PYTHON GENERAL EXERCISE

Here's a two-part exercise that covers the mentioned Python concepts:

Part 1: Theory Exercise

1. **Python Variables and Data Types:**
   Explain the difference between a variable and a data type in Python. Provide examples of three different data types in Python.

2. **Numbers and Strings:**
   Describe the difference between numbers and strings in Python. Provide an example of a numeric variable and a string variable.

3. **Type Conversion:**
   Explain the concept of type conversion in Python. Provide an example where you convert an integer to a string and vice versa.

4. **Booleans:**
   Define what a boolean is in Python and provide two examples of boolean variables.

Part 2: Practice Exercise

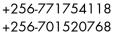1. **Operators Intro and Arithmetics:**
 Write a Python script that prompts the user to input two numbers, then performs the following operations:
 - Addition
 - Subtraction
 - Multiplication
 - Division
 Print the result of each operation.

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2. **Assignment and Comparison:**
 Write a Python script that assigns two different numbers to variables `num1` and `num2`. Then, compare them using the following comparison operators:
 - Equal to
 - Not equal to
 - Greater than
 - Less than
 Print the result of each comparison.

3. **Logical and Identity:**
 Write a Python script that checks the following logical expressions and prints the result:
 - True and True
 - True or False
 - Not True
 Also, demonstrate the identity operator 'is' by comparing two variables with the same value but different identities.

4. **Membership:**
 Write a Python script that checks if a given element exists in a list. Define a list of 5 elements and use the `in` and `not in` operators to check for membership.

Want to Become a Python Expert?

If you're serious about learning Python and getting ready for Data Analysis or Web Development roles using Python, I highly encourage you to enroll in my Complete Python Course. Don't waste your time following disconnected, outdated tutorials.

My Complete Python Course has everything you need in one place.

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- About 10 hours of HD video
- Unlimited access - watch it as many times as you want
- Self-paced learning - take your time if you prefer
- Watch it online or download and watch it offline
- One-on-one training with me 2-4 times a week

Sincerely,

Shafara

Juma Shafara
Data Scientist, Instructor