STTGK3013 MobileWeb Programming

Session 1 2025/2026 (A251)

Lab Assignment 1
Sip Smart - Water IntakeReminder Calculator

PreparedFor:
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README
App Name: Sip Smart

Project GitHub Link
https://github.com/zenwaifu/flutter_projects.git
– SipSmart App

YouTube presentation Links
https://youtu.be/6SSDr4iv0J0

App Description
Sip Smart is a simple calculator app that helps users estimate their daily water intake based on personal factors such as gender, weight, activity duration, activity level, and surrounding temperature. It promotes healthy hydration habits through an easy-to-use interface and instant feedback.

Input → Process → Output

Inputs

Text Field
- Weight (kg) - TextField
- Activity Duration (minutes) - TextField

DropDown
- Gender
- Activity Level
- Temperature

ElevatedButton
- Calculate Water Intake
- Reset

Process

- Base requirement: 35ml x weight (kg)
- Add: 12ml x activity duration (min)
- Adjust based on gender (Male: 1.1, Female: 0.9)
- Adjust based on activity level

- People who are more active sweat more, so they need more water.
  The app multiplies the total water by a factor depending on the selected level:
  - Lightly Active → x 1.2
  - Moderately Active → x 1.4
  - Very Active → x 1.6
  - Extra Active → x 1.8
  - Sedentary → no change

- Adjust based on temperature
  - Hotter weather increases water needs because of fluid loss through sweat. The app multiplies the total water by:
    - Cold → x 1.0
    - Warm → x 1.2
    - Hot → x 1.4
- Convert total water need to liters (rounded to 1 decimal place
  - After all the multipliers are applied, the total amount is still in milliliters (ml).
    The app then divides the total by 1000 to convert it to liters (L) and rounds the result to one decimal place (e.g., 2.657 L → 2.7 L). This makes the result easier to read and display neatly on screen.

Output

- Displays recommended daily water intake in liters
- Error messages for invalid or missing inputs

Widgets Used

- Text – For headings, labels, and output
- TextField – For numeric input (weight, duration)
- TextEditingController – To retrieve and manage the text entered in TextFields
- DropdownButton – For gender, activity level, and temperature selection
- ElevatedButton – For “Calculate” and “Reset” actions
- Row / Column – For organizing layout and aligning widgets
- Container – For grouping content and applying decoration
- Scaffold, AppBar, SnackBar, Icon, Image – For structure, navigation, and UI feedback.

Basic Validation

- Checks if weight and activity duration are numeric and positive
- Ensures all dropdown fields are selected before calculation
- Displays a red SnackBar warning for missing or invalid input

Authorship Note

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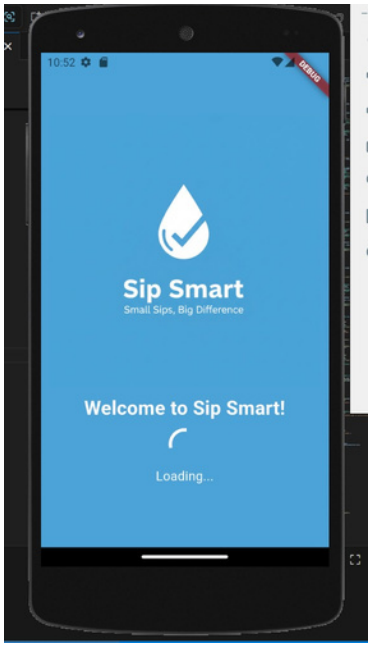
“I confirm thatthisproject represents my own original work in accordance with academic integrity policies.No part of the code was fully generated by AI tools such as ChatGPT or GitHub Copilot.Irelied solely on lecture notes, class tutorials, and official Flutter documentation.Iunderstand that my work may be scrutinized, and if it is found that I did not personallydevelop the code, marks may be deducted, or the submission may be disqualified.”

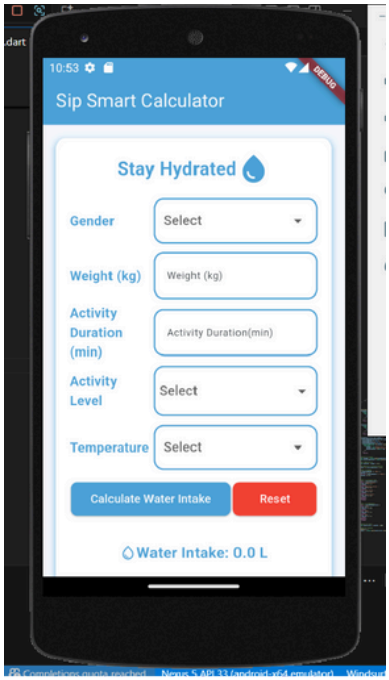
Signature:

Screenshots

1. Splash Page



2. HomePage before Calculation



3. HomePage after Calculation