CSCE 315-501 Team 9

Project 3 – Android App

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Brief report on Test-Driven Development

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Up to this deliverable for the project, we have not been able to integrate test-drive development in an ideal or complete way due to the fact that thus far our project only contains simple UI elements. However, we have tried to follow the spirit of TDD in two ways so far. First, we created a test for the "Records" button, which is designed to fail if pressing the button does not bring up a new activity. This test was unfortunately added in retrospect, after the feature had already been implemented, but the test seems to operate as expected – failing if the new activity code is commented out of the button handling function and succeeding if it is left in. Screenshots of the test failing and succeeding (at a somewhat earlier stage in the development of the testing) are provided below:
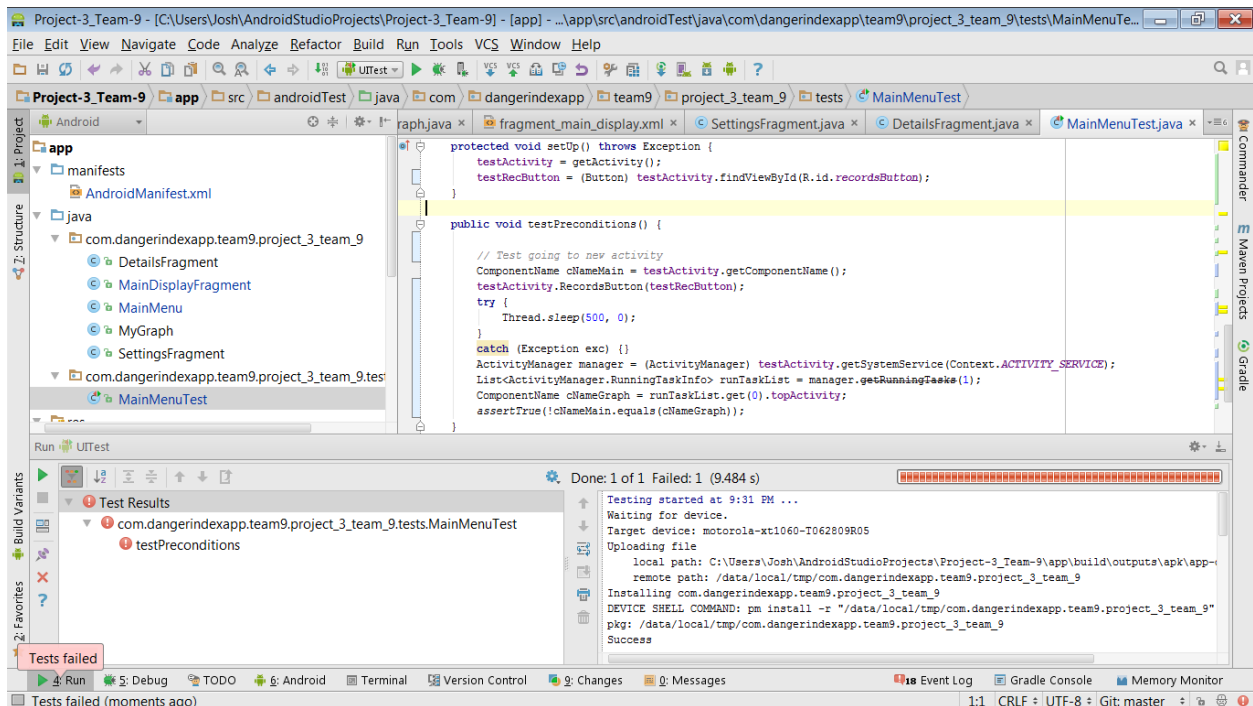


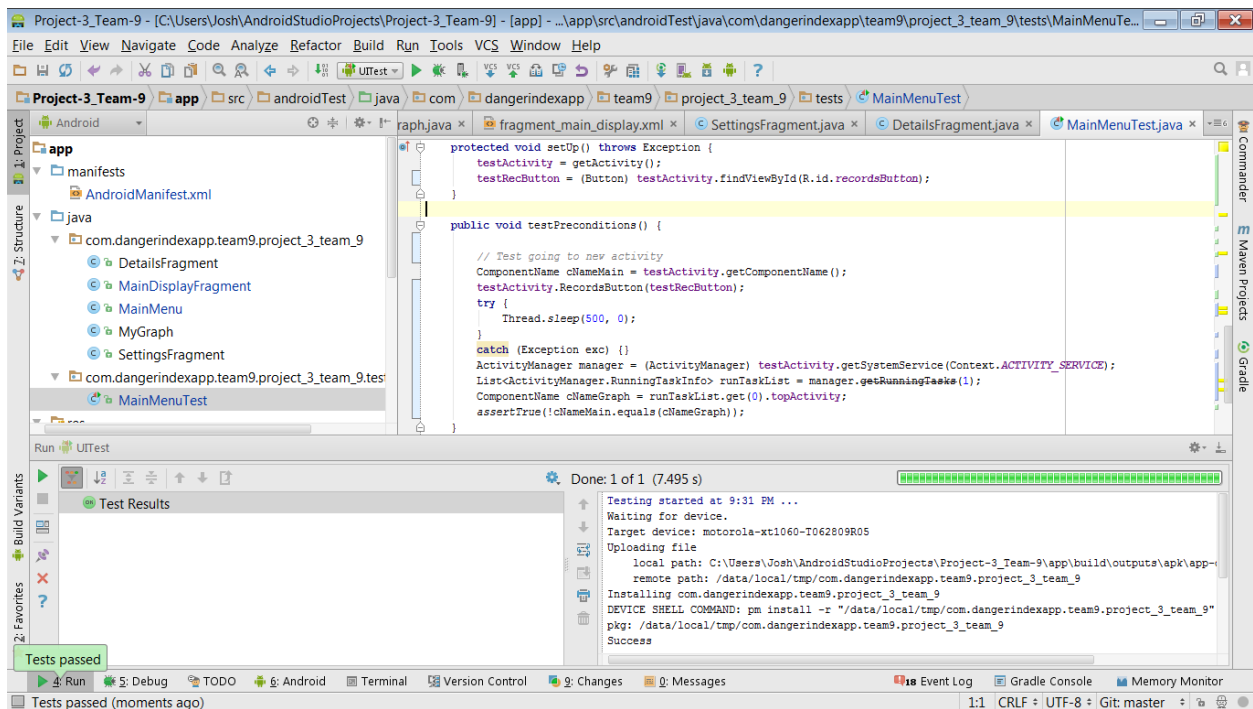Figure 1.) Records button test failing

Figure 2.) Records button test succeeding

To have a more solid use of test-driven development in this deliverable, we also added simple GPS location-obtaining code and tied it to the "Get Current Location" button (the button with the bull's-eye icon). This test waits a little bit to allow GPS data to be obtained, simulates a press of the button, waits a bit longer, and then tests to see if the Location internally stored in the activity is no longer null. We ran into a thread-based exception if the button press attempted to change the contents of the textbox during testing, however, so the contents of the if statement (which includes changing the contents of the textbox) must be commented out to allow for testing. This test fails if the location acquisition step is absent and succeeds otherwise. Example screenshots of the test failing and succeeding are given below:
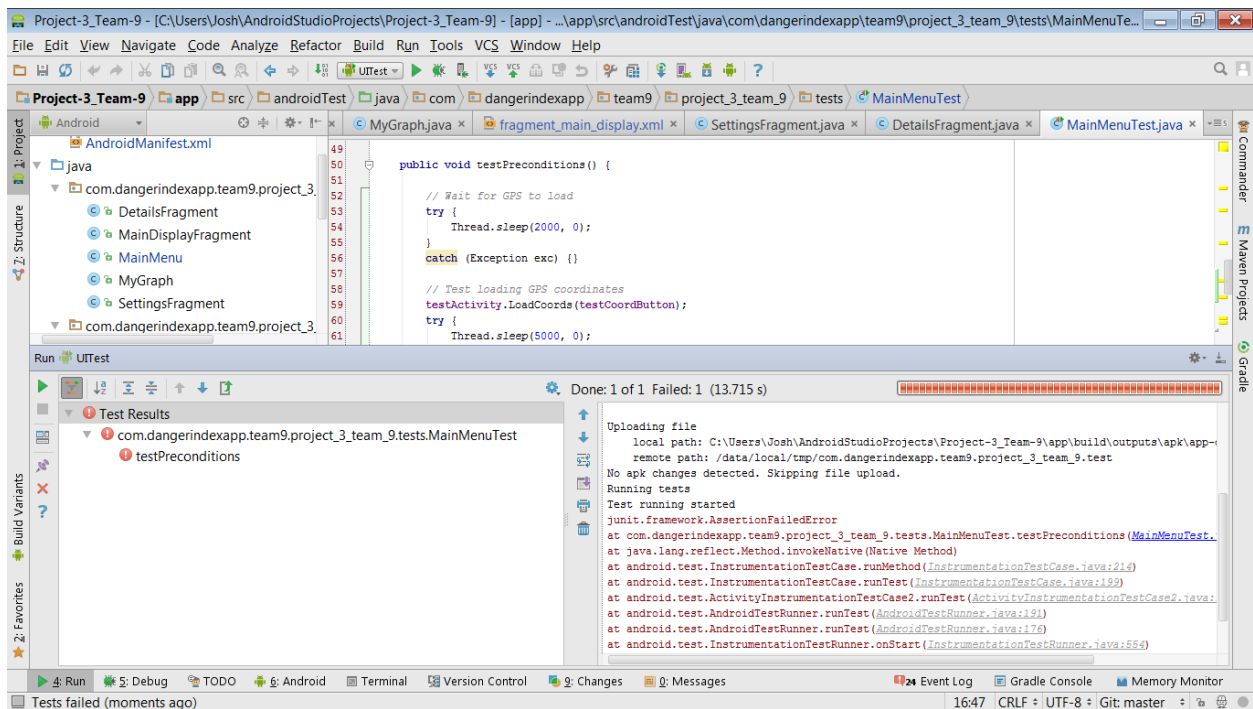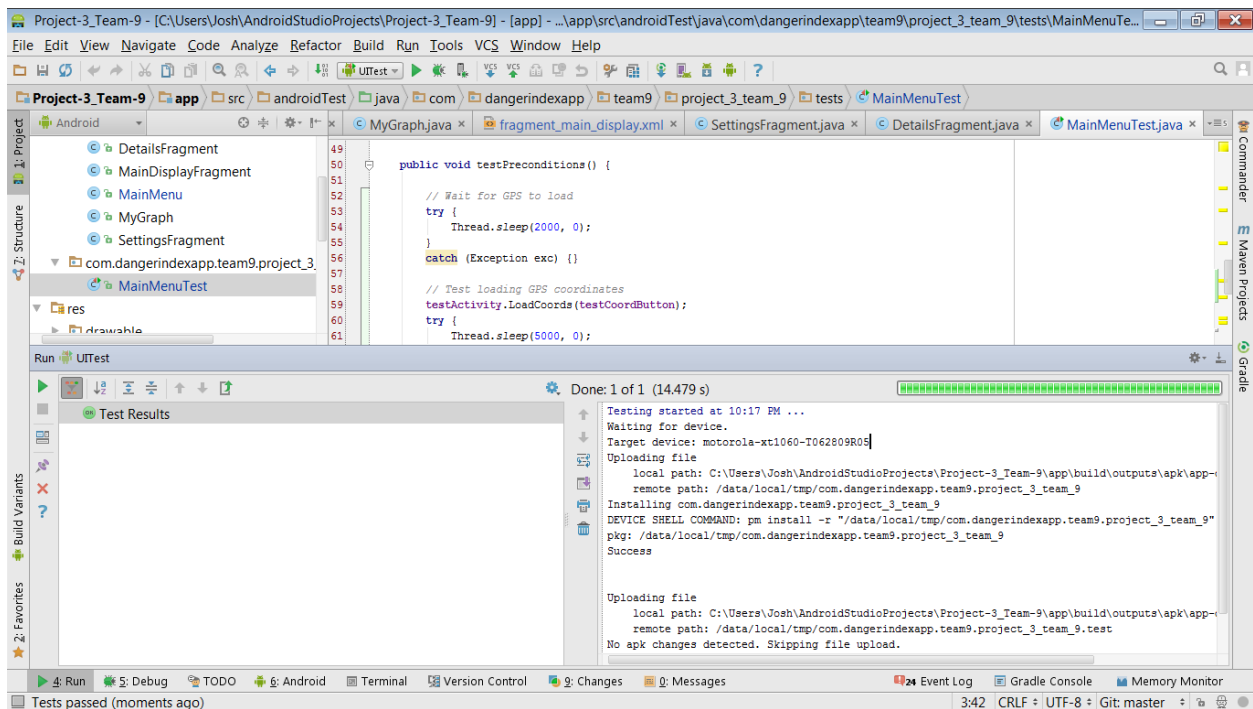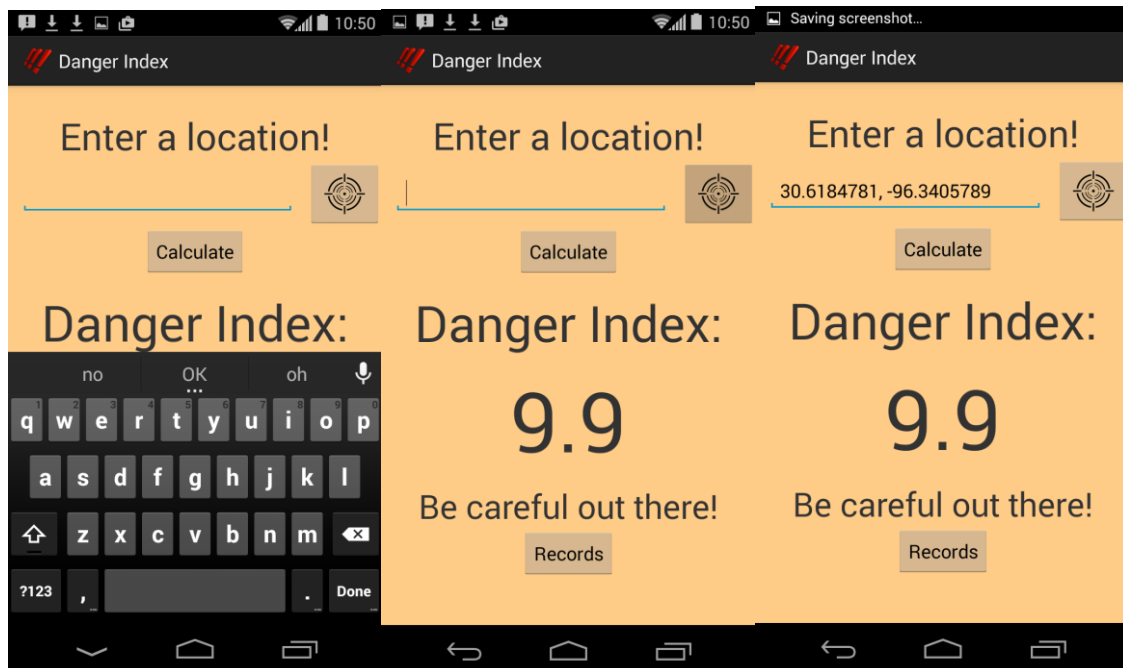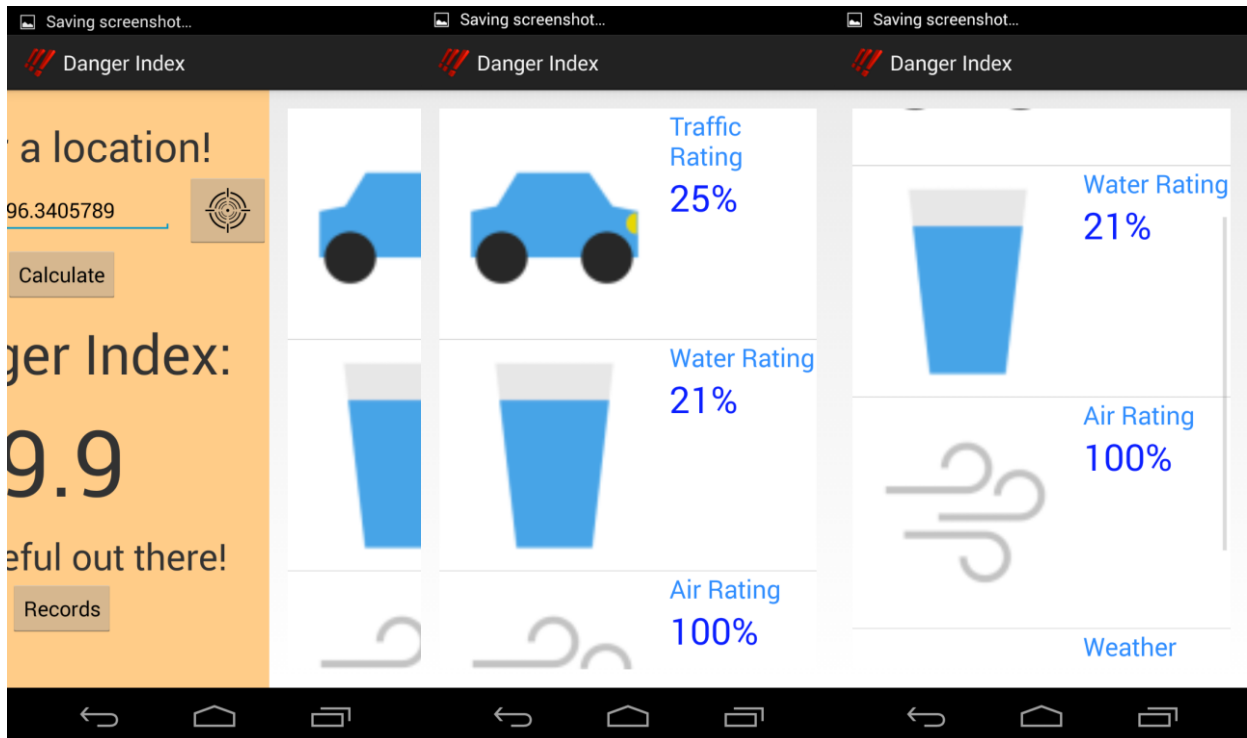
Figure 3.) GPS test failing
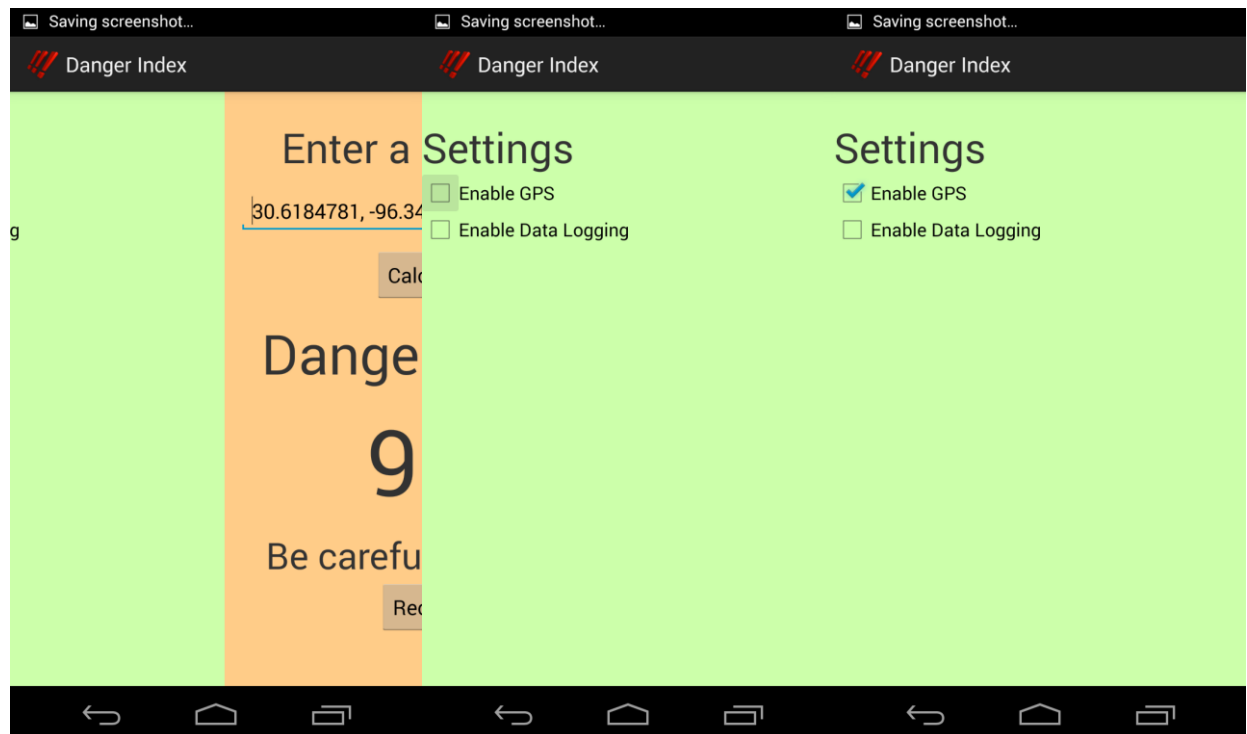


Figure 4.) GPS test succeeding

For future deliverables, we plan to incorporate a more in-depth use of test-driven development, first developing tests and then adding to the code until the tests are passed. Also, in addition to the screenshots of Android Studio testing, screenshots of the application running are given below to demonstrate that the features are working successfully:
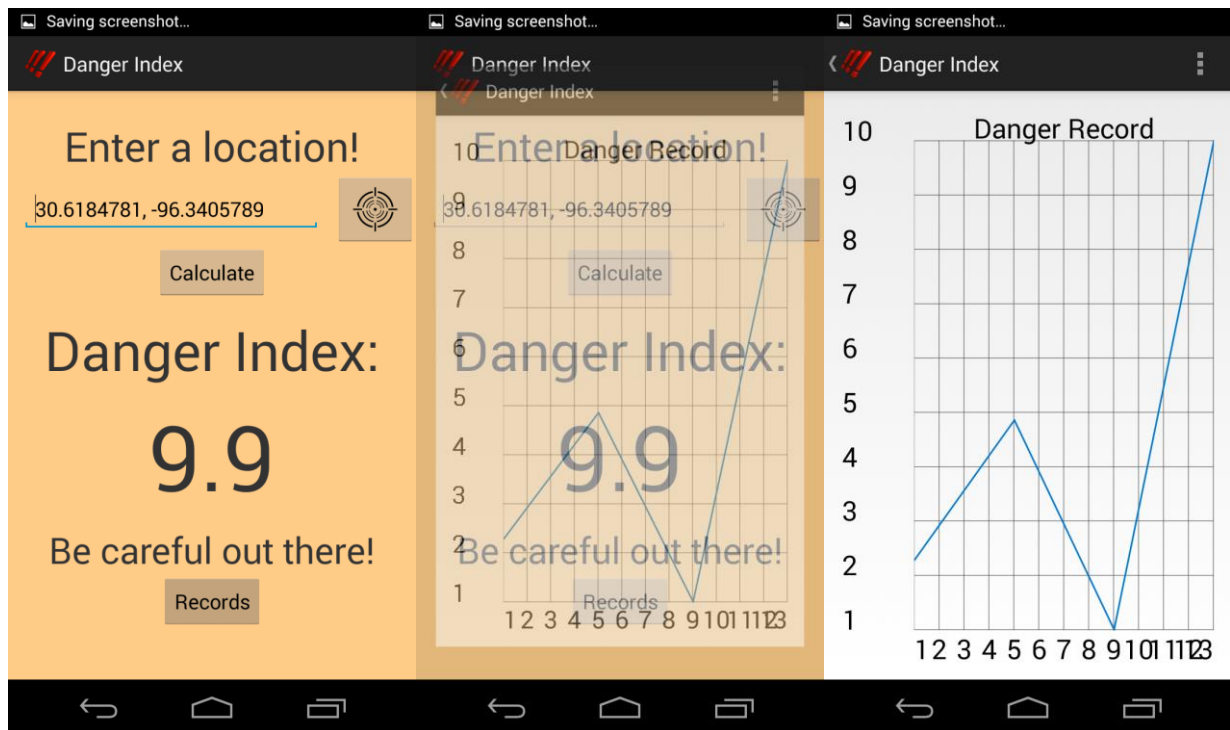


Initial screen upon loading, pressing the "Use Current Location" button, and coordinates loaded after pressing button
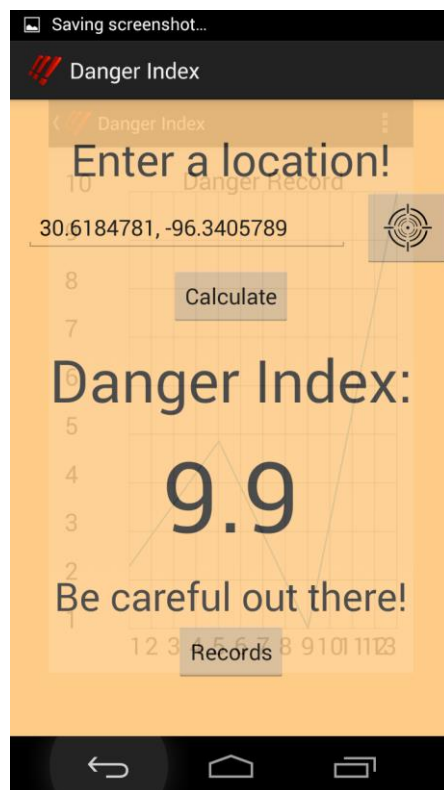
Swiping to details screen, details screen, and scrolling down in details screen



Swiping to settings screen, pressing checkbox, checkbox checked

Pressing records button, opening records activity on top, records view



Pressing back button, going back to main menu