# Lab # 24

## OPEN – ENDED LAB

## OBJECTIVE

This open-ended lab is designed to assess students' understanding of all topics covered after the midterm course. Students must apply programming concepts creatively to solve the given tasks using Python.

**Task 1 – Python Data Processing**

**Description:**
Write a Python program that:

1. Takes a **list of names or numbers** from the user.
2. **Sorts** the list in ascending or descending order.
3. Searches for a **specific item** in the list (using simple linear search).
4. Uses **functions** to organize your code.
5. Handles errors like **empty input** or **invalid data** using exception handling.

**Task 2 – Simple Flask Web App**

**Description:**
Create a simple Flask application that:
1. Displays a **home page** with a welcome message.
2. Contains a **form** to collect user input (e.g., name and favorite color).
3. Displays the input back on a **result page**.

**Requirements:**
- Use **templates folder** for HTML pages.
- Use **GET or POST method** in your form.