 65-74, P: 50-64, F: 0-49).
- Class average
- Highest and lowest score and student name
- Lowest score and student name

Example:

How many students? 3

Student 1 name: Alice

Alice's score: 78

Student 2 name: Bob

Bob's score: 92

Student 3 name: Carol

Carol's score: 45

Results:

Alice: 78 (D)

Bob: 92 (HD)

Carol: 45 (F)

Average score: 71.67

Highest: Bob (92)

Lowest: Carol (45)

Question 4

Create a program that asks the user to input a sentence, and display:

- Count total words
- Find the longest word
- Display the sentence in:
 - All uppercase
 - All lowercase
 - Title case (first letter of each word capitalized)
 - Reversed

Example:

Input: "The quick brown fox"

Output:

Total words: 4

Longest word: Quick (5 letters)

Uppercase: THE QUICK BROWN FOX

Lowercase: the quick brown fox

Title case: The Quick Brown Fox

Reversed: xof nworb kciuq ehT