UV Sense

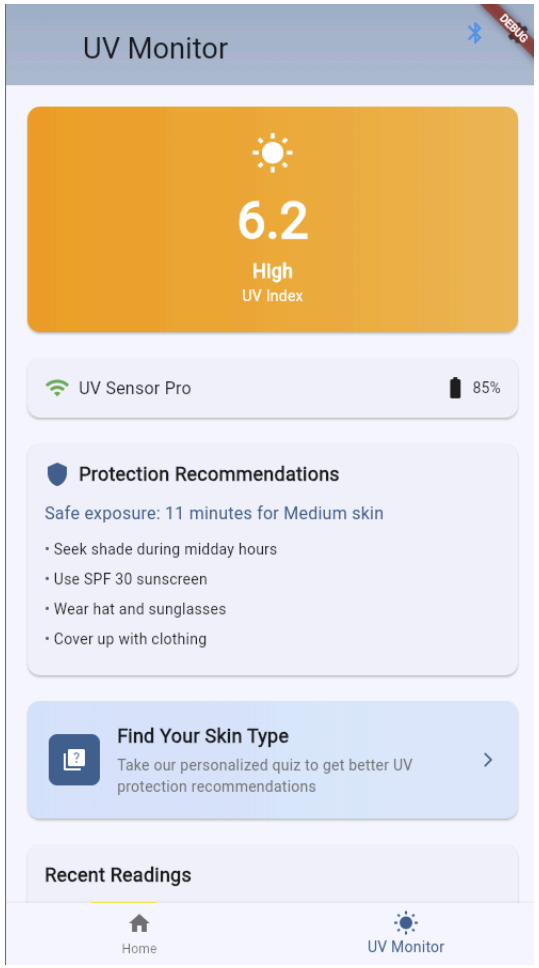
Week 1 Individual Project Report

Personalized UV Monitoring & Protection

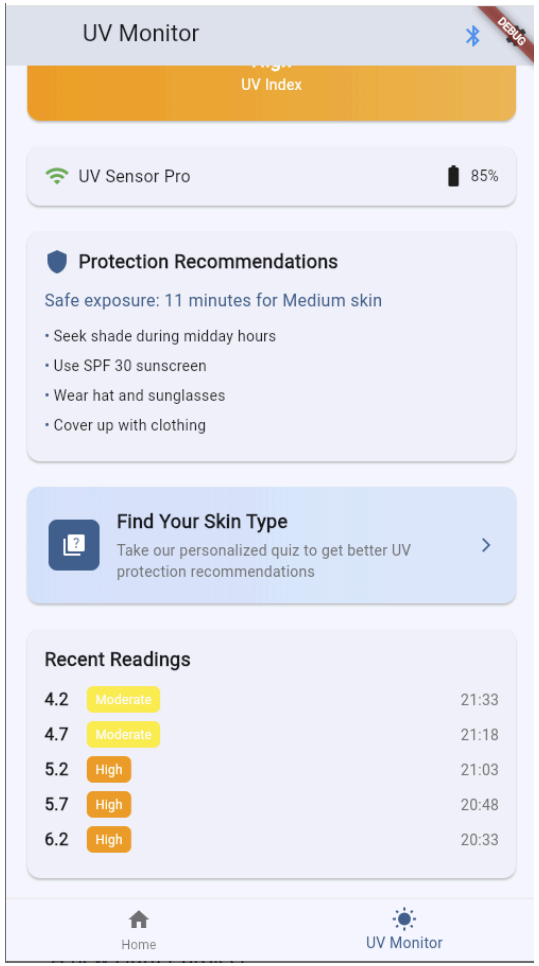
Cross-Platform Development - ASE456

1. **Sprint 1 Demo**
    - Show working features from Sprint 1
    - Screen capture of your application demo

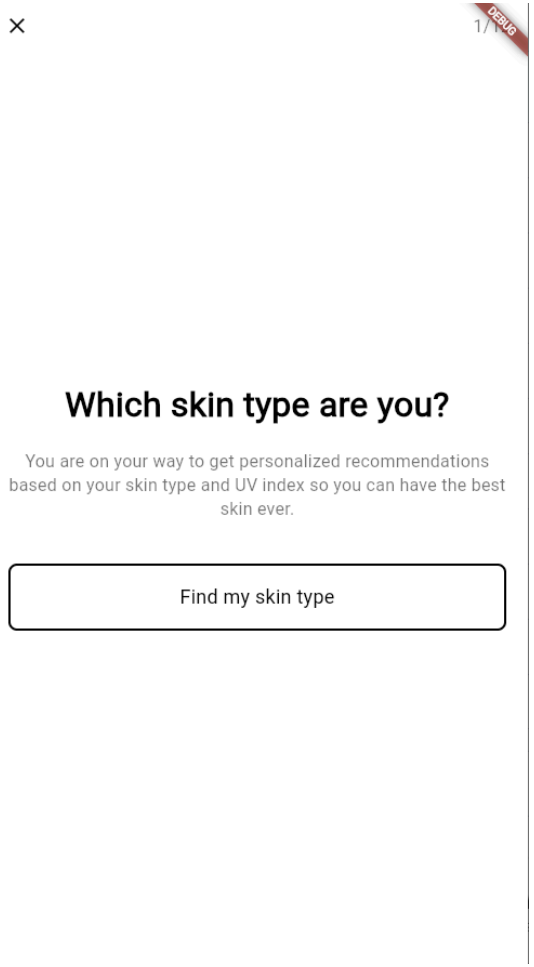
UV Monitor


UV Monitor
DEBUG
6.2
High
UV Index
UV Sensor Pro
85%
Protection Recommendations
Safe exposure: 11 minutes for Medium skin
• Seek shade during midday hours
• Use SPF 30 sunscreen
• Wear hat and sunglasses
• Cover up with clothing
Find Your Skin Type
Take our personalized quiz to get better UV protection recommendations
Recent Readings
Home
UV Monitor

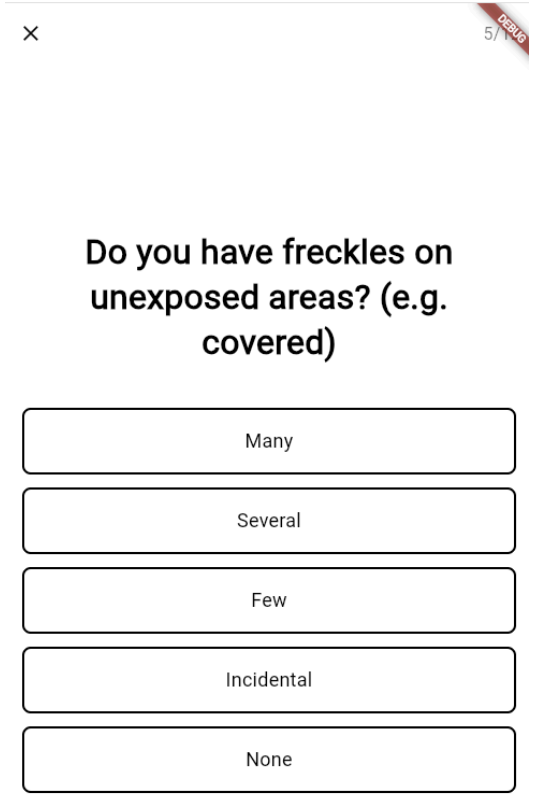
Recent Readings



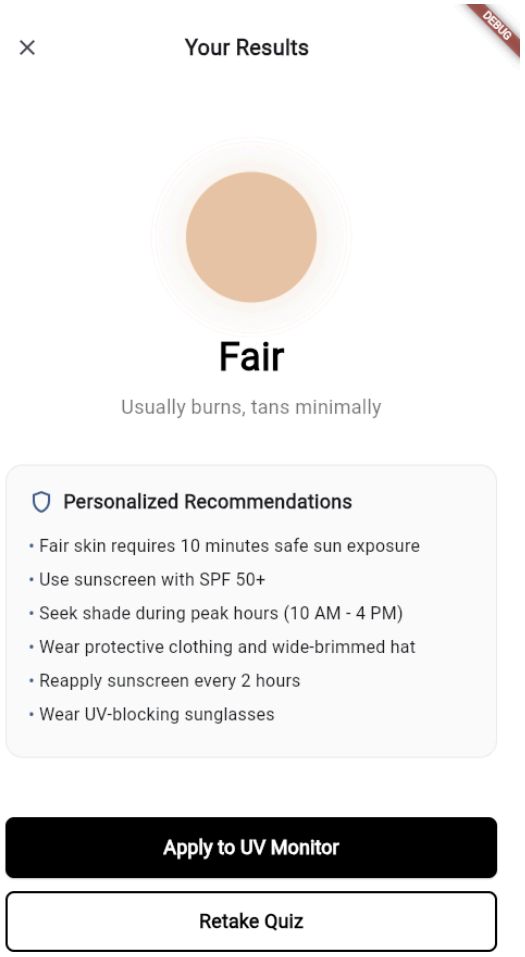
Find your skin type for personilized advice



Questions


5/
DEBUG
Do you have freckles on unexposed areas? (e.g. covered)
Many
Several
Few
Incidental
None

Quiz results



2. **Sprint 1 Retrospective**
    - Project metrics: LoC, # of features, # of requirements, and burndown rate
    - What Went Wrong/Well with Analysis & Improvement Plan

- Total individual Lines of Code (LoC): ***1547***
- Number of individual features completed: ***2***
- Number of individual requirements completed: ***10***
- Individual burndown rate (%): ***50***

What Went Wrong (Individual Level):

- BLE connection was harder than expected
- Hardware integration delayed - only mock device connections implemented
- Database persistence not yet implemented (using global variables temporarily)

What Went Well (Individual Level):

- Good mock up of UV screen with professional UI/UX
- Included Fitzpatrick Skin quiz to get to know users sensitivity to UV
- Successfully implemented complete quiz flow with 11 questions
- Created comprehensive recommendation engine based on skin type and UV index
- Built reusable data models and mock data infrastructure

Analysis & Improvement Plan (Individual Level):

- Research flutter and BLE more - need flutter_blue_plus package
- Implement actual database (SQLite) instead of global state
- Focus on hardware integration for Sprint 2
- Add historical data visualization charts

3. **Sprint 2 Goals**
    - What will you accomplish in Sprint 2
    - Project metrics: # of features and # of requirements
    - Updated timeline and milestones

Individual Sprint 2 Goals:

- Implement actual BLE connectivity to ESP32 UV sensor hardware
- Add local database persistence (SQLite or Hive) for storing quiz results and UV readings
- Implement historical data visualization with charts (fl_chart package)
- Add background service for auto-logging UV readings
- Complete full hardware integration testing

Individual Sprint 2 Metrics:

- Number of individual features planned: **2__**
- Number of individual requirements planned: **7__**

Updated Individual Timeline:

- Week 1: Order/setup ESP32 hardware if not done, implement SQLite database for persistent storage
- Week 2: Implement flutter_blue_plus for BLE connectivity, test ESP32 sensor readings
- Week 3: Complete BLE data transmission, implement fl_chart for historical visualization
- Week 4: Add background service for auto-logging, final integration testing and bug fixes

Key Individual Dates and Milestones:

- Individual presentation: During Sprint 2 (TBD)
- Individual milestones:
  - Database implementation: End of Week 1
  - BLE connectivity working: End of Week 2
  - Charts and visualization: End of Week 3
  - Full integration complete: End of Week 4