

# Mobile and Embedded Computing

**Laboratory 2. Flutter Intro**

# Task I - Users

In the 'default' Flutter project, do the following:

1. Create a User class with properties: String name, int? age, and String? email
2. In your main widget, create instances of User with different combinations of null and non-null values
3. Display user information safely, showing "Not provided" for null values Implement a method getDisplayAge() that returns "Age not specified" when age is null, otherwise returns the age as a string

# Task II - Bank

1. Create a BankAccount class with:
  - late String accountNumber (initialized after object creation)
  - required String holderName in constructor
  - double balance with default value of 0.0 String? bankBranch (optional)
2. Create a method initializeAccount(String number) that sets the account number
3. Add validation to ensure account number is set before accessing it
4. Create multiple bank accounts and display their information in a ListView
5. Handle the case where someone tries to access account number before initialization.

# Task III – Library management system

- Abstract LibraryItem class with: String title, String? author, DateTime? publishDate
- Book class extending LibraryItem with: int? pageCount, String? isbn
- Magazine class extending LibraryItem with: int? issueNumber, String? publisher
- Library class managing collections with null-safe operations
- searchByTitle(String? query) - handle null search terms
- getItemsByAuthor(String? author) - find items by author
- addItem(LibraryItem? item) - validate before adding
- getRecentItems(int? count) - return recent items with default count

Implement a borrowing system where items can have User? borrower and DateTime? dueDate.