Web Technologies Lab

Lab 02 **Marks 100**

Instructions
Work on this lab individually.

You are **NOT** allowed to use the internet, or mobile phone.

You are **NOT** allowed to borrow anything from your peer student.

What you have to do
Program the following tasks. The name of your files will be according to the task given in this lab.

Task 1 [100]

You are supposed to build a University Management System. A university has different types of **staff members**:

1. Professors – who have a fixed monthly salary.
2. Lecturers – who are paid based on the number of lectures delivered.
3. Administrators – who have a base salary plus performance-based bonuses.
4. Research Assistants – who receive stipends and research grants.

The university wants a Java program to manage its **payroll system polymorphically**.

REQUIREMENTS:

1. Create an abstract **Staff** class with:
    a. Common attributes like **name, ID, department**.
    b. An abstract method **calculateSalary()**.
    c. An overridden **toString()** method.

2. Create four concrete classes:
    a. **Professor** (Fixed monthly salary)
    b. **Lecturer** (Paid per lecture delivered)
    c. **Administrator** (Base salary + performance bonus)
    d. **ResearchAssistant** (Stipend + research grant)

3. Implement a **driver class** that:
    a. Creates an array of **Staff** references.
    b. Takes input for required parameters.
    c. Uses **instanceof** to determine the object type.
    d. Calls **calculateSalary()** for each staff member.
    e. Prints the staff details and calculated salary.

Instruction:

- Override **toString()** in each class.
- Use **instanceof** for type checking in the loop.
- Implement proper input handling.

☺ ☺ ☺ **BEST OF LUCK** ☺ ☺ ☺