DATA SCIENCE 30 DAYS REVISIONS

PYTHON, MySQL, EXCEL, POWEI BI, PANDAS, MATPLOTLIB, SEABORN, SCIKIT-LEARN

Day 1 Python Basics Exercises --

Topics covered:

- Python syntax and indentation
- Data types: int, float, str, bool
- Variables and type conversion (int(), float(), str())
- Input and output (input(), print() with f-strings)
- Writing comments

1. **User Introduction**
Write a program that:

- Asks the user for their name and age.
- Prints a greeting using an f-string.
- Adds comments explaining each step.

2. **Full Name Formatter**
Write a program that:

- Asks the user for their first and last name.
- Joins them into a full name.
- Prints: "Your full name is <full_name>".

3. **Age in Future**
Write a program that:

- Asks the user for their age.
- Calculates their age in 5, 10, and 20 years.
- Prints the results in one line using an f-string.

4. **Favorite Number Double**
Write a program that:

- Asks the user for their favorite number.
- Converts it to an integer.
- Multiplies it by 2 and prints the result.

5. **Quote Display**
Write a program that:

- Asks the user for their favorite quote and the author's name.
- Prints: "Your favorite quote is "<quote>" by <author>." using an f-string.

6. **Age Difference Calculator**
Write a program that:

- Asks for the ages of two users.
- Calculates and prints the difference between them (can be negative).
- Includes comments explaining each step.

7. **Minutes to Seconds**
Write a program that:

- Asks the user for a number of minutes.
- Converts it to seconds.
- Prints the result using an f-string.

8. **Movie Rating**
Write a program that:

- Asks the user for their favorite movie and rating (out of 10).
- Prints: "You rated <movie> <rating>/10" using an f-string.

9. **Type Conversion Practice**
Write a program that:

- Asks the user for a number (string).
- Prints it as an integer, then as a float, then as a string in a sentence.

10. **User Info Summary**
Write a program that:

- Asks for the user's name, age, and favorite color.
- Prints: "Hello <name>, you are <age> years old and your favorite color is <color>."
- Add proper comments for every step.

Practice Resources

Here are some free resources I've used to practice and strengthen these concepts:

- W3Schools Python Tutorial — Clear explanations and interactive examples
- Python Official Docs — Tutorial — Authoritative and comprehensive
- Programiz Python Basics — Easy to follow with examples
- HackerRank Python Challenges — Hands-on coding exercises
- Codecademy Python 3 (Free Version) — Interactive lessons

Guided Learning Followed --

- **Alex the Analyst** — Python Basics YouTube Tutorial as part of his Data Analysis Free Bootcamp
- **FreeCodeCamp** — Free Python Course titled *Python Programming in 6 hours*