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| **Test Plan** – To test my application I am going to break each requirement down into functions and exhaustively test each one. I will use a mixture of normal, extreme and exceptional data where applicable to full test the system. I will log the test case, data, purpose, expected & actual outcomes alongside and indication of whether the function works. | | | | |
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| 1. **Interlinking Screens** | | | | |
| **Test Case** | **Purpose** | **Expected Outcome** | **Actual Outcome** | **Working** |
| Check ‘Main Activity’ activity displays on launch. | To ensure that the correct screen (Main Activity) is displayed to the user on start-up. | Main Activity displayed. | Main Activity displayed. |  |
| In ‘Main Activity’ click ‘Preferred Locations’ button to go to ‘Preferred Locations’. | To ensure the user is able to access the preferences activity. | Activity switches from ‘Main Activity’ to ‘Preferred Locations’. | Activity switches from ‘Main Activity’ to ‘Preferred Locations’. |  |
| In ‘Main Activity’ click ‘View Forecasts’ to go to ‘Forecasts Activity’. | To ensure the user is able to access the ‘Forecasts’ activity. | Activity switches from ‘Main Activity’ to ‘Forecasts Activity’. | Activity switches from ‘Main Activity’ to ‘Forecasts Activity’. |  |
| In ‘Preferred Locations’ click the back button to go to ‘Main Activity’. | To ensure the user is able to return to the main activity from the preferences activity. | Activity switches from ‘Preferred Locations’ to ‘Main Activity’. | Activity switches from ‘Preferred Locations’ to ‘Main Activity’. |  |
| In ‘Forecasts Activity’ click the back button go to ‘Main Activity’. | To ensure the user is able to return to the main activity from the ‘Forecasts Activity’. | Activity switches from ‘Forecasts Activity’ to ‘Main Activity’. | Activity switches from ‘Forecasts Activity’ to ‘Main Activity’. |  |
| In ‘Forecasts Activity’ click ‘Search’ to go to ‘Search Activity. | To ensure the user is able to access the ‘Search’ activity. | Activity switches from ‘Forecasts Activity’ to ‘Search Activity’. | Activity switches from ‘Forecasts Activity’ to ‘Search Activity’. |  |
| In ‘Search Activity’ enter an existing forecast and click ‘Search’. | To ensure the user is able to return to the forecasts screen. | Activity switches from ‘Search Activity’ to ‘Forecasts Activity’. | Activity switches from ‘Search Activity’ to ‘Forecasts Activity’. |  |
| In ‘Search Activity’ click the back arrow to go to ‘Forecasts Activity’. | To ensure the user is able to return to the forecasts screen. | Activity switches from ‘Search Activity’ to ‘Forecasts Activity’. | Activity switches from ‘Search Activity’ to ‘Forecasts Activity’. |  |
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| 1. **Store Preferred Locations** | | | | |
| **Test Case** | **Purpose** | **Expected Outcome** | **Actual Outcome** | **Working** |
| In ‘Preferred Locations’ activity, check that all the saved locations are – 37.8267,-122.4233 ‘’. | To ensure default correct locations are saved as default for the preferences. | All saved locations are 37.8267,-122.4233. | All saved locations are 37.8267,-122.4233. |  |
| In ‘Preferred Locations’ activity, change the first preference to 37.8267,-122.4234 ‘’ and restart the app. Check to ensure the change has been saved. | To ensure that the preferences are persisting when the app is restarted. | First preference is 37.8267,-122.4234 on restart. | First preference is 37.8267,-122.4234 on restart. |  |
| In ‘Preferred Locations’ activity, change the last preference to ‘’ and restart the app. Check to ensure the change has been saved. | To ensure that all the preferences are working, not just the first one. | Last preference is 37.8267,-122.4235 on restart. | Last preference is 37.8267,-122.4235 on restart. |  |
| In ‘Preferred Locations’ change a location to 37.8267,-122.4236 and restart the device, check to ensure the change has been saved. | To ensure preference persists even when device is shut down. | Preference changed to 37.8267,-122.4236 remains on system reboot. | Preference changed to 37.8267,-122.4236 remains on system reboot. |  |
| Write a log statement in ‘Main Activity’ on.Create() outputting each of the preferences to the logcat and check it. | To ensure that each of the preferences are retrieved correctly. | Location: 37.8267,-122.4234  Location: 37.8267,-122.4234  Location: 37.8267,-122.4234  Location: 37.8267,-122.4234  Location: 37.8267,-122.4234  Location: 37.8267,-122.4234  Location: 37.8267,-122.4234  Location: 37.8267,-122.4234  Location: 37.8267,-122.4234  Location: 37.8267,-122.4234 | Location: 37.8267,-122.4234  Location: 37.8267,-122.4234  Location: 37.8267,-122.4234  Location: 37.8267,-122.4234  Location: 37.8267,-122.4234  Location: 37.8267,-122.4234  Location: 37.8267,-122.4234  Location: 37.8267,-122.4234  Location: 37.8267,-122.4234  Location: 37.8267,-122.4234 |  |
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| 1. **Downloading Forecasts From DarkSky** | | | | |
| **Test Case** | **Purpose** | **Expected Outcome** | **Actual Outcome** | **Working** |
| Click ‘Download’ and check to see if a toast with the message ‘Downloaded Forecasts Successfully’ appears. | To ensure download was successful and user is made aware. | Toast with message ‘Downloaded Forecasts Successfully’ appears. | Toast with message ‘Downloaded Forecasts Successfully’ appears. |  |
| Log-in to DarkSky online and have a look at the number of calls made to the API today. Click ‘Download’ and refresh the webpage. Check if the number of calls increases by 10. | To ensure that the application is making the correct number of calls to the API. | Number of calls increases by 10. | Number of calls increases by 10. |  |
| Write a log statement in @@@ that outputs the downloaded JSON to the logcat and check it. | To ensure that the download is successful and returning JSON. | JSON printed to logcat 10 times. | JSON printed to logcat 10 times. |  |
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| 1. **Parse Downloaded Data** | | | | |
| **Test Case** | **Purpose** | **Expected Outcome** | **Actual Outcome** | **Working** |
| Write a log statement in the parseJSON () method in the JsonHandler class that outputs each parsed forecast to the logcat and check it. | To ensure that JSON parsed correctly into a readable format. | Method prints formatted location to logcat in a readable format. | Method prints formatted location to logcat in a readable format. |  |
| View a forecast in the ‘Forecasts’ activity. | If the forecast is displayed correctly then the JSON must have been parsed correctly. | Forecast displayed correctly. | Forecast displayed correctly. |  |
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| 1. **Manage Data In An SQL Database** | | | | |
| **Test Case** | **Purpose** | **Expected Outcome** | **Actual Outcome** | **Working** |
| Click ‘Download’ button in ‘Main Activity’ and check if a toast with the message ‘Downloaded Forecasts Successfully’ appears. | To ensure that the processed forecast is saved to a database. | Toast with message ‘Downloaded Forecasts Successfully’ appears. | Toast with message ‘Downloaded Forecasts Successfully’ appears. |  |
| Navigate to ‘Forecasts Activity’ and check that a forecast is displayed. | This activity reads a default forecast from the database and displays it. This will ensure that the database is working. | Forecast displayed correctly. | Forecast displayed correctly. |  |
| In ‘Forecasts Activity’ check that all forecasts are displayed. | To ensure the browsing of the database works. | All forecasts are displayed. | All forecasts are displayed. |  |
| In ‘Forecasts Activity’ click a forecast and click ‘Delete’, check to see if the forecast changes and that the display updates correctly. | To ensure the deletion of data in the database works. | Forecast deleted and display updated correctly. | Forecast deleted and display updated correctly. |  |
| Delete a forecast and check to see if a message alerting the user of deletion appears. | To ensure the deletion of data in the database works. | Toast with message ‘Forecast Deleted Successfully’ appears. | Toast with message ‘Forecast Deleted Successfully’ appears. |  |
| Browse any forecast in the ‘Forecasts Activity’. Check that a value for location, time, temperature, humidity, wind speed, wind direction and summary are given. | To ensure the correct values are saving to the database. | All values are displayed. | All values are displayed. |  |
| Click ‘Refresh’ button on Forecasts Activity and check to make sure all forecasts are displayed. | To ensure the refresh button works. | Display is updated with all database forecasts. | Display is updated with all database forecasts. |  |
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| 1. **Search** | | | | |
| **Test Case** | **Purpose** | **Expected Outcome** | **Actual Outcome** | **Working** |
| In the ‘Search Activity’ enter the details of a known saved forecast into the edit texts and click ‘Search’ button. | To ensure that the search function works. | Activity switches to the ‘Forecasts Activity’ and the forecast searched for displays. | Activity switches to the ‘Forecasts Activity’ and the forecast searched for displays. |  |
| In the ‘Search Activity’ leave the edit texts blank and click ‘Search’ button. | To ensure that the search function does not crash when forecast not found. | Toast with message ‘No forecast found’ displays. | Toast with message ‘No forecast found’ displays. |  |
| In the ‘Search Activity’ leave the first 3 edit texts blank and click ‘Search’ button. | To ensure that the search function does not crash when forecast not found. | Toast with message ‘No forecast found’ displays. | Toast with message ‘No forecast found’ displays. |  |
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| 1. **User Interface** | | | | |
| **Test Case** | **Purpose** | **Expected Outcome** | **Actual Outcome** | **Working** |
| Open ‘Main Activity’ and check that all controls and views are displayed properly. | To ensure that the activity displays properly. | All content displayed properly. | All content displayed properly. |  |
| Open ‘Preferences Activity’ and check that all controls and views are displayed properly. | To ensure that the activity displays properly. | All content displayed properly. | All content displayed properly. |  |
| Open ‘Forecasts Activity’ and check that all controls and views are displayed properly. | To ensure that the activity displays properly. | All content displayed properly. | All content displayed properly. |  |
| Open ‘Search Activity’ and check that all controls and views are displayed properly. | To ensure that the activity displays properly. | All content displayed properly. | All content displayed properly. |  |
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| **Evaluation –** We can see by the test logs above that the application seems to be working as required and as expected due to the appearance of no errors when testing all of the functions. I believe that the test plan and method was thorough enough that I have confidence that the application is in full working order and development of the project can be finished. | | | | |