Team 5B

PetApp Test Plan

Overview:

The purpose of this document is to describe the scope, strategy, objectives and process of testing. It is the protocols that are followed while creating and deploying tests.

Scope:

The features that are required to be tested are that each activity is reachable without error. This is due to the fact most activities' purpose is to display information to the user although methods such as button clicks are also tested to ensure navigation to other screens is correct. The 2 main functions that will be tested are both the app database can be initialized and run query functions as well as DBHelper class functions, ensuring that lists can be correctly populated from it to be inserted into the database. Store location is out of scope and will not be tested as it requires user location data that can be only provided via given permissions of the user. Due to limited input from every group member the scope of testing has been reduced to core functionality of the application and not additional such as extending to store location.

Objective:

The objective of these tests will be to determine that the application is in a state ready for user consumption and that all crucial activities can be reached or functions called without error.

Risks:

Limited variation in mobile phone models.
Delays in schedule caused by meeting times or group members not fulfilling obligations to project.
Changes in scope and requirement due to limited members.

Entry & Exit Criteria

Entry:
Requirements have been
Initial tests have been created
Test plan created
Initial tests return results

Exit:
All test cases return results
Specific tests have been removed from isolated testing as they are only used within the context of other already tested activities.
Test errors have been fixed
All tests pass

Test Schedule:
Tests are scheduled to be run after completion of each java class file being tested on top of being tested as a batch at the end. Should any context change or new data within other class files affect previously tested class files (parsing data, etc) then they will be tested again.

Installation:
Testing of the android application installation is done by downloading the apk built from the project onto an android phone. The phone model used was a Huawei P Smart 2019 and the application installed and ran as normal without any errors. After Installation the app icon was found where expected on the phone along with other installed apps and could be run successfully.

Methods used & purpose:
Tests were created and automated using the junit4 and espresso modules provided alongside the project during initial creation. Instances of activities were initialised and then functions were called to find elements within those activities via id call. By Asserting if these elements existed using assertnotnull or by calling button click functions it could be determined whether or not those activities were able to be created and opened without error so that those elements could be reached. Testing instances of activities also as a byproduct tested functions called within them as well as whether the app database could be called and its functions used.

As the DBHelper class is within a separate file and could be tested in pure isolation it was also tested. Lists pertaining to each respective class (pet or food) were created and the respective dbhelper functions for each were run. This determined whether the function was sufficient in working to populate a list and could be run within the MainActivity to help populate the database using the latter's insert functions.

Results
All tests passed returning results according to what is asserted within each @Test function. Installation tests also completed without error on the specified model.