**📅 Date: 13th May**

**🧠 Topic: Inheritance**

**🛠️ Category: Java (OOP)**

**✅ Assignment: Implement Inheritance in Java**

**🎯 Goal:**

Practice object-oriented inheritance by creating a class hierarchy with **method overriding** and **constructor chaining**.

**📝 Task Description**

1. Create a base class Person with fields like name and age, and a method introduce().
2. Create a derived class Student that extends Person. Add an extra field like university. Override the introduce() method.
3. Create another derived class Teacher that also extends Person. Add a field like subject. Override the introduce() method.
4. In a Main class, create objects of Person, Student, and Teacher, and call their introduce() methods to observe **polymorphism** in action.

**🏁 Stretch Goal (Optional):**

* Add an Employee class that also inherits from Person and includes a salary field.
* Implement an interface Payable with a method calculateSalary(), and let Employee implement it.

**🧠 Task Breakdown:**

1. **Create an interface** called Payable
   * Add a method calculateSalary() (no body — just the method signature).
   * This interface defines a **contract** for anything that involves salary calculation.
2. **Create a class Employee** that extends Person
   * Add fields like baseSalary, bonus, or workingDays.
   * Implement the Payable interface.
   * Provide the logic for calculateSalary() using the fields.
3. **In your Main class**, create an Employee object and call calculateSalary()
   * Print the salary details.