Python Basics Practice

Python Course · Module 2 Practice

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Warm-Up — Quick Questions

Without running code, guess the results:

```
1 + 2 * 3
(1 + 2) * 3
10 / 3
10 // 3
10 % 3
```

Then open a Python REPL or script file and **verify** your answers.

Why? Getting a “feel” for operator behavior makes later code easier to read.

Practice 1 — Simple Calculator

Task:

Create `calculator.py` inside `projects/module2_basics/` that:

1. Asks the user for two numbers.
2. Converts them to `float`.
3. Computes and prints:
   - sum
   - difference
   - product
   - quotient (second not zero)

Example interaction:

```
Enter first number: 10
Enter second number: 3
Sum: 13.0
Difference: 7.0
Product: 30.0
Quotient: 3.3333333333
```

Try adding **rounding** with `round(value, 2)`.

Practice 2 — Truth Tables with and / or / not

In `logic_table.py`, without using user input:

1. Create variables `a = True`, `b = False`.
2. Print a simple truth table:

```
a      b      a and b   a or b   not a
True   False  False     True     False
...
```

Use **f-strings** for clean formatting.

Practice 3 — Simple Tip Calculator

`tip.py`:

1. Ask for bill amount (`float`).
2. Ask for desired tip percentage (e.g., 10, 15, 20).
3. Compute tip and total.
4. Print results with 2 decimal places.

Mini Project — Profile Summary

Create `profile.py` that:

1. Asks for:
   - name (`str`)
   - age (`int`)
   - city (`str`)
   - favorite number (`int`)
2. Uses arithmetic to compute:
   - age next year
   - favorite number squared
3. Prints a nicely formatted multi-line summary using an f-string.

Example output:

```
Hello, Ada!
You live in London and next year you will be 37.
Your favorite number 42 squared is 1764.
```
