## 🔹 TASK 2: Variables, Data Types & Type Conversion

### Tools:

- Python
- VS Code / Jupyter Notebook
- Alternative: Google Colab

### Hints / Mini Guide:

1. Create a script named datatypes_demo.py.
2. Declare variables of different types: int, float, string, boolean.
3. Print the type of each variable using type().
4. Perform arithmetic operations using numeric variables.
5. Convert string input to integer and float using type casting.
6. Handle invalid input using basic error handling.
7. Concatenate strings and numbers properly.
8. Demonstrate dynamic typing by reassigning variable values.
9. Add clear comments explaining each conversion.

### Deliverables:

- Python script with data type operations

### Final Outcome:

- Intern understands how Python handles data, memory, and dynamic typing.

### Interview Questions Related To Above Task:

- What is dynamic typing?
- Difference between int and float?
- Why is type conversion required?
- What happens if conversion fails?
- How does Python store variables in memory?

📌 **Task Submission Guidelines**

- ⏰ **Time Window:**

Youcan complete the task anytime between 10:00 AM to 10:00 PM on the given day. Submission link closes at 10:00 PM

- 🔍 **Self-Research Allowed:**

Youare free to explore, Google, or refer to tutorials to understand concepts and complete the task effectively.

- 🛠️ **Debug Yourself:**

Tryto resolve all errors by yourself. This helps you learn problem-solving and ensures you don't face the same issues in future tasks.

- 💸 **No Paid Tools:**

Ifthe task involves any paid software/tools, do not purchase anything. Just learn the process or find free alternatives.

- 📁 **GitHub Submission:**

Create a new GitHub repository for each task.
Add everything you used for the task — code, datasets, screenshots (if any), and a short README.md explaining what you did.

📤 **Submit Here:**

After completing the task, paste your GitHub repo link and submit it using the link below:

- 👉 [Submission Link]