**Python Programming Assignment 07** Due: Sep 1

Post: Aug 25

**Assignment Overview**  
This assignment aims to evaluate your grasp of the Python Fundamentals discussed during our onsite sessions. The topics covered include:

|  |  |
| --- | --- |
| * Print statements | * List |
| * Strings | * Tuples |
| * f-Strings | * For Loops |
| * Operators | * Input Handling |

**Submission Guideline**  
Please upload your completed code to a GitHub repository and submit the repository link.

<https://github.com/JahanzaibTayyab/Batch-62/blob/main/python-learning/assignments/Number_Exploration_Tool.md>

**Python Programming Assignment: Number Exploration Tool**

**Instructions**

You are tasked with creating a Python program that serves as an interactive tool for a friend who enjoys exploring numbers. The program should begin by prompting the user to enter their name and then ask them for three of their favorite numbers. After gathering this information, the program should greet the user with a personalized message that includes their name. The three numbers provided by the user should be stored in a list. The program should then check if any of the numbers are even or odd, and store this information in a separate list of tuples, where each tuple contains the number and a string indicating whether it is "even" or "odd". Following this, the program should use a for loop to iterate over the list of numbers, and for each number, it should create a tuple containing the number and its square. These tuples should be printed in a creative and engaging format. Additionally, the program should calculate the sum of the three numbers and print the result, accompanied by an encouraging message. Finally, the program should determine if the sum is a prime number and notify the user with an appropriate message. The goal is to make the tool both enjoyable and informative, allowing the user to explore their favorite numbers in a fun and interactive way, while also introducing some interesting logical checks.

**Example Output**

Enter your name: Alex

Enter your first favorite number: 4

Enter your second favorite number: 6

Enter your third favorite number: 9

Hello, Alex! Let's explore your favorite numbers:

The number 4 is even.

The number 6 is even.

The number 9 is odd.

The number 4 and its square: (4, 16)

The number 6 and its square: (6, 36)

The number 9 and its square: (9, 81)

Amazing! The sum of your favorite numbers is: 19

Wow, 19 is a prime number!

**Python Programming Assignment 07**

Jahanzaib Tayyab

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Aug 25 (Edited Yesterday)

10 points

Due Sep 13

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* Operators
* Lists
* Tuples
* For loops
* Input handling

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