



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](#)