OFFICIAL ANNOUNCEMENT

Assignment

Dear All,

This is an official assignment for Python learners ✅

🔷 Assignment Rules:

- At **least 80% of the questions must be attempted**
- **All answers** must be **posted on GitHub**
- This is a **1-week task** ⌛

🔷 Python Course – Evaluation & Topper Selection Outlook:

The topper list for this course will be prepared based on the following criteria:

- ⭐ HackerRank Stars
- 📘 Maximum Assignment Questions Attempted
- 🛠️ Project Completion Score

➡️ An average of these three will be calculated.
➡️ The learner with the highest average score will be declared the Course Topper 🏆

🎁 Rewards & Recognition:
A **special surprise** for the **topper**
For all other learners:

- 📜 Certificate
- 🔗 LinkedIn Shoutout

Please take this assignment seriously, as it is important for both your learning and evaluation.
Best of luck to everyone.

Python Programming – Creative Assignment

This assignment is designed to assess logical thinking, problem-solving ability, and practical understanding of Python programming concepts. Students are expected to write clean, readable, and well-documented code.

- **Q1. Mood Analyzer:** Write a program that asks the user how they are feeling (happy, sad, angry, excited). Based on the input, print a customized motivational message. Handle unexpected inputs gracefully.

- **Q2. Smart Calculator:** Build a calculator that supports addition, subtraction, multiplication, division, and modulus using user choice. The program should keep running until the user selects exit.

- **Q3. Password Strength Checker:** Write a program that checks whether a password is strong or weak based on length, use of digits, uppercase letters, lowercase letters, and special characters.

- **Q4. Number Guessing Game:** Generate a random number between 1 and 100. Allow the user multiple attempts to guess the number and provide hints (too high / too low).

- **Q5. Word Frequency Counter:** Take a sentence as input and display the frequency of each word using a dictionary.

- **Q6. Student Report System:** Store marks of multiple students in a dictionary. Calculate average marks, highest scorer, and grade classification.

- **Q7. Palindrome Analyzer**: Check whether a given string is a palindrome. Ignore spaces, punctuation, and letter case.

- **Q8. Mini ATM Simulation:** Simulate basic ATM operations such as balance inquiry, deposit, and withdrawal using functions and loops.

- **Q9. List Intelligence:** Given a list of integers, remove duplicates, sort the list, and display the second largest element without using built-in max().

- **Q10. Weather Data Analyzer:** Given a list of daily temperatures, calculate the average temperature, find the hottest and coldest day, and detect abnormal temperature spikes