1.3 Requirements

1.3.1 Functional Requirements

<Insert APPLICATION Name> v1.0 Function Requirements

* R1.1: The APPLICATION shall allow a user to be able to capture images and TAG images.
* Purpose: To allow for a database of meals acquired by the user.
* Test: There must be at least 5 different test cases per user.

These users will be spread out on various devices.

%100 of images must be able to be captured, TAGGED per user.

* R1.2: The APPLICATION shall recognise either a common TAG, or new TAG by a user.
* Purpose: To allow for auto filling, and pre-generate information about the meal.
* Test: There must be at least 200 different common test cases, 10 unique cases.

Of which all unique cases must be added to the APPLICATIONs online database.

All common cases must be recognised by the APPLICATION.

* R1.3: The APPLICATION shall allow a user to add the GEOLOCATION of the meal.
* Purpose: To provide a location for the captured meals for future revisitation by the user, or other users.
* Test: There must be at least 5 different test cases per user.

These users will be spread out on various devices.

%100 of images must be able to have the correct GEOLOCATION added to its details.

* R1.4: The APPLICATION shall be able to access Google's Maps and GEOLOCATION function
* Purpose: To provide an accurate GEOLOCATION for captured meals that can be accessed through Google Maps.
* Test: There must be at least 5 different test cases per user.

These users will be spread out on various devices.

100% of images must be able to have correct GEOLOCATION added to its details.

* Assumption: If the internet is not accessible then GEOLOCATION will not work. Therefore it is assumed that internet is on for this functionally to work correctly.
* R1.5: The APPLICATION shall allow a user to edit an ingredients list in relation to the meal after identifying the meal.
* Purpose: To generate a more accurate list of ingredients a more accurate ORAC RATING.
* Test: There must be at least 50 test cases of unedited meals.

100% of ingredient lists must be accurate and consistent to the TAGGED meals.

There must be at least 50 test cases of edited meals.

100% of ingredient list must be editable.

* Assumption: There is a general database that handles the pairing of meals and ingredient lists.

* R1.6: The APPLICATION shall generate an ORAC RATING based upon a meal and/or ingredients.
* Purpose: To give an appropriate and accurate ORAC RATING along a certain scale to provide helpful information to the user.
* Test: There must be at least 200 test cases.

There must be at least 20 duplicate cases.

There must be at least 100 similar test cases.

* R1.7: The APPLICATION shall allow the user to search through a database of populated by their own meals.
* Purpose: The user must be easily able access earlier meals for future use.
* Test: There must be at least 20 different test cases per user.

These users will be spread out on various devices.

100% of meals must be accessible through the inbuilt file system.

* R1.8: The APPLICATION shall allow the user to sort through meals based on the user’s GEOLOCATION.
* Purpose: To provide the user with meals that is close to their current GEOLOCATION.
* R1.9: The APPLICATION shall allow the user to sort through meals based on the ORAC RATING.
* Purpose: To provide the user with meals that is high on the ORAC RATING for healthy eating.
* R1.10: The APPLICATION shall allow the user to sort through meals based on a given GEOLOCATION.
* Purpose: To provide the user with meals that are close to a given GEOLOCATION.

* R1.11: The APPLICATION shall allow the user to sort through meals based on the TAG name.
* Purpose: To provide the user with meals that are of the same variety as their input TAG.

* R1.12: The APPLICATION shall allow the user to search/sort through a database of all meals that are within the online database
* Purpose: The user must easily be able to access all meals shared across other users for future use, to create meal plans, and find meals base on sort requirements easily.
* Test: There must be at least 5 users.

There must be at least 100 meals that vary according to ORAC RATING, USER RATING, TAGs, and GEOLOCATION.

100% of meals must be viewable and accessible through all users.

* Assumption: There is an online database that manages the uploading and downloading of meals either TAGGED by users of the APPLICATION of added by the moderator of the APPLICATION.
* R1.13: The APPLICATION shall allow the user to group together meals and export either individual or groups of ingredient lists for meals.
* Purpose: The user will be able to use the list to shop for ingredients to maintain a healthy diet based on the APPLICATIONs functions.
* Test: There must be at least 5 group test cases.

There must be at least 20 individual test cases.

These must be exported into each format.

* R1.14: The APPLICATION shall allow the user to edit/remove meals/groups of meals from the APPLICATION.
* Purpose: To give control of the file system to the user.
* Test: There must be at least 5 group test cases of editing.

There must be at least 5 group test cases of removing.

There must be at least 20 individual test cases of editing.

There must be at least 20 individual test cases of removing.

100% must show either the edit of removal was completed correctly.

* R1.15: The APPLICATION shall provide healthy tips to the user.
* Purpose: To provide information to the user to better maintain a healthy lifestyle.

1.3.2 Performance Requirements

<Insert APPLICATION Name> v1.0 Performance Requirements

* R1.16: The APPLICATION must load the home page in less than 4 seconds
* Purpose: To minimise User waiting times
* Test: There must be at least 5 test cases per user.

100% of test cases must load in under 4 seconds.

60% of test cases must load under 2 seconds.

* R1.17: The APPLICATION does not freeze, crash, or function in an abnormal way on any targeted device.
* Purpose: To give the user a positive experience with the APPLICATION.

98% of devices must not crash or function in an abnormal way.

* R1.18: The APPLICATION displays all UI elements without noticeable blurring, or any other forms of distortion.
* Purpose: To leave a good visual impression on the User.

98% of the UI must not have blurring or other noticeable distortions.

* R1.19: The content that this app delivers must be displayed proportionately on all targeted devices, including tablets.
* Purpose: To ensure that all users can utilise the functionality of this APPLICATION, regardless of the Android device they are using.

98% of devices must be able to access the app.

* R1.20: The APPLICATION must be responsive to all button presses within 1 second of being pressed.
* Purpose: To give the user a positive experience using the APPLICATION.
* R1.21: The generation of an ORAC score should not exceed 4 seconds.
* Purpose: To deliver information promptly,
* R1.22: Search results should load in less than 3 seconds.
* Purpose: To promptly assist with the users search.
* R1.23: Camera should launch within 2 seconds an application request.
* Purpose: To allow user access to the camera seamlessly without delay.
* R1.24: Generation and exportation of shopping list should take no longer than 3 seconds.
* Purpose: To allow user quick access to information.

1.3.3 Design Implementation Requirements/Constraints

* R1.25: The APPLICATION must be delivered to the client no later than the 4th December 2014
* R1.26: The APPLICATION must be compatible with Android devices running Android 4.1.1 and above
* Purpose: To eliminate compatibility issues, as 75% of Android devices run on 4.1.1 or above.
* R1.27: The APPLICATION shall attempt to be compatible with Android devices running older operating systems.
* Purpose: To allow users of older devices to access the APPLICATION
* R1.28: The APPLICATION must be compatible with a variety of screen sizes, and scale all elements accordingly.
* Purpose: To cater to users who are using tablets or small devices
* R1.29: The APPLICATION colour scheme must match that of the Cadence health website
* Purpose: To identify the APPLICATION with Cadence health, and ensure continuity across their product range
* R1.30: The APPLICATION must follow the Android Design guidelines and conform to common UI patterns
* Purpose: To conform with guidelines set out by Google
* R1.31: The APPLICATION does not redefine the expected function of a system icon (such as the "home" or "back " buttons)
* Purpose: To avoid confusion with the users.
* R1.32: The APPLICATION does not misuse Android UI patterns, which would make a standard user become confused.
* Purpose: To avoid confusion with the users.
* R1.33: The APPLICATION must function normally when installed on an SD card
* Purpose: To allow users to store the APPLICATION on an SD card.
* R1.34: The APPLICATION must request the absolute minimum permissions that it needs to operate normally.
* Purpose: To ensure that the APPLICATION does not accidentally access unauthorised system resources
* R1.35: The APPLICATION should support both landscape and portrait orientations
* Purpose: To provide an adaptable view of the APPLICATIONs content
* R1.36: The APPLICATION must adhere to the terms of the Google play developer content policy found at https://play.google.com/about/developer-content-policy.html
* Purpose: To allow the APPLICATION to be sold on the Google Play store.

1.3.4 Other Non-Functional Requirements

<Insert APPLICATION Name> v1.0 Non-Functional Requirements

* R1.37: The APPLICATION shall improve user health
* Purpose: To prove the need for this Application
* Test: Regular examination of database traffic and reviews of the APPLICATION will determine if it is providing assistance.

Examining the general health of state could possibly be used at a later stage.

* R1.38: The APPLICATION shall be available to users 24/7 with 100% reliability

Purpose: This is to ensure that all users will have access to the APPLICATIONs functionality at all times

* R1.39: The APPLICATION shall be available to users without the requirement of installing additional software.
* Purpose: This is to ensure that all users may easily access the APPLICATION.
* R1.40: The APPLICATION shall provide accurate an ORAC RATING to users
* Purpose: To provide accurate statistics of meals to the users which will help the user make informed choices.
* Test: R1.6 will provide these tests.
* R1.41: The APPLICATION shall provide accurate ratings to users

Purpose: To provide accurate reviews of meals to help the user make informed choices.

* Test: There must be at least 10 meals created.

There must be at least 200 reviews on each meal generated

* R1.42: The APPLICATION shall retain user anonymity
* Purpose: To provide anonymity to the user, as personal details being shared or access are not necessary.
* R1.43: The APPLICATION shall record all stored meals for other users use.
* Purpose: To provide a largely populated database of meals for the user to search and sort through at any time.
* Test: There must be at least 20 users

These users will be spread over multiple devices

There must be at least 10 meals submitted by each user

These meals must have attached GEOLOCATION

These users must be able to search, sort and view all meals by all users.

* R1.44: The APPLICATION shall update its database to further identify information being input by the user
* Purpose: To allow for quicker
* R1.45: The APPLICATION shall allow for future functionality to be added.
* Purpose: To allow for development on other platforms and to add additional functionality