🐍 Python Basics Tutorial – Lecture 1

This tutorial will help you practice the concepts we learned in class: variables, data types, operators, strings, lists, and control flow. Start with the guided questions, then try the rest on your own.

Part A: Guided Questions

Q1. Printing and Comments

Write a program that prints your name and age on the screen.

```
# Example
print("My name is Alice and I am 20 years old.")
```

👉 Try changing the name and age to yours.

Q2. Variables and Input

Ask the user for their name and greet them.

```
name = input("Enter your name: ")
print("Hello,", name, "Welcome to Python!")
```

👉 Run your code and test it with different names.

Q3. Operators

Write a program that takes two numbers from the user and prints:

- Their sum
- Their difference
- Their product
- Their quotient

(Hint: use `int(input(...))` to convert input to numbers.)

Part B: Practice Questions (Independent)

Q4. Even or Odd

Write a program that asks for a number and prints whether it is **even** or **odd**.

Q5. String Methods

Take a string input from the user and print:

- The string in uppercase
- The string in lowercase
- The first 3 letters of the string

Q6. Largest Number in a List

Create a list of 5 numbers and print the **largest number**.
(Hint: use a loop or the built-in `max()` function.)

Q7. Sum of Numbers

Write a program that sums up all the numbers in a list.
Example: `[1, 2, 3, 4]` → Output: `10`

Q8. Temperature Converter

Convert Celsius to Fahrenheit.

Formula: `F = (C × 9/5) + 32`

Q9. Counting Characters

Ask the user for a word and print how many characters it has.

Q10. Multiplication Table

Write a program that prints the multiplication table for a number (1 to 10).

Example: For 3 →

`\n3 x 1 = 3\n3 x 2 = 6\n...\n`\n\n---\n\n## Part C: Challenge Questions 🚀\n\n### **Q11. Guessing Game**\nWrite a program where the computer picks a random number between 1 and 10, and the user has to keep guessing until they get it right.\n- Import `random`\n- Use a `while` loop\n- Give hints (too high / too low)\n\n---\n\n### **Q12. Simple Calculator**\nWrite a program that acts as a simple calculator:\n- Ask the user to enter two numbers\n- Ask which operation they want (`+`, `-`, `*`, `/`)\n- Print the result\n\n*(Hint: Use `if-elif-else` for choosing operation.)*\n\n---\n\n✅ By completing this tutorial, you will have hands-on experience with all the basic Python concepts from Lecture 1. Try to solve without looking at answers, and test with different inputs!\n\n---\n\nWould you like me to prepare this tutorial in a **print-friendly handout format (PDF/Word)** so you can directly share with students?