

Lab 5: Flutter Fundamentals 2 - CampusHub

UI Design

Lab Overview

In this lab, you will continue create a **CampusHub app** that showcases a tutor's profile with comprehensive details. This lab focuses on understanding Flutter widgets, layouts, and styling.

Lab Objectives

By the end of this lab, you will be able to:

- Apply **widget composition and layout** skills to design complex profile screens.
- Use **Rows, Columns, Cards, Containers, Expanded, and Wrap** effectively.
- Design reusable **profile components** (stat cards, chips, progress indicators).
- Practice **styling and responsive layouts** with Flutter's Material widgets.
- Build a **Student Profile screen** that follows the CampusHub design language.
- Understand state in Flutter and how to manage it using `StatefulWidget + setState()`.

Part A: Tutors Profile

In this section you'll develop **CampusHub**, a peer tutoring platform designed for Qatar University students. CampusHub connects students seeking academic help with qualified peer tutors, creating a collaborative learning environment that enhances the educational experience at QU.

The **CampusHub ecosystem** includes:

- **Students** can browse available tutors, book tutoring sessions, and leave reviews
- **Tutors** can showcase their expertise, set availability, and manage their tutoring profiles
- **Clean, professional interface** that reflects Qatar University's academic standards

You'll build **two profile screens** that demonstrate comprehensive information display in beautifully designed interfaces. This lab emphasizes fundamental Flutter concepts including widget composition, layout techniques, and styling principles, while intentionally avoiding navigation and state management to maintain focus on core UI development skills.

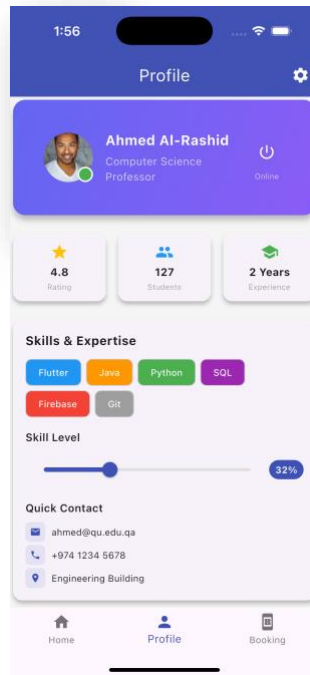


Figure 1 Campus Hub Tutors Profile

1. Create new Flutter project and name it ***campus_hub***
2. You need to build the app section by section then combine them inside the Scaffold body
3. Build the **AppBar**
 - Purple/blue background color (`Color(0xFF6366F1)`)
 - White text and icons
 - Title: "Profile"
 - Settings icon on the right
 - Remove elevation (set to 0)
 - Center the title
4. Profile Header with Gradient
 - **Header Layout (Row):**
 - **Left Side:** Profile avatar with online status indicator
 - CircleAvatar with radius 35
 - Green online dot positioned at bottom-right
 - White border around online indicator
 - **Middle:** Name and title information
 - "Ahmed Al-Rashid" in white, bold, large text
 - "Computer Science Professor" in smaller white text
 - Use Expanded widget for responsive width
 - **Right Side:** Online status column
 - Power icon in white
 - "Online" text below icon
5. Statistics Cards Row
 - Container with horizontal padding (16px)
 - Row with three Expanded cards

- 12px spacing between cards
- 6. Skills & Expertise Section
 - White background card with rounded corners
 - Shadow for elevation
 - Margin and padding (16px and 20px respectively)
- 7. Skill Level Progress
 - "Skill Level" as section title
 - Row containing progress bar and percentage

Part C : Student and Admin Profiles

Build the student and admin profile screens applying learned concepts:

- Create similar layout with student and admin-specific data as shown in figure 2 and 3.
- Apply consistent styling
- Add personal touches and improvements
- Demonstrate understanding through implementation

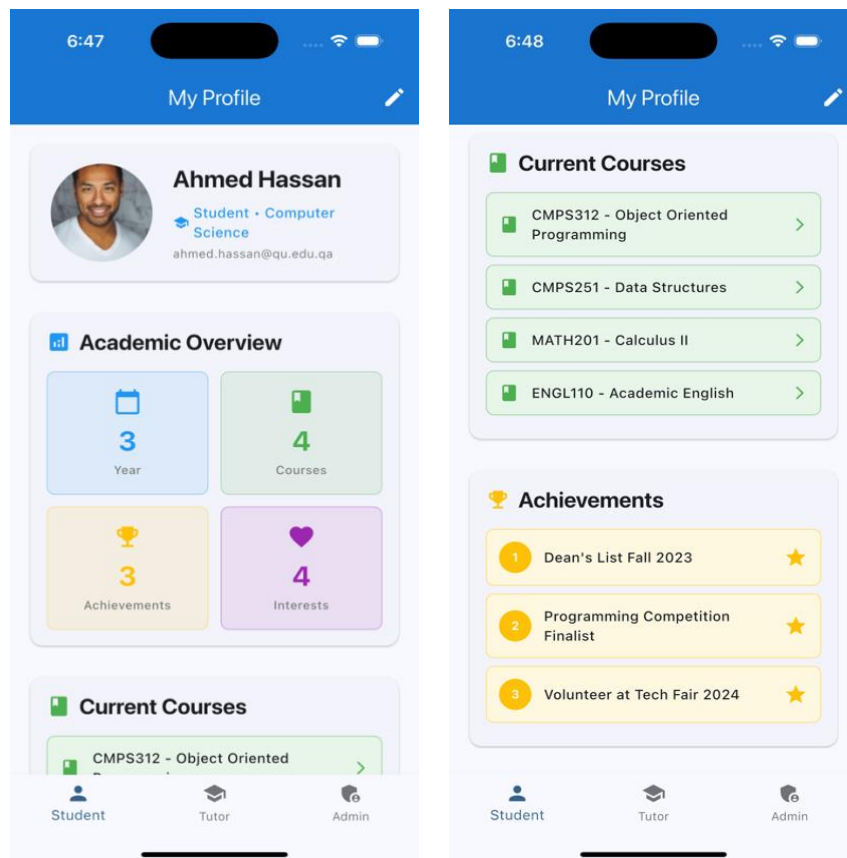


Figure 2 Student Profile

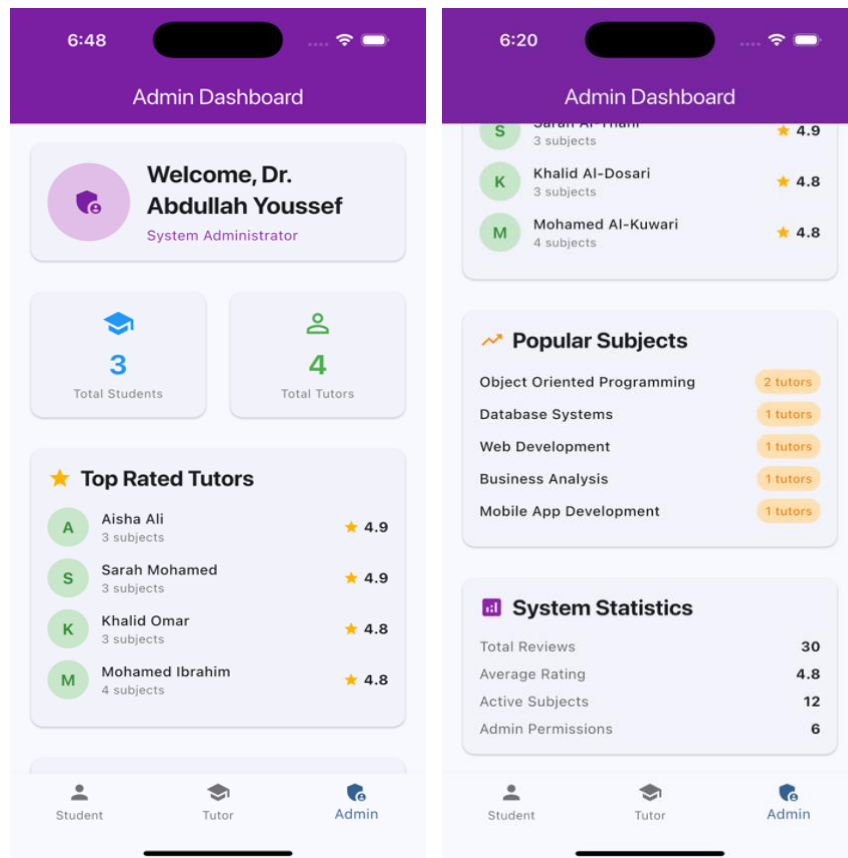


Figure 3 Admin Profile