

## Session 04

### Flutter

"Every small step brings you closer to your goal 💪"

— Keep learning, keep growing.

#### 1. Task 04:

You are building a Simple School System using Dart only (no UI).

The system must apply null safety, parameter types, OOP, and inheritance together.

---

#### 📌 Requirements

---

##### ① Base Class: Person

Properties

- String name

String? phone → nullable

Constructor

- **name** → required
- **phone** → optional (named parameter)

## Methods

- **void printInfo()**
    - Print name
    - If phone is null, print "No phone number"
- 

## ② Child Class: Student (extends Person)

### Additional Properties

- **int id**
- **List<int>? grades** → nullable list

### Constructor

- **Required:**
  - **name**
  - **id**
- **Optional named:**
  - **Phone**

- **grades**

**Use super correctly.**

---

### Methods

① `double calculateAverage()`

#### Rules:

- If **grades** is null or empty → return 0
- Otherwise → calculate and return the average

**Do not use ! unless necessary**

---

② `Override printInfo()`

#### Must:

- Call parent `printInfo()`
  - Print student id
- Print average grade**
- 

③ **Child Class: Teacher (extends Person)**

#### Properties

- **double salary**

### Constructor

- **Required:**

- **name**
- **salary**

- **Optional:**

- **phone**
- 

### Method

**double calculateSalary( {double bonus = 0} )**

- **Return salary + bonus**
- 

## ④ Service Class: SchoolService

### Method

**void printPersonData(Person person)**

### Rules:

- If person is Student
  - Print "This is a student"
- If person is Teacher
  - Print "This is a teacher"
- Call printInfo() in all cases

👉 Use OOP polymorphism (is keyword)

---

## 5 Main Function (MANDATORY)

Inside main():

1. Create:
  - One Student
    - With grades
    - Without phone
  - One Teacher
    - With phone



## ■ With bonus salary

### 2. Call:

- **calculateAverage()**
  - **calculateSalary(bonus: value)**
  - **printPersonData() for both**
- 

## ! Rules (Strict)

- **No UI**
- **No input from user**
- **Use:**
  - **nullable types (?)**
  - **named parameters**
  - **required parameters**
  - **inheritance**

- **method overriding**
- **Code must compile without warnings**

## **2. Roles:**

- a. Don't use AI Like ChatGpt

## **3. Deadline:**

- a. **3Days #Thursday \_ Jan 27 at 12 PM**

## **4. Submission:**

- a. Upload the task in github and The submission link will be send

## **5. Excuse:**

- a. Add your excuse here [Excuse Form](#)