VitalTracker

Smart Location Tracking Device

By Lifesaver Engineers

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Overview

Currently the Vital Tracker application aims to provide users with a comprehensive health and location monitoring system. The app is designed to enhance the safety and health monitoring of its users by tracking their vitals, location, and device status.
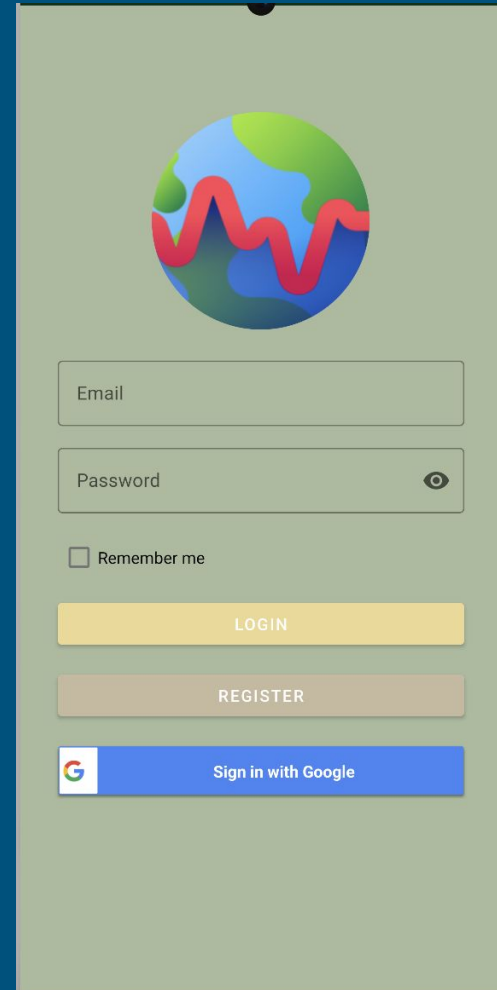
Splash Screen

- Opens on app startup
- Displays name, logo, progress bar
- Runs for 3 seconds
- Transitions to login screen

VitalTracker
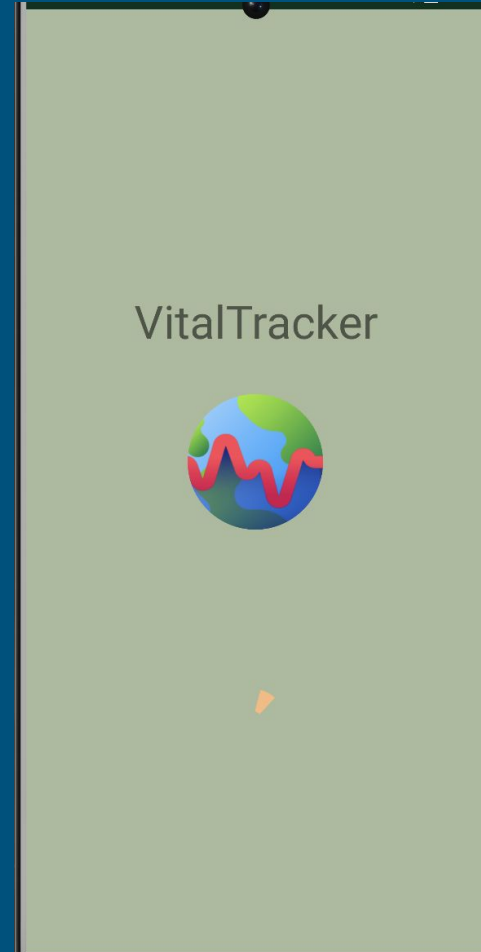
Login Screen

- Immediately after splash screen, user must login to continue
- User can create an account or sign in with google
- User information is stored on the firebase database

Home Screen

- Main app screen
- Shows quick visual screens for devices, current GPS location, vitals, and an optional fall detection feature
- Displays username
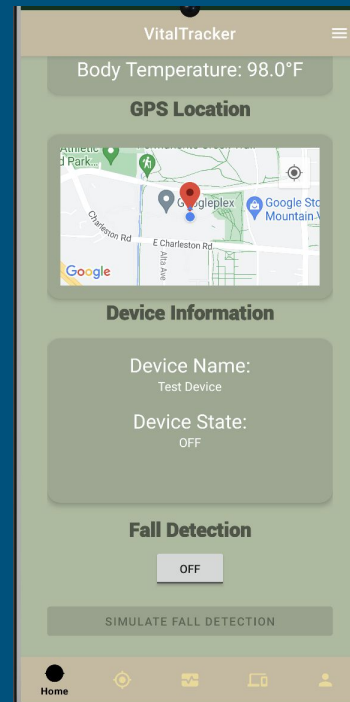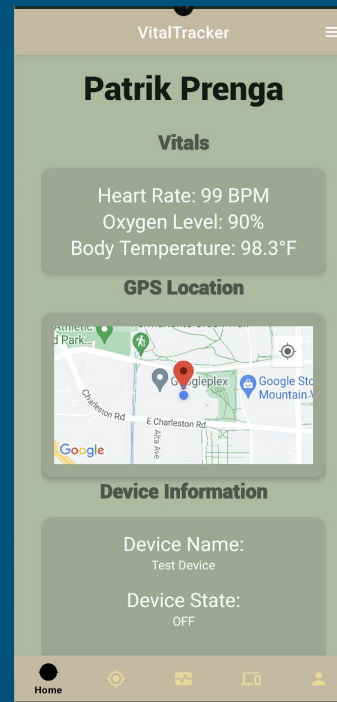- All screens provide access to other screens using bottom navigation
- The 3 containers are clickable and take you to there respective screen for more detail information
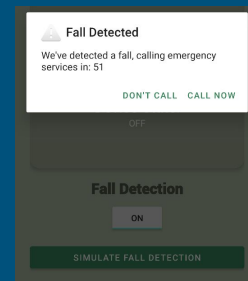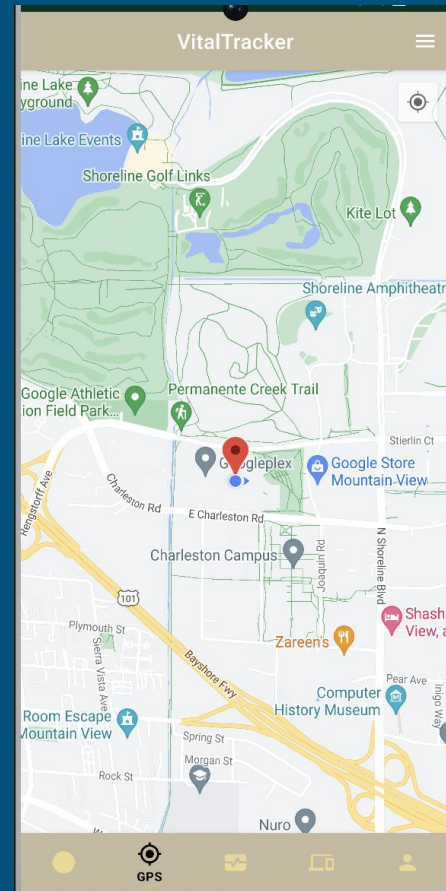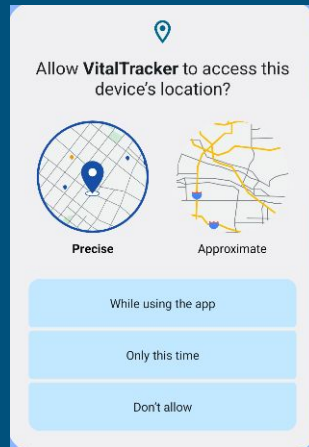
Account Screen

- Shows User Profile Picture and allows user to change it
- Displays account username and password in a hidden field
- Allows user to change their current password
- Equipped with a logout feature for when a user wants to logout
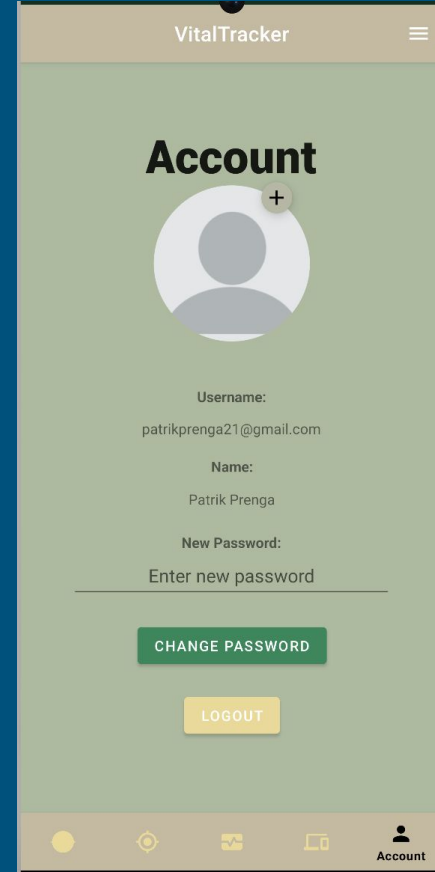
GPS Screen

- Real time location of device
- Live location updates
- Requests runtime permission upon first usage

Vitals Screen

- Continuous reading updates for heart rate, oxygen levels, and body temperature
- Displays notifications for significant changes
- Shows detailed history of vitals allowing the user to see their vitals from a certain day and time
- Can export vitals data from the app into the users email
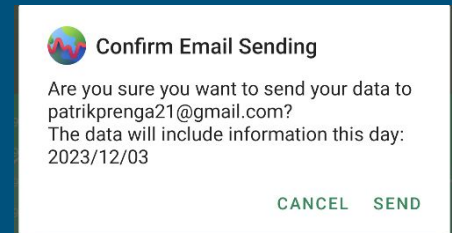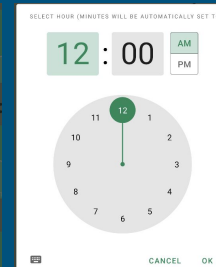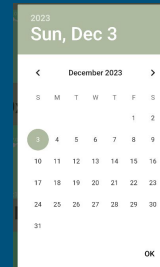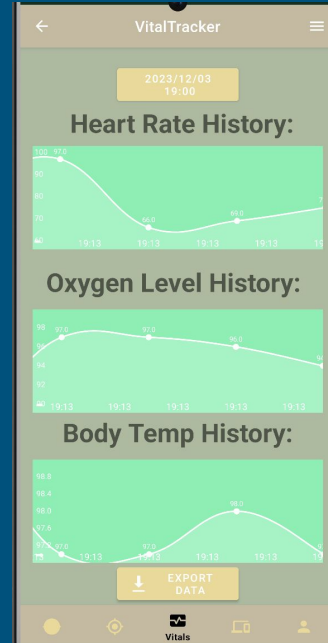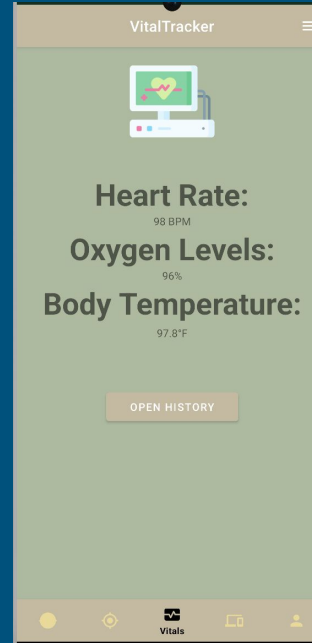
Device Screen

- Displays all devices that are connected to the app
- "Turn On" button to turn the device on
- Displays device battery level
- Displays the sensors in the device with a click of a button and allows user to turn on and off the sensors if they please
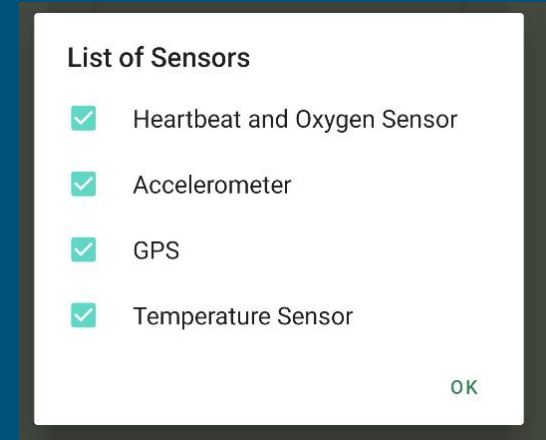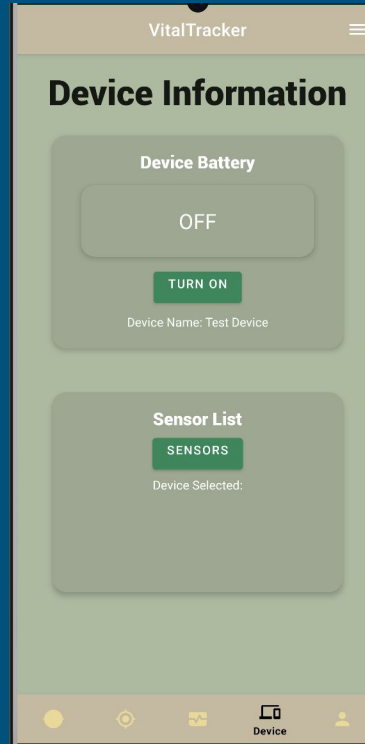
Settings Screen

- Sets and displays GPS home location
- Lock Display Orientation
- Push Notifications Toggle Switch
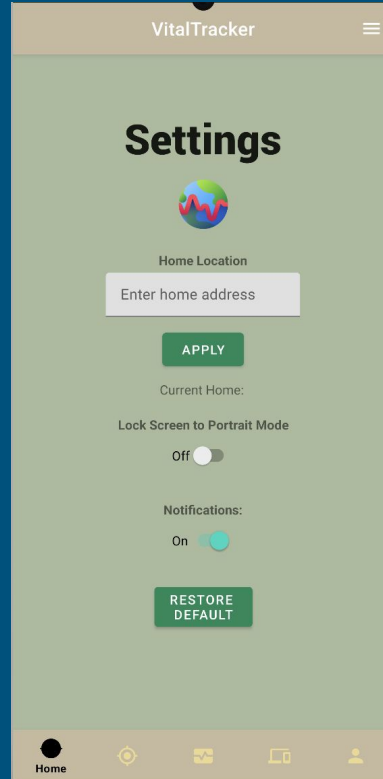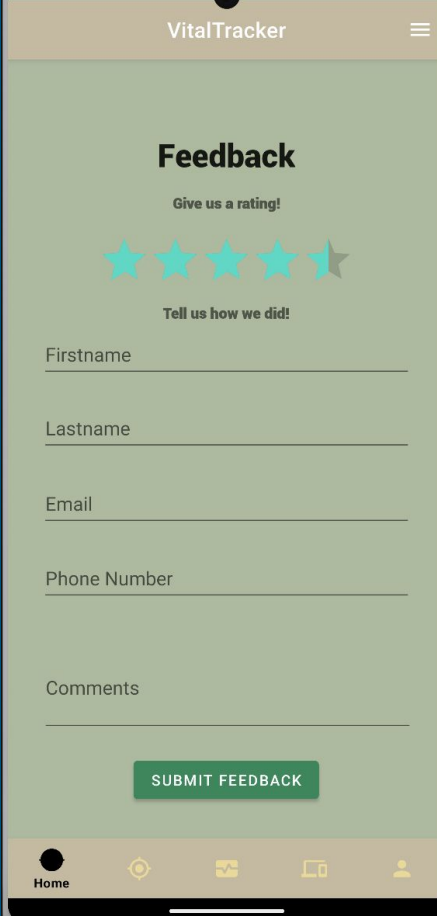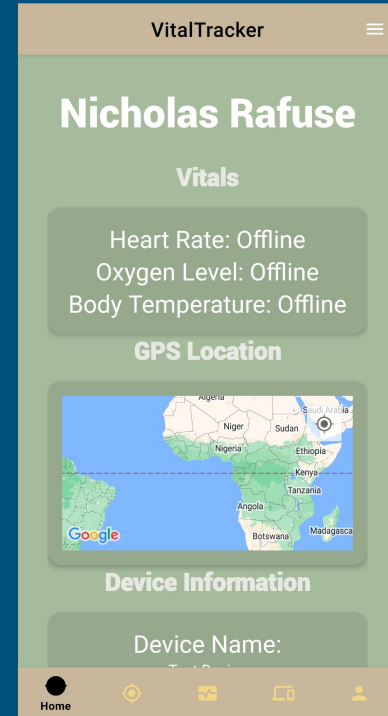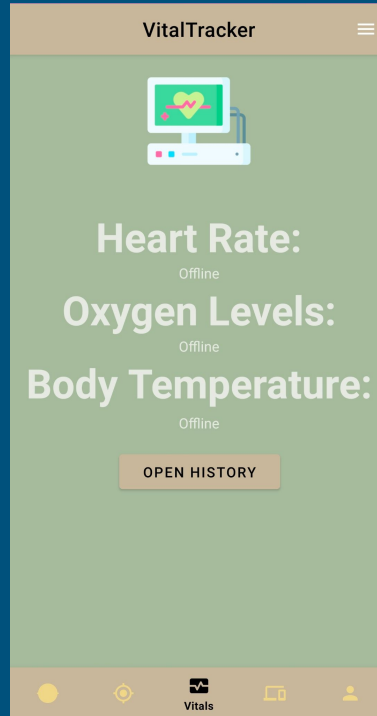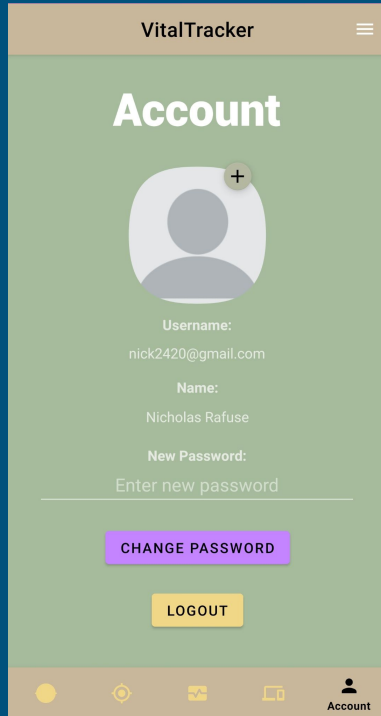- Restore to Default button

Feedback Screen

- Has fields to allow users to enter their personal information in order to give feedback
- Includes a 5 star grading system that can give out .5 stars

Offline mode

Test Cases

Espresso Testing


```
                                                                    ⚠ 2 ∧ ⌄
    @Test
    public void testVitalsContainerClick() {
        onView(withId(R.id.vitalsContainer)).perform(click());
        // Check if the Heart Rate text is displayed
        //  onView(withId(R.id.heartRate)).check(matches(withText("Heart Rate: --")));
    }

    @Test
    public void testGpsContainerClick() {
        onView(withId(R.id.gpsContainer)).perform(click());
        onView(withId(R.id.map)).check(matches(isDisplayed()));
    }

    @Test
    public void testDeviceContainerClick() {
        onView(withId(R.id.deviceContainer)).perform(click());
        // Check if the Device Name text is displayed
        onView(withId(R.id.devicename2)).check(matches(withText("Device Name:")));
    }

    @Test
    public void testSimulateFallButtonClick() {
        onView(withId(R.id.btnSimulateFall)).perform(scrollTo()).perform(click());
    }

    @Test
    public void testDeviceStateText_Off() {
        onView(withId(R.id.devicebattery)).check(matches(withText("OFF")));
    }
```

Run: 🤖 app ✕   🤖 HomeFragmentTest ✕

Status ▬▬▬▬▬▬▬▬▬▬   5 passed   5 tests, 20 s 141 ms

Filter tests: ✓ ⊘   ≡ ≡   ↑ ↓   ⏱ ↙ ↗

Tests	Duration	Pixel_6_Pro_API_33
✓ Test Results	8 s	5/5
✓ HomeFragmentTest	8 s	5/5
✓ testSimulateFallButtonClick	3 s	✓
✓ testDeviceContainerClick	1 s	✓
✓ testVitalsContainerClick	1 s	✓
✓ testGpsContainerClick	1 s	✓
✓ testDeviceStateText_Off	945 ms	✓

Sprint Dashboard

https://trello.com/w/workspace19208120