Python Strings Practice Problems

1. **Receipt with Formatting**

   Write a program that asks for `item_name` (str), `price` (float), and `quantity` (int), then prints exactly: `You bought 3 x Coffee at £2.5 each. Total = £7.5` Do this once with concatenation, once with an f-string.

2. **Age Description**

   Ask the user for their age (use `int()`), then print:

   - `You are 18 years old.` using commas in `print()`
   - `You are 18 years old.` using an f-string. Which version is easier to read and maintain?

3. **Tidy Name & Course**

   Ask for `full_name` and `course_name`.

   - Strip extra spaces from both.
   - Convert `full_name` to title case, `course_name` to uppercase. Print: `Student: Alice Smith (COM4402)` using an f-string.

4. **Multi-line Details with \n**

   Write a program that prints, using ONE `print()` call:

   ```
   Your details:
   Name: <name>
   Age: <age>
   Course: urse>
   ```

Use `\n` and an f-string. Take `name` (str) and `age` (int) from `input()`.

5. **Message Customiser with `.replace()`**

   Given a template: `template = "Hello NAME, welcome to COURSE."` Ask the user for `name` and `course`, strip both, then use `.replace()` to swap `NAME` and `COURSE` with the user's values, and print the final message.

6. **Shouting and Whispering**

   Ask the user to type a sentence.

   - Print the sentence in all uppercase.
   - Print the same sentence in all lowercase.
   - Print the length of the sentence. Use `.upper()`, `.lower()`, and `len()`.

7. **Safe Division with Message**

Ask for two numbers using `float()`. If the second number is zero, print: `"Error: cannot divide by zero"` Otherwise print a nicely formatted message with the result using an f-string, e.g. `"10.0 divided by 2.0 is 5.0"`.

8. **Login Name Normaliser**

   Ask the user for a username.

- Strip spaces.
- Convert to lowercase. Print both the raw and processed username in quotes, e.g.: `Raw: ' Alice ' Processed: 'alice'` Explain in a comment why this is useful for login systems.

9. **Personalised Letter (Basic)**

   Ask for `name`, `course`, and `year` (int). Generate a short 3–4 line letter using a triple-quoted f-string (`"""..."""`) that includes line breaks and the variables. Use at least one string method (e.g. `.title()` or `.upper()`).

10. **Style Comparison Exercise**

    Using `name = "Sam"`, `age = 19`, `course = "COM4402"`: Write three separate prints that all output: `Hello Sam, you are 19 and enrolled in COM4402.`

- One using `+`
- One using commas
- One using an f-string In comments, note one advantage and one disadvantage of each style.