

**DPS924– Android Programming – Seneca@York**

**Assignment #1**

**Nutrient Values App**

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## 1. Executive Summary

The Food Nutrient Values App being proposed in this document aims at helping the user to maintain a healthy lifestyle, by providing nutritional details about common food items in the average day-to-day.

As times move on, so does technology and information. This project aims at delivering a mobile application as its outcome, since it is the platform that makes the most sense for what it is trying to achieve. These days most people have a phone, which they carry with themselves at most, if not all times. This application will be an easy way for a user to check the nutritional values of their food, without having to navigate through webpages or having to search online. The application makes searching for a food item easy, and the fact that it is mobile, allows for a user to do his or her own quick search anywhere at any time.

## 2. Business Opportunity/Costs

By hiring a mobile software developer, you will be securing not only an expert at code and design, but also a potential opportunity for expansion, or even support post launch. The mobile market is now better than ever thanks to the large user base that owns a mobile phone, as well as the increase in awareness for personal health in the population. A good application created by a dedicated developer for the platform will secure you a better product that is sure to meet the Android standards of use, as well as give an application that will satisfy the customer.

### 3. Application Basic Features

- Scrollable list of food items available for viewing
- Search functionality for food items and their nutritional values as well as food category filtering for easier searches
- Persistent database storage for list of favourite food items
- No need for internet/data connection to access any database items or information
- Bilingual support for interface and food items information (English and French)
- Feedback form in order to contact the developer (internet/data required)

### 4. Expected Market

The application is targetting the young adult/adult audience, since these are the two generations that care more about their personal health and look. The application can also be a great aid for individuals undergoing diets, by providing details that can help them catalog the nutrients in each food item consumed. Lastly because this will be a paid application it is assumed that the user owns a credit card which means that the vast majority of the audience won't be children.

## 5. System Components

### 5.1 Nutrient Value App Landing Page Module

This component will allow the user to see an overall view of all food items in the database in simple form. The use cases in this module are:

- View food items list
- View food item details
- Add food item to Favourites
- Search food item

### 5.2 Food Category Module

This component will allow the user to see an overall view of all food items in the database by the selected category in the menu. The use cases in this module are:

- View category's food items list
- View food item details
- Add food item to Favourites
- Search food item

### 5.3 Food Details Module

This component will allow the user to see all the nutrient value details that belong to a previously selected food item. The use cases in this module are:

- View details
- Add food item to Favourites

### 5.4 Favourites Module

This component will allow a user to view all of the previously saved favourite items. The use cases in this module are:

- View favourite food items list
- View food item details
- Remove selected food item

### 5.5 Feedback Module

This component will allow a user to send the developer feedback via email through the app. The use cases in this module are:

- Send feedback

### 5.6 Language selection Module

This component will allow a user to switch the UI's language as well as the database's food items and its details. The use cases in this module are:

- Switch Language

## 6 Use Cases

### 6.1 Use Case Name: Landing Page View

User uses this system to view, search, access categories, add item to favourites or user preferences menu

6.1.1 Author: Joao Rodrigues

6.1.2 Actor(s)

User

6.1.3 Use Case Preconditions

User has to be in the activity

6.1.4 Use Case Successful Post Conditions

User selects an option

6.1.5 Main Flow:

	Actor(s): User	System
1		Application opens in landing page, loading appropriate list of items
2	The actor selects an option and the appropriate use case is initiated: View: View food items Details: View food item details on click Search: Search food item Add: Add food item to favourites on hold	

6.1.6 Alternate Flows:

	Alternate Flow	Description
2	Actor closes application	Application closes down
2	Actor selects left menu	Application displays categories to be selected on click
2	Actor selects right menu	Application displays user preferences to be selected on click

## 6.2 Use Case Name: View food items list

User uses this system to view a scrollable list of all food items

6.2.1 Author: Joao Rodrigues

6.2.2 Actor(s)

User

6.2.3 Use Case Preconditions

User has to be in the activity

6.2.4 Use Case Successful Post Conditions

User views list of food items

6.2.5 Main Flow:

	Actor(s): User	System
1		Application opens in selected page with appropriate list of food items
2	Actor scrolls through list	Application scrolls through fetched items from database

6.2.6 Alternate Flows:

	Alternate Flow	Description
2	Actor closes application	Application closes down
2	Actor selects left menu	Application displays categories to be selected on click
2	Actor selects right menu	Application displays user preferences to be selected on click

## 6.3 Use Case Name: View food item details

User uses this system to view the item details of a selected food on click

6.3.1 Author: Joao Rodrigues

6.3.2 Actor(s)

User

6.3.3 Use Case Preconditions

User has to be in the activity

6.3.4 Use Case Successful Post Conditions

User selects a food item to view details

### 6.3.5 Main Flow:

	Actor(s): User	System
1	Actor selects/clicks on an item on the scrollable list	Application fetches details from database and displays them to user

### 6.3.6 Alternate Flows:

	Alternate Flow	Description
1	Actor does not select an item	Application remains in the view food items list activity
2	Actor closes application	Application closes down
2	Actor selects left menu	Application displays categories to be selected on click
2	Actor selects right menu	Application displays user preferences to be selected on click

## 6.4 Use Case Name: Add food item to Favourites

User uses this system to add a food item to the Favourites list by holding on it

6.4.1 Author: Joao Rodrigues

6.4.2 Actor(s)

User

6.4.3 Use Case Preconditions

User has to be in the activity

6.4.4 Use Case Successful Post Conditions

User adds food item to Favourites list

6.4.5 Main Flow:

	Actor(s): User	System
1	Actor holds on a food item	Application asks user to confirm selection
2	Actor selects confirm	Food item is added to favourites database



#### 6.4.6 Alternate Flows:

	Alternate Flow	Description
1	Actor closes application	Application closes down
1	Actor selects left menu	Application displays categories to be selected on click
1	Actor selects right menu	Application displays user preferences to be selected on click
2	Actor selects cancel	Food item isn't added to favourites database

### 6.5 Use Case Name: Search food item

User uses this system to filter the list view displaying only searched food item(s)

6.5.1 Author: Joao Rodrigues

6.5.2 Actor(s)

User

6.5.3 Use Case Preconditions

User has to be in the activity

6.5.4 Use Case Successful Post Conditions

User views searched food item(s)

6.5.5 Main Flow:

	Actor(s): User	System
1	Actor selects the text box	Application opens up keyboard and allows for user input
2	Actor types a search parameter	
3	Actor presses go	Validation
		Application updates the listview, fetching only the searched parameters

#### 6.5.6 Alternate Flows:

	Alternate Flow	Description
1	Actor closes application	Application closes down
1	Actor selects left menu	Application displays categories to be selected on click
1	Actor selects right menu	Application displays user preferences to be selected on click

2	Actor types illegal characters	Toast pops up warning user about illegal search, does not update current listview
3	Actor does not press go	Application does not update listview

## 6.6 Use Case Name: Food Category Page View

User uses this system to view, search, access other categories, add item to favourites or user preferences menu

6.6.1 Author: Joao Rodrigues

6.6.2 Actor(s)

User

6.6.3 Use Case Preconditions

User has to be in the activity

6.6.4 Use Case Successful Post Conditions

User selects an option from the category view

6.6.5 Main Flow:

	Actor(s): User	System
1		Application opens in previously selected category from menu, loading appropriate list of items filtered by that specific category only
2	The actor selects an option and the appropriate use case is initiated: View: View food items Details: View food item details on click Search: Search food item Add: Add food item to favourites on hold	

6.6.6 Alternate Flows:

	Alternate Flow	Description
2	Actor closes application	Application closes down
2	Actor selects left menu	Application displays categories to be selected on click
2	Actor selects right menu	Application displays user preferences to be selected on click

## 6.7 Use Case Name: Food Details Page View

User uses this system to view details, access other categories, add item to favourites or user preferences menu

6.7.1 Author: Joao Rodrigues

6.7.2 Actor(s)

User

6.7.3 Use Case Preconditions

User has to be in the activity

6.7.4 Use Case Successful Post Conditions

User selects an option from the food details view

6.7.5 Main Flow:

	Actor(s): User	System
1		Application opens in previously selected food item, loading appropriate details from database that belong to that item
2	The actor selects an option and the appropriate use case is initiated: View: View details Add: Add to favourites on click	

6.7.6 Alternate Flows:

	Alternate Flow	Description
2	Actor closes application	Application closes down
2	Actor selects left menu	Application displays categories to be selected on click
2	Actor selects right menu	Application displays user preferences to be selected on click

### 6.8 Use Case Name: View Details

User uses this system to view nutrient values for the selected food item

6.8.1 Author: Joao Rodrigues

6.8.2 Actor(s)

User

6.8.3 Use Case Preconditions

User has to be in the activity

6.8.4 Use Case Successful Post Conditions

User views food item details

6.8.5 Main Flow:

	Actor(s): User	System
1		Application opens in previously selected food item, loading appropriate details from database that belong to that item
2	Actor scrolls through details	

6.8.6 Alternate Flows:

	Alternate Flow	Description
2	Actor closes application	Application closes down
2	Actor selects left menu	Application displays categories to be selected on click
2	Actor selects right menu	Application displays user preferences to be selected on click

### 6.9 Use Case Name: Add to Favourites

User uses this system to add selected food item to favourites

6.9.1 Author: Joao Rodrigues

6.9.2 Actor(s)

User

6.9.3 Use Case Preconditions

User has to be in the activity

6.9.4 Use Case Successful Post Conditions

User views food item details

#### 6.9.5 Main Flow:

	Actor(s): User	System
1	Actor clicks on add to favourites	Validation
2		Application adds current food item to favourites list

#### 6.9.6 Alternate Flows:

	Alternate Flow	Description
1	Actor adds an item that is already in the favourites list	Application prompts the user and asks if he or she wishes to remove item from favourites
2	Actor closes application	Application closes down
2	Actor selects left menu	Application displays categories to be selected on click
2	Actor selects right menu	Application displays user preferences to be selected on click

### 6.10 Use Case Name: Favourites Page View

User uses this system to view favourites, access other categories, remove items from favourites and user preferences menu

6.10.1 Author: Joao Rodrigues

6.10.2 Actor(s)

User

6.10.3 Use Case Preconditions

User has to be in the activity

6.10.4 Use Case Successful Post Conditions

User selects an option from the favourites

6.10.5 Main Flow:

	Actor(s): User	System
1		Application opens in favourites page view
2	The actor selects an option and the appropriate use case is initiated: View: View favourites View: View food item details	

	Remove: Remove from favourites on hold	
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#### 6.10.6 Alternate Flows:

	Alternate Flow	Description
2	Actor closes application	Application closes down
2	Actor selects left menu	Application displays categories to be selected on click
2	Actor selects right menu	Application displays user preferences to be selected on click

### 6.11 Use Case Name: View favourite food items list

User uses this system to view a scrollable list of all favourite food items

6.11.1 Author: Joao Rodrigues

6.11.2 Actor(s)

User

6.11.3 Use Case Preconditions

User has to be in the activity

6.11.4 Use Case Successful Post Conditions

User views list of favourite food items

6.11.5 Main Flow:

	Actor(s): User	System
1		Application opens in selected page with appropriate list of favourite food items
2	Actor scrolls through list	Application scrolls through fetched items from database

#### 6.11.6 Alternate Flows:

	Alternate Flow	Description
2	Actor closes application	Application closes down
2	Actor selects left menu	Application displays categories to be selected on click
2	Actor selects right menu	Application displays user preferences to be selected on click

## 6.12 Use Case Name: Remove selected food item from favourites

User uses this system to remove a favourite food from list

6.12.1 Author: Joao Rodrigues

6.12.2 Actor(s)

User

6.12.3 Use Case Preconditions

User has to be in the activity

6.12.4 Use Case Successful Post Conditions

User removes food from favourites list

### 6.12.5 Main Flow:

	Actor(s): User	System
1	Actors holds on a food item	Application opens a prompt and requests confirmation
2	Actor confirms	Application removes selected food item from database, listview is updated

### 6.12.6 Alternate Flows:

	Alternate Flow	Description
2	Actor selects cancel	Application does not remove food item from favourites
2	Actor closes application	Application closes down
2	Actor selects left menu	Application displays categories to be selected on click
2	Actor selects right menu	Application displays user preferences to be selected on click

## 6.13 Use Case Name: Send Feedback

User uses this system to send an email to developer with feedback

6.13.1 Author: Joao Rodrigues

6.13.2 Actor(s)

User

6.13.3 Use Case Preconditions

User has to be in the activity

User needs to be connected to internet

#### 6.13.4 Use Case Successful Post Conditions

User sends email to developer with feedback

#### 6.13.5 Main Flow:

	Actor(s): User	System
1		Application opens a feedback form
2	Actor enters their email	
3	Actor enters their feedback message	
4	Actor selects send	Validate
5		Application sends email to developer
6		User is notified of success via a toast

#### 6.13.6 Alternate Flows:

	Alternate Flow	Description
4	Actor does not enter email or feedback message and attempts to send email	Toast will pop up notifying user, will not send email
4	Actor does not select send	Email won't be sent
6	Actor closes application	Application closes down
6	Actor selects left menu	Application displays categories to be selected on click
6	Actor selects right menu	Application displays user preferences to be selected on click

### 6.14 Use Case Name: Switch Language

User uses this system to switch application and database items language to English or French

#### 6.14.1 Author: Joao Rodrigues

#### 6.14.2 Actor(s)

User

#### 6.14.3 Use Case Preconditions

User has to be in the activity

#### 6.14.4 Use Case Successful Post Conditions

User changes application's language



#### 6.14.5 Main Flow:

	Actor(s): User	System
1	Actor selects a language	System notifies user via a toast and switches to chosen locale, changing the database that is being used as well as the UI strings

#### 6.14.6 Alternate Flows:

	Alternate Flow	Description
1	Actor does not select different language	Language won't change
1	Actor closes application	Application closes down
1	Actor selects left menu	Application displays categories to be selected on click
1	Actor selects right menu	Application displays user preferences to be selected on click

## Mockups

*Figure 1- Landing page*



*Figure 2 - Landing page on item hold*



Figure 3 - Categories menu



*Figure 4 - Category view*



Figure 5 - Food item details



Figure 6 - User Preferences Menu



*Figure 7 - Favourites view*





*Figure 8 - Favourites on item hold*



*Figure 9 - User manual view*



*Figure 10 - Send Feedback*

Send Feedback

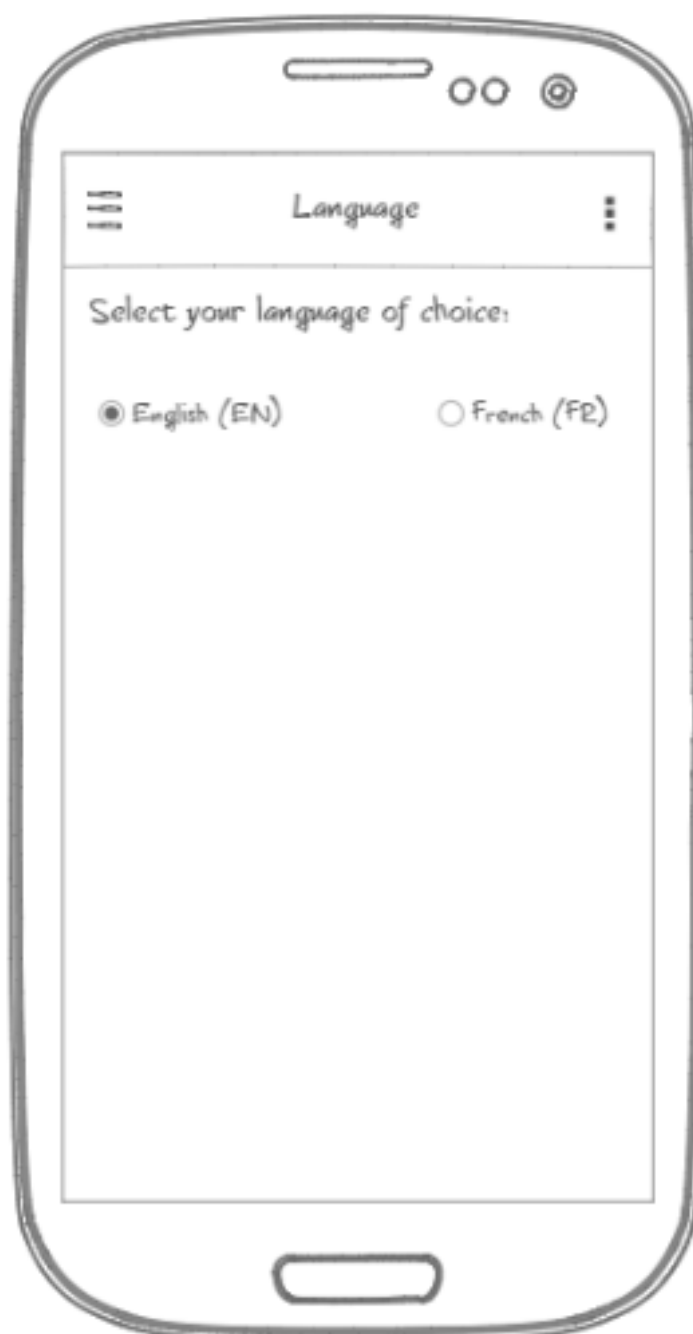
Enter your email:

someone@hotmail.com

Enter your feedback:

Send

*Figure 11 - Language selection view*



*Figure 12 - About view*



## Timeline for Implementation

Development of the application will begin taking place after the due date for this proposal, on the 1<sup>st</sup> of November. Assuming that the due date for the project is 6 weeks after, the workload will be divided as such:

**Week 1** – Creation of databases and parsing of data

**Week 2** – UI design and components

**Week 3 & 4** – Coding and connecting databases

**Week 5 & 6** – Debugging and design/code cleanup