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# **Software Project Management Plan (SPMP)**

**Healthy Foodie Nutrition App**

**Project Manager/Group Members:**

**Legaspi, Celso Adrian D.**

**Pons, Scott Salvador**

**Esteva, Darryl**

**Lucena, Marga**

**TABLE OF CONTENTS**

1 INTRODUCTION.....	3
1.1 Project Overview.....	3
1.2 Project Deliverables.....	4
2 PROJECT ORGANIZATION.....	4
2.1 Software Process Model.....	4
2.2 Roles and Responsibilities.....	5
2.3 Tools and Techniques.....	7
3 PROJECT MANAGEMENT PLAN.....	8
3.2 Assignments.....	13
3.3 Timetable.....	14
4 ADDITIONAL MATERIALS.....	15

## Document Change Control

This section provides control for the development and distribution of revisions to the Project Charter up to the point of approval. The Project Charter does not change throughout the project life cycle, but rather is developed at the beginning of the project (immediately following project initiation approval, and in the earliest stages of project planning). The Project Charter provides an ongoing reference for all project stakeholders. The table below includes the revision number (defined within your Documentation Plan Outline), the date of update/issue, the author responsible for the changes, and a brief description of the context and/or scope of the changes in that revision.

Revision Number	Date of Issue	Author(s)	Brief Description of Change
1	12/11/2017	Legaspi, Celso Adrian D. Pons, Scott Salvador Nicolas, Miguel Mariano, John Benedict Esteva, Darryle Navarro, Fredriek Granada, Aron Justin	Revised information to the ff.: <ul style="list-style-type: none"><li>● Software process model</li><li>● Resources needed</li><li>● Project deliverables</li><li>● Tools and techniques</li><li>● Risks</li><li>● Use Case Points</li></ul>

## 1 INTRODUCTION

### 1.1 Project Overview

The purpose of the project is to create a web-based game application that will prevent future complications of malnutrition and to provide an innovative teaching concept that gives an opportunity for children to learn the basic nutrition food groups and healthy food practices, and these will also help inculcate in children good decision in choosing for healthy food options as early as possible. Good health and proper nutrition are essential for a child to fully achieve his full potential for growth and development.

### 1.2 Project Deliverables

1. Software Project Management Plan (SPMP) – It contains the overall overview of the project such as the goals, documentations, and the progress of the actual product.
2. Software Requirements Specification (SRS) – Description of what the client want to be in our product.
3. Software Test Document (STD) – A document describing each of the software's functions. Detailing its inputs and outputs.
4. Prototype – it provides an idea of what the final product would look like.

## 2 PROJECT ORGANIZATION

### 2.1 Software Process Model

In figure 2-1 shows that Rapid Application Development (RAD) is the process model that is going to be used in this project. This process is to ensure that cost and development time is reduced by involving users in every phase of systems development and allows the development team to make necessary adjustments quickly as the design evolves.

#### 2.1.1 Requirements Planning

In the requirements planning phase, the team researches on the current situation for preparing the requirements on scope and objective of the system. Next, we define the requirements, the outline of the system model and scope of the proposed system are developed in this task. Management issues that affect the development and transition activities are also identified. Then an estimated cost and duration of the implementation of the system is prepared. Approval to proceed with the implementation is obtained.

### **2.1.2 User Design**

In the user design phase, the team produces a detailed system model. Next, we develop the outline system design where interactions between functions and data are identified. Then, we refine system design where the consistency of analysis and design are confirmed via interaction analysis. After that, the implementation plan is developed and an estimate of the effort necessary to complete the task is made and summarized for an overall cost estimate. Lastly, the outline design and the implementation plan of the system are finalized and is presented and discussed for approval for construction.

### **2.1.3 Construction**

In the construction phase, the team prepares for rapid construction. The team prepared the development environment and the CASE tools are used. Next, we construct the system where the detailed definition of the design is completed and software to implement the automated functions are developed and tested. Then, we generate test data that will explain how the system is to be operated by the users and computer operations are produced. After that we prepare for transition procedures and arrangements. Lastly, the system is put into test to ensure that the system is complete and performs accordingly to the requirements.

### **2.1.4 Cutover**

In the cutover phase, the information necessary for the system is converted from existing data into a format accessible by the new system. Next, the converted data is then loaded into the data structures associated with the system. The necessary adjustments to the hardware and software configuration system are completed.

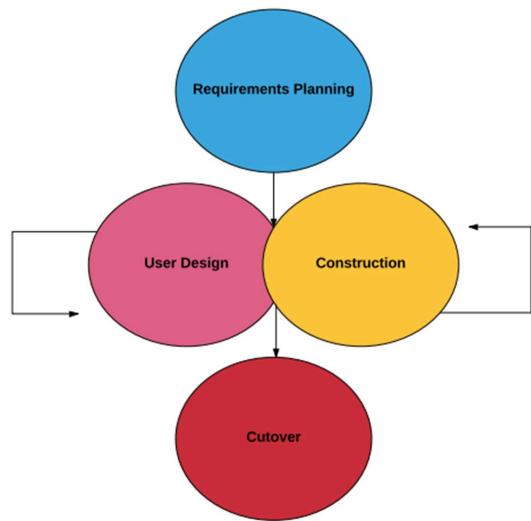


Figure 2-1: Rapid Application Development Model

## 2.2 Roles and Responsibilities

ROLES	NAME	RESPONSIBILITIES
1. Project Manager	• Legaspi, Celso Adrian	<ul style="list-style-type: none"><li>• Planning and Defining Scope.</li><li>• Activity Planning and Sequencing.</li><li>• Resource Planning.</li><li>• Developing Schedules.</li><li>• Time Estimating.</li><li>• Cost Estimating.</li><li>• Developing a Budget.</li><li>• Documentation.</li></ul>

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## Healthy Foodie Nutrition App

2. Systems Analyst	<ul style="list-style-type: none"> <li>● Mariano, John Benedict</li> </ul>	<ul style="list-style-type: none"> <li>● Defines application problem by conferring with clients; evaluating procedures and processes.</li> <li>● Develops solution by preparing and evaluating alternative workflow solutions.</li> <li>● Controls solution by establishing specifications; coordinating production with programmers.</li> <li>● Validates results by testing programs.</li> </ul>
3. Business Analyst	<ul style="list-style-type: none"> <li>● Nicolas, Miguel</li> </ul>	<ul style="list-style-type: none"> <li>● Assisting with the business case</li> <li>● Planning and monitoring</li> <li>● Eliciting requirements</li> <li>● Requirements organization</li> <li>● Translating and simplifying requirements</li> <li>● Requirements management and communication</li> <li>● Requirements analysis</li> </ul>
4. Developer/s	<ul style="list-style-type: none"> <li>● Granada, Aron Justin</li> <li>● Pons, Scott Salvador</li> </ul>	<ul style="list-style-type: none"> <li>● Establishing a detailed program specification through discussion with clients</li> <li>● clarifying what actions the program is intended to perform</li> </ul>

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		<ul style="list-style-type: none"><li>● Breaking down program specification into its simplest elements and translating this logic into a programming language</li><li>● Working as part of a team, which may be established purely for a particular project to write a specific section of the program</li></ul>
5. Quality Assurance Officer/s	<ul style="list-style-type: none"><li>● Esteva, Darryl Diego</li><li>● Navarro, Fredriek Vhong</li></ul>	<ul style="list-style-type: none"><li>● Determining, negotiating and agreeing on in-house quality procedures, standards and specifications</li><li>● Assessing customer requirements and ensuring that these are met</li><li>● Setting customer service standards</li><li>● Specifying quality requirements of raw materials with suppliers</li><li>● Investigating and setting standards for quality and health and safety</li><li>● Ensuring that manufacturing processes comply with standards at both national and international level</li><li>● Working with operating staff to establish procedures, standards, systems</li></ul>

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		and procedures • Writing management and technical reports and customers' charters
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### 2.3 Tools and Techniques

#### 1. Open Project

- **Gantt chart**

Is the tool we used to measure and predict the entire scope of our project to provide the estimated schedule and the duration it requires to accomplish the Healthy Foodie Nutrition App.

Each activity has an allotted date and time to be able to predict the final date to accomplish the said project. (Note that the target date may change due to delays and/or the success or failure of each activity)

The Information in the Gantt chart was used as a basis to create the Pert chart.

- **PERT Chart**

The PERT Chart is the tool we used to schedule, organize, and coordinate tasks within a project. It is constructed with the information provided by the Gantt chart. Each activity is assigned to an index since most of them have a predecessor. That means you cannot move or skip to another activity without finishing the previous one or its predecessor.

#### 2. Trello

Is the project management application we used to create, edit, share, and collaborate our activities and files used in our project.

#### 3. Ms Excel

We used the Ms excel in computing the values of the tables used in the charts used such as the Gantt chart and the Pert chart.

#### 4. Lucid Chart

One of the tools used to create the pert diagram is the website Lucidchart.com. It is an online simulator used to create and design your own custom pert chart critical path. It is an ideal tool for creating professional diagrams. Because it's completely browser-based, users can switch devices and enjoy cross-platform collaboration.

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#### 6. Justinmind

A website that will be used to generate our proposed prototype

### SWOT ANALYSIS

#### Strengths

User Friendly

Educes the User

Capable to evaluate students learning

#### Weaknesses

Possible that the user might not understand the Content

#### Opportunities

spread awareness about nutrition

Prevent future complications of malnutrition

#### Threats

Unexpected bugs and glitches

Figure 2: SWOT ANALYSIS

### 3 Project Management Plan

Tasks	Description	Deliverables and Milestones	Resources Needed	Dependencies and Constraints	Risks and Contingencies
<b><u>3.1.1</u></b> <b><u>Task-1</u></b> <b><u>Meeting with the Client.</u></b>	First time meeting with our client in order to discuss the system.	Acceptance of our team to the client's specification s	Microsoft Word – for creating certain document s Pen- For taking notes.	Dependencies – Team collaboration and the cooperation of the client. Constraints – The group's schedule will vary or experience conflict depending on the time of the client	The developer might encounter misunderstanding between his/her meeting with the client
<b><u>3.1.2</u></b> <b><u>Task-2</u></b> <b><u>Requirements</u></b> <b><u>Gathering</u></b>	Discussion about the details that they specifically needed . The specifications of the software we are to produce and	Discussion of the system without flaws and about the specification	Microsoft Word – for creating certain document s.	Dependencies – n/a Constraints – The group must	Some requirements might not be affordable for the

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	how its output would look like	s		concur with the client's said schedule. Completion of request to avoid any process delay	students
<b><u>3.1.3 Task-3 Brainstorming the project</u></b>	Talk about on how is the distribution of tasks in creating software to each member be distributed.	Concrete Plan about the whole system. Created a visual about the future of the system.	Document paper that contains the information/data gathered Microsoft PowerPoint – for creating powerful presentations.	Dependencies – The letter for approval must be approved. Constraints – Time allotment for the interview with the client. Schedule is strictly followed by the group	Each and every one of the members has a different perspective on how will they think the project will succeed
<b><u>3.1.4 Task-4</u></b>	Any tools virtual or physical that we	Complete requirement	Interviewee – the	Dependencies –	The creation

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<b><u>System Prototyping and Design</u></b>	need to execute the proper project. These so-called expectations or requirements should be relevant, detailed, and feasible.	s for the whole system to fully function without problems	one that has the guts to ask questions about the project	What was the concrete between the client and our group. Constraints – Accessibility of resource s Knowledge of every tools and resource s to be used Backup of resource s	of the prototype could be costly and it could be a waste of resources because the prototype is a sample and is yet to be improved and eventually replaced with a better system.
<b><u>3.1.5 Task-5 Systems Requirements and Specification</u></b>	analyze and interpret the data that we gathered including the production of the SPMP	Completely understand what the sole purpose of the whole datum gathered and the SPMP enlists what the	Microsoft Word – To document gathered data Gantt Chart – Used to display the timetable	Dependencies – Requirements gathered and Pre-Gathered Data Constraints –	The specifications required by the client cannot be implemented by

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		client should want.		Group coordination Time allotment for every each group member	the team due to factors like lack of resources /devices to use in the project and many others.
<b><u>3.1.6</u></b> <b><u>Task-6</u></b> <b><u>Evaluation</u></b>	Any tools virtual or physical that we need to execute the proper project..	System functions and do's & don'ts from the provided plan.	Microsoft Word – To list down and specify requirements. Lucidchart - used to produce our process models Process Models – it shows the workflow of the system.	Dependencies – The requirements need to be planned first. Constraints – Software is accessible in a particular place	Problems may still be encountered during the evaluation process such as System failure, bugs, and logical errors. Inability to meet the client's specification and many others.
<b><u>3.1.7</u></b>	Planning about	System	Programm	Dependence	If the

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<b><u>Task-7</u></b> <b><u>Final</u></b> <b><u>Documentation</u></b>	how the software will look and work.	specification will be fully functional and is useful without flaws	ing languages - The software will be programmed with applicable programming tools. Fit requirements for the specifications needed for the system	ncies – must be related to the way it was planned and organized	final documentation does not match the system's function and deployment. If the final documentation is inaccurate and unclear
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### 3.2 Assignments

Member	Assignment
<b>Esteva, Darryl Diego</b>	Write the Tools and Techniques, help in other tasks such as Dependencies and Constraints and Risks and Contingencies.

<b>Granada, Aron Justin</b>	Write the Dependencies and Constraints
<b>Legaspi, Celso Adrian</b>	Write the Introduction which includes the Project Overview and the Project Deliverables
<b>Mariano, John Benedict</b>	Write the Tasks and description and Roles and Responsibilities
<b>Navarro, Fredriek</b>	Write the Risks and Contingencies and helps on other tasks
<b>Nicolas, Miguel</b>	Write the Deliverables and Milestones and the Resources needed
<b>Pons, Scott Salvador</b>	Create and analyze the Software Process model

## Healthy Foodie Nutrition App

**Commented [1]:** display all associated text of this diagram in landscape also

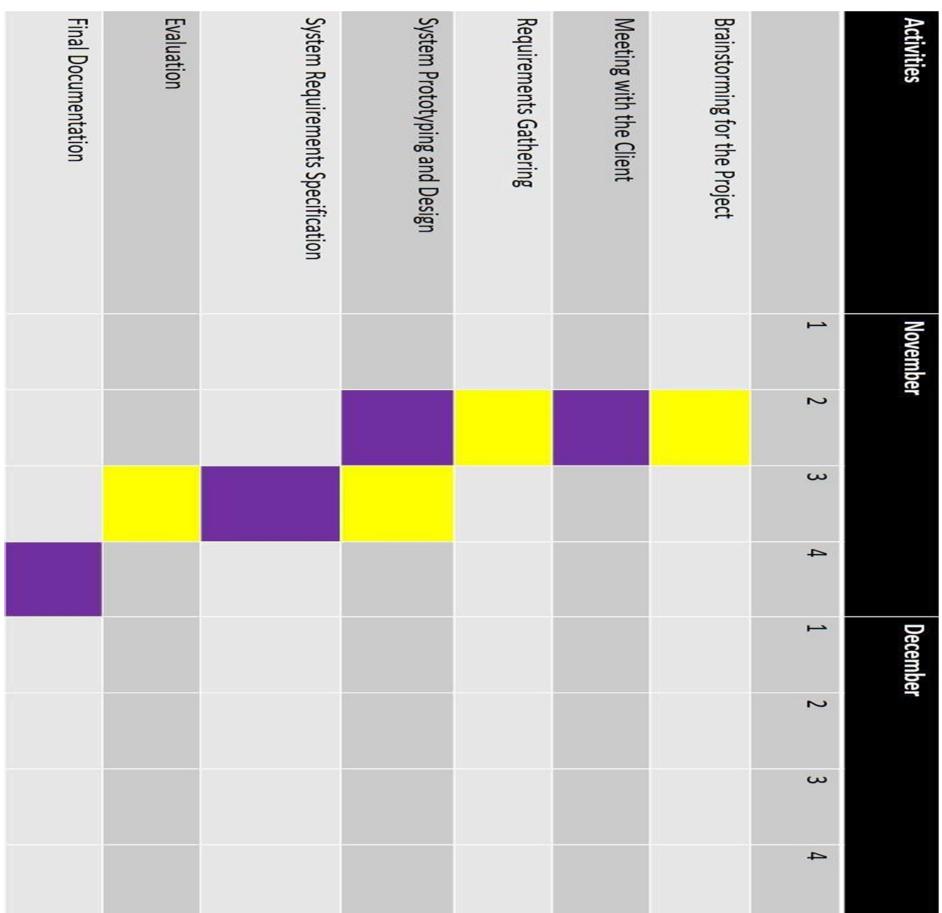


Figure 3: Gantt chart table. It shows the estimated time to accomplish our assignments.

**4 ADDITIONAL MATERIALS**

- PPT presentation from Doctor Gan
- Transcript of the interview
  - Through the interview that we had conducted with our client, the requirements for the system was immediately propose. And discussed to us on how important this project would be, because many children can benefit from this application. All throughout the meeting, we talk about how the game works and the components of it and then after a week a prototype was proposed to her and she gives opinion on how we will make improvements for the application and have a little time to talk about the things to clarify.
- Word Document - it was provided by our client to have a reliable source of food classification

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# **Software Requirements Specification**

**UST Pay Hospital Nutrition Center**

**Healthy Foodie Nutrition App**

**Document Revision #3**

**Prepared by**

**Legaspi, Celso Adrian D.**

**Pons, Scott Salvador**

**Esteva, Darryl**

**Lucena, Marga**

## Table of Contents

1	4
1.1	4
1.2	4
1.3	4
1.4	4
1.5	5
2.	5
2.1	5
2.2	5
2.3	5
2.4	6
2.5	6
2.6	6
2.7	6
3.	7
3.1	7
3.2	17
3.3	17
3.4	17
4.	18
4.2	19
5.	19
5.1	19
5.2	19
5.3	20
6.	20

## Revision History

Name	Date	Reason For Changes	Version
Legaspi, Celso Adrian Pons, Scott Salvador Nicolas, Miguel Mariano, John Benedict Esteva, Darryl Granada, Aron Justin Navarro, Fredriek	30/11/20 17	<ul style="list-style-type: none"> <li>● remaking of the storyboard</li> <li>● safety requirements</li> <li>● Italic words</li> <li>● alignment of the page layout</li> <li>● Additional references</li> <li>● updated data from the client</li> </ul>	1

# 1 Introduction

## 1.1 Purpose

The proposed system is intended to develop a Healthy Foodie Nutrition App that creates and validates a modern interactive nutrition teaching module for the children to learn more about nutrition. This application is designed to answer by children ranges from six to ten years old, and it consists of different phases that are presented in English language that includes a Filipino translation.

## 1.2 Document Conventions

When writing this document it was inherited that all requirements have the same priority. First there is also a presented overall view about the Healthy Foodie Nutrition Application where all features and functions are analyzed in detail. It's scope is to describe the requirements of the Healthy Foodie Nutrition Application and the interfaces for it. This document has been created after the Software Project Management Plan and it is important to note that future changes to the program should be included in this Software Requirements Specification document, in order to maintain its usefulness. Since the program has not been implemented, and it can be used as manual for development of system.

## 1.3 Intended Audience and Reading Suggestions

The intended Readers and Audience for this documentation are Software Engineering Professors, Project Manager, Developers, Business Analysts, System Analysts, and Client. The structure of the Software Requirements Specification (SRS) is to exemplify the main concept of system software. The audience and readers are intended for the concept to introduce and to report the scope and applicable material of the system. Generally Description is intended for the reader to be understood.

## 1.4 Product Scope

Our team's product is a Healthy Foodie Nutrition web-based game application for children ranges from six to ten years old that will help them to gain proper nutrition by choosing the amount and kind of food that can teach the basic food groups such as Go, Grow, and Glow food, and how it will be applied to the Filipino food plate. It also imparts the concept of traffic light food group and afterwards compares the knowledge of children before and after completing the game through pre-test and post-test.

## 1.5 References

- \* **PowerPoint Presentation** - a slide presentation entitled “Development and Validation of Healthy Foodie, A Nutrition Application for Kids” was used as the source of information
- \* **Word Document** - it was provided by our client to have a reliable source of food classification

## 2. Overall Description

### 2.1 Product Perspective

The Healthy Foodie App is an educational, self-contained and a web-based game application for children to learn and understand the importance of nutrition and how it impacts not only their physical body but their health and lifestyle. Basically, it is a game for children and a simple user interface for children to understand and comprehend. It is an application designed for children to learn at the same time to have fun.

### 2.2 Product Functions

**The following are the product functions present in the project:**

- A Home with a user-friendly graphical user interface designed specifically for children.
- Short educational lectures about nutrition.
- Educational game for children to classify the go, grow, and glow foods and to understand the importance of nutrition.
- Makes use the concept “Traffic Light Food Group” to be well informed and serves as a guide for children what to eat and what they should avoid.

### 2.3 User Classes and Characteristics

There are two types of users that can communicate with the system: The intended users or the children, and the System Developer.

Users Classes	User Characteristics
Children (six to ten years old)	They are the intended users of the application for them to learn and to apply the proper nutrition as part of their lifestyle and also for educational purposes.

<b>System Developer</b>	The System Developer is also granted access for they are the one to contact in case of problems encountered while using the system and also to troubleshoot and make changes if and when it deems necessary.
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Table 1: User classes and Characteristics

## 2.4 Operating Environment

The application will operate on a web and it is accessible via the internet which is preferably designed for children and will also be able to play or use via smartphones for the convenience of the users since not all the children in the community has the access to computers.

## 2.5 Design and Implementation Constraints

The primary design of the application is set to be both attractive and interactive to children only for them to be more focused and attracted to the game. The other constraint aspect of the application is the accessibility, considering that it is a web-based application, therefore internet connection is a must to run or play this game application.

## 2.6 User Documentation

### Documentation components (Information and resources used in the prototype) :

- American Academy of Pediatrics: the 5-2-1-0 program
- Cardiometabolic Complications of Obesity.  
Source: <https://www.ncbi.nlm.nih.gov/pubmed/19046736>
- FNRI(Food And Research Institute) Burden of Obesity in Children.
- Philippine National Nutritional Survey conducted by FNRI.
- Department of Science and Technology (Information presented in the prototype)

## 2.7 Assumptions and Dependencies

- Assumptions
  - Internet connection is a must
  - Guide on the process on how will the application will run
  - Required specifications on what we must on the application
  - website on where to find the web application
- Dependencies
  - System requirements that is needed to satisfy our client
  - Each pre-requisite that should be done to move on to other assignments
  - Standard classification of food groups based on department of energy

### **3. External Interface Requirements**

#### **3.1 User Interfaces**

##### **3.1.1 Home Screen**



Figure 3.1.1: The title page is the first thing that you will encounter after executing the program.  
The user must click the Start button to start the game.

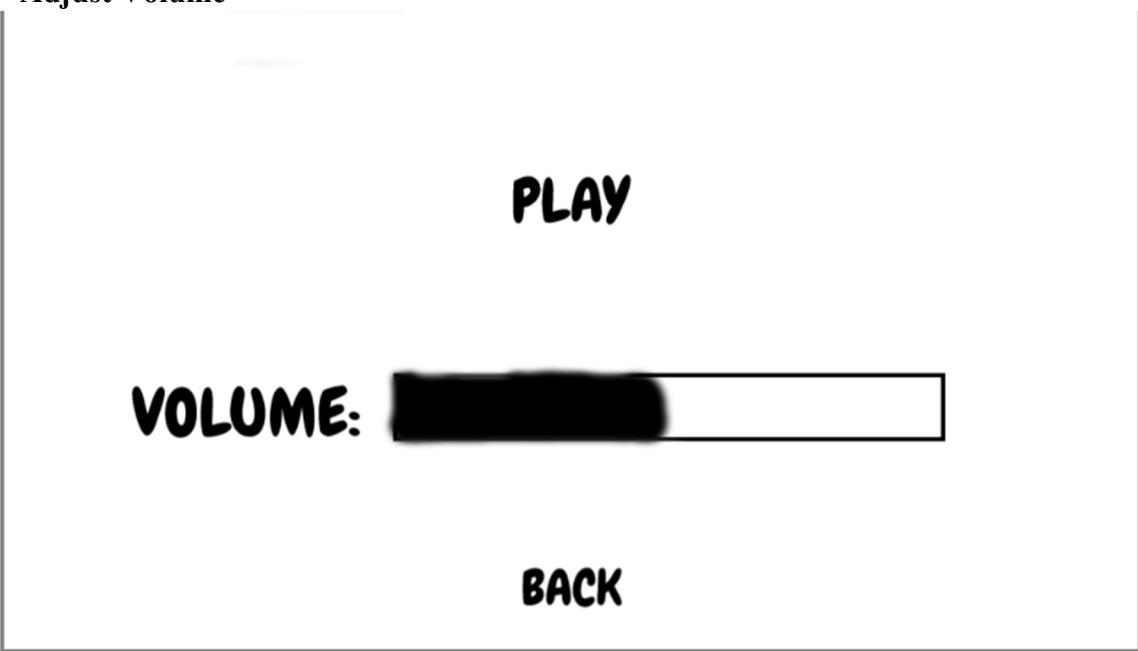
##### **3.1.2 Main Menu**



Figure  
3.1.3  
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on what  
will the  
user  
will do  
to  
continu  
e

**3.1.3**

Figure 3.1.4: The user has the capability to adjust his/her desired volume



#### 3.1.4 User Information

A screenshot of a mobile application interface titled "STUDENT'S INFORMATION". It contains four text input fields labeled "Name:", "Age:", "Sex:", and "Grade:". Each label is followed by a horizontal input field. At the bottom left is a "BACK" button, and at the bottom right is a "NEXT" button, both in a bold, black, sans-serif font.

3.1.5: the user will input the information needed before it starts the game

### 3.1.5 Pre-Test

**ANSWER THE QUESTION**

1) CARBOHYDRATES BELONG TO WHICH GROUP?

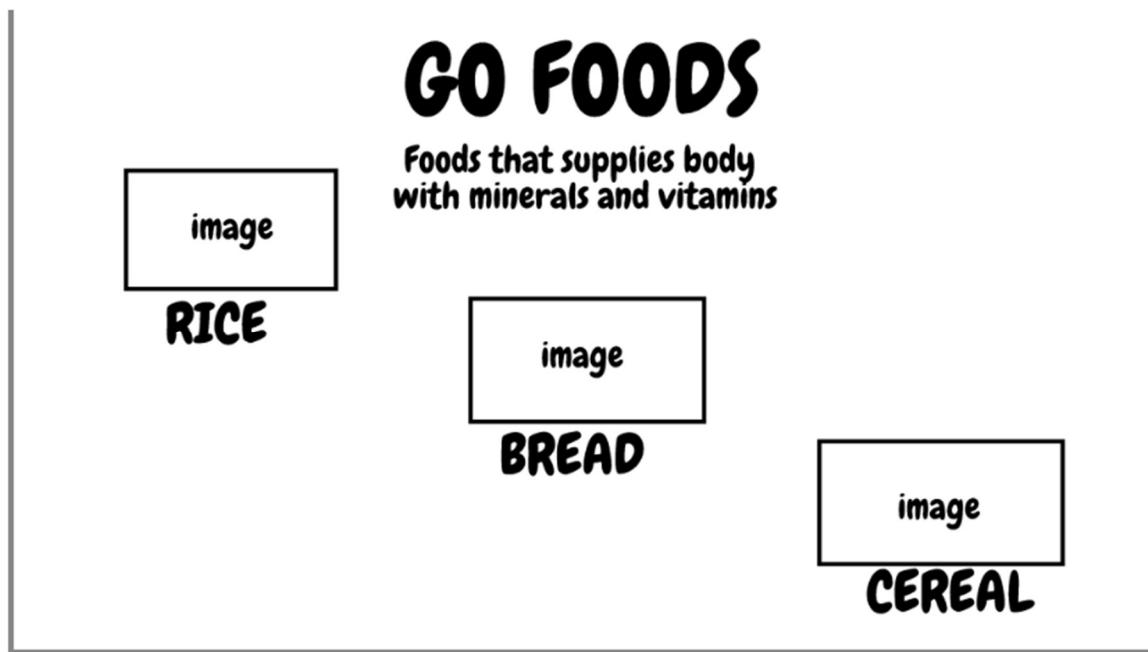
GO FOODS     GLOW FOODS     GROW FOODS

**BACK**

**NEXT**

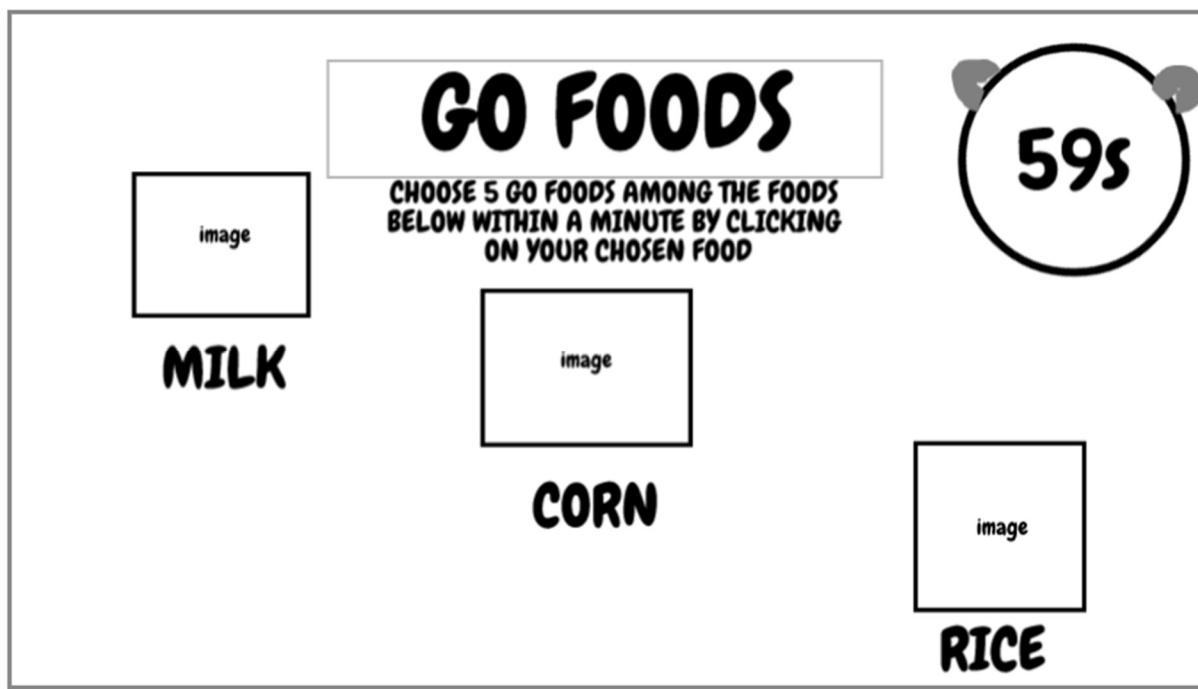
Figure 3.1.5: the user will needs to answer the pre-test questions by choosing from the choices

### 3.1.6 Go Foods Information and Sample



and shows a sample of it

### 3.1.7 Go Food Game, Instructions, and result



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### 3.1.8 Grow food Game and instructions

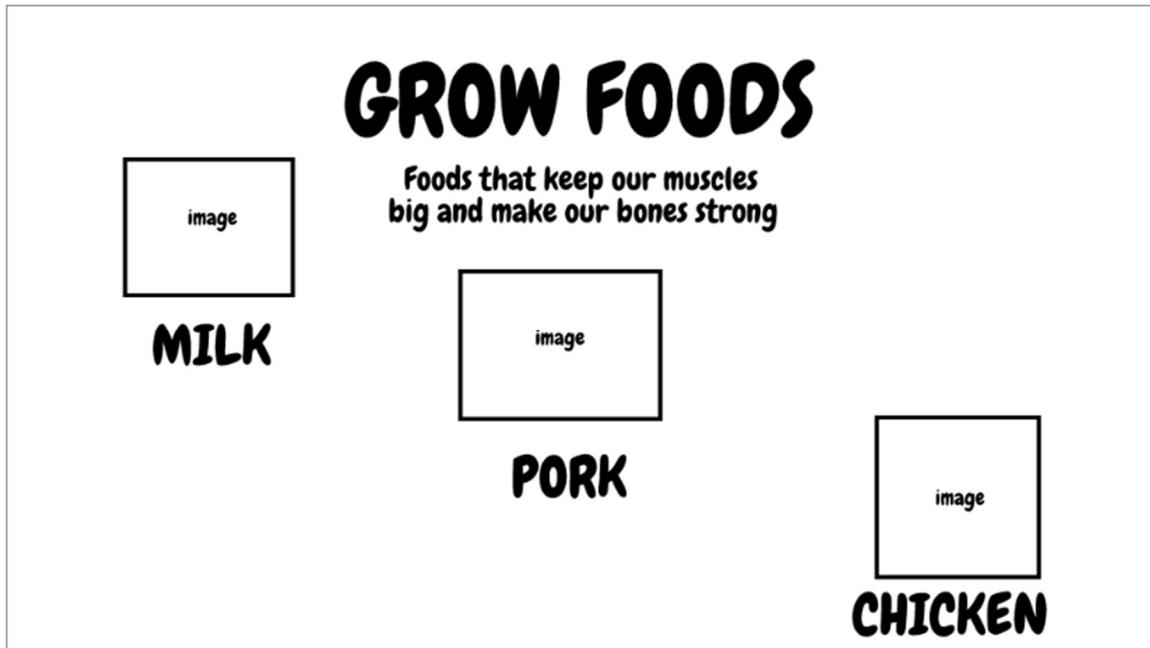
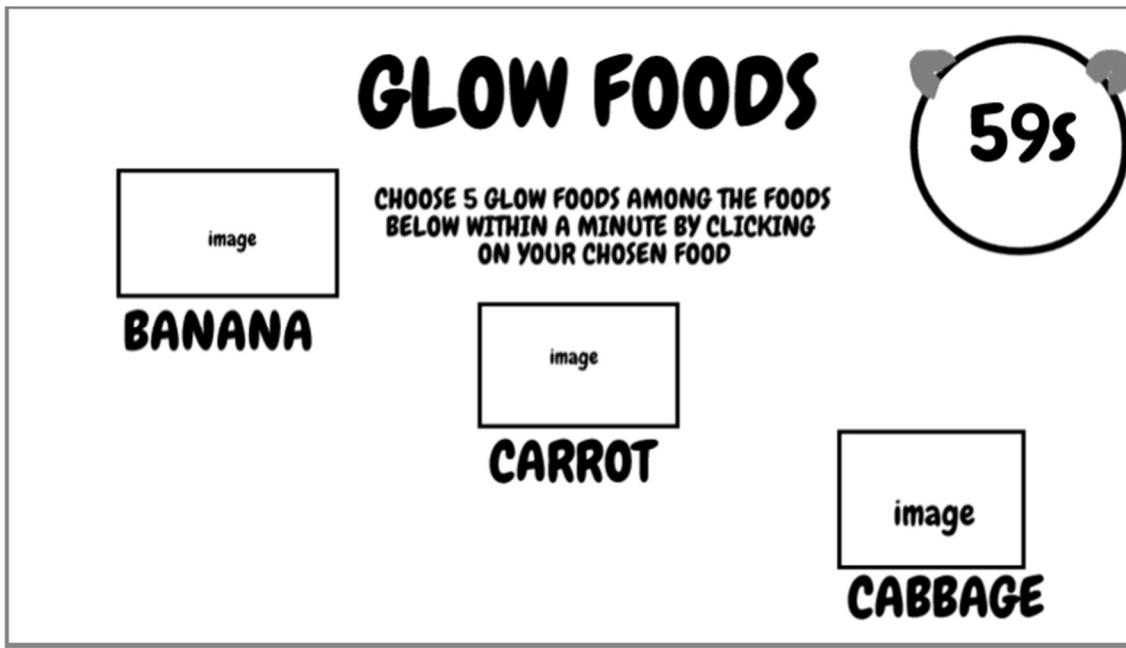


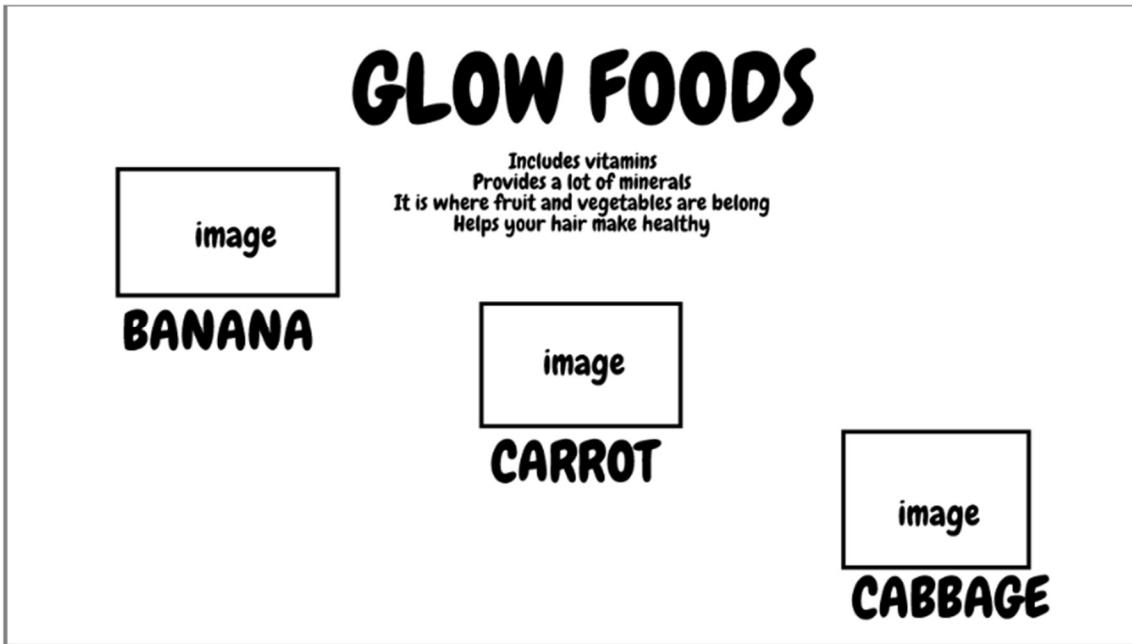
Figure 3.1.8.1: describe Grow foods and shows a sample of it



selected as follows

Figure  
3.1.8.  
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### 3.1.9 Glow food game and instructions



3.1.9.1: describe Glow foods and shows a sample of it

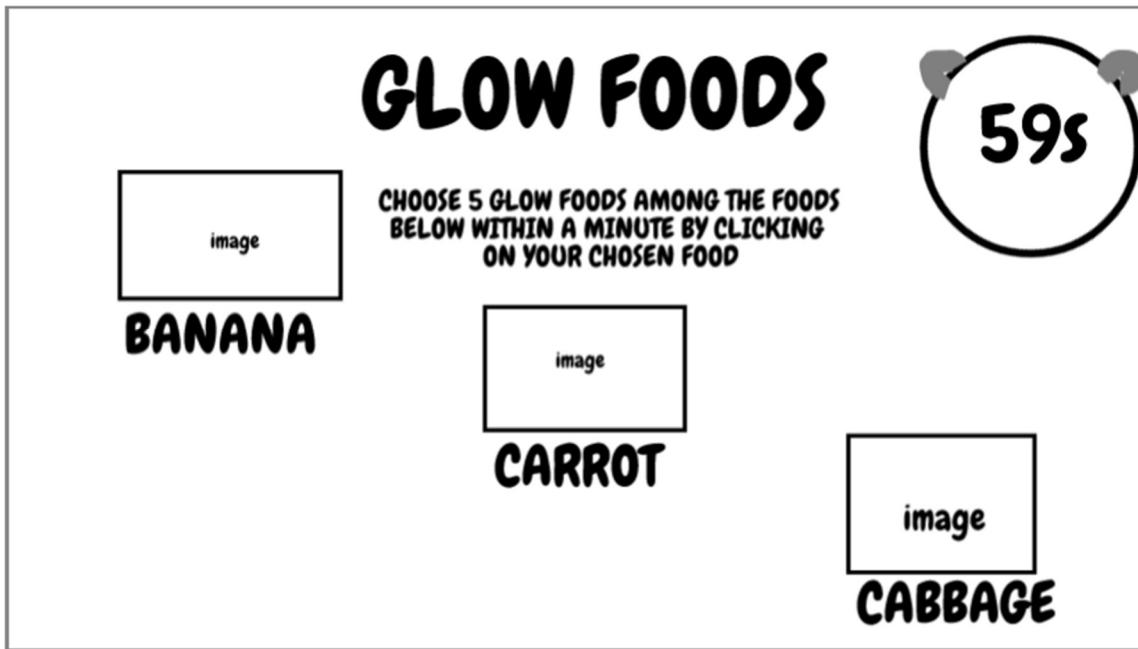


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W foods will be selected as follows

### 3.1.10 Filipino food plate

## Filipino Food Plate

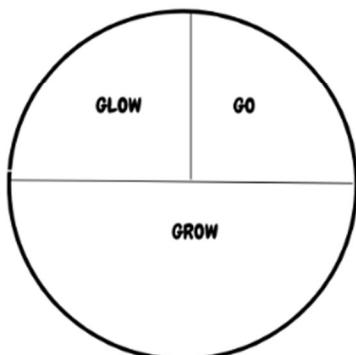


Figure 3.1.10: Food will be selected from each category by drag and drop method

### 3.1.11 Green Light food group game

## GREEN LIGHT FOODS

Good and healthy food choices  
that advice every particular  
individual to eat more.

image

RICE

image

MANGO

image

CABBAGE

Figure 3.1.11.1: describe Green light foods and shows a sample of it

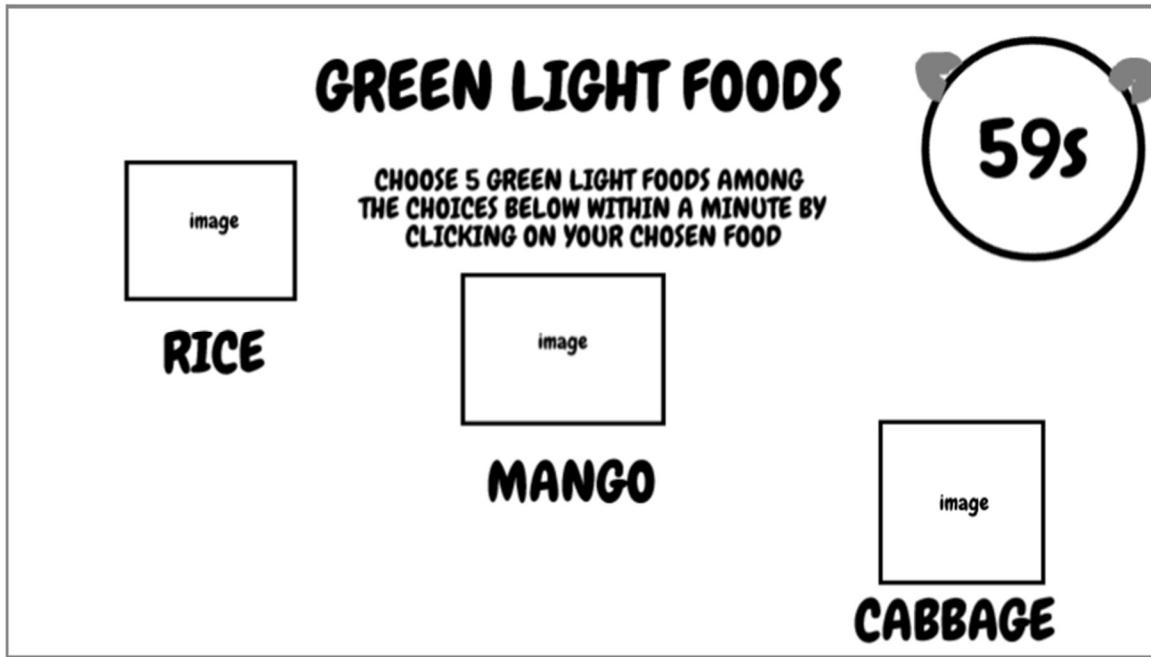


Figure 3.1.11.2: Green light foods will be selected as follow

### 3.1.12 Yellow food group game and instructions

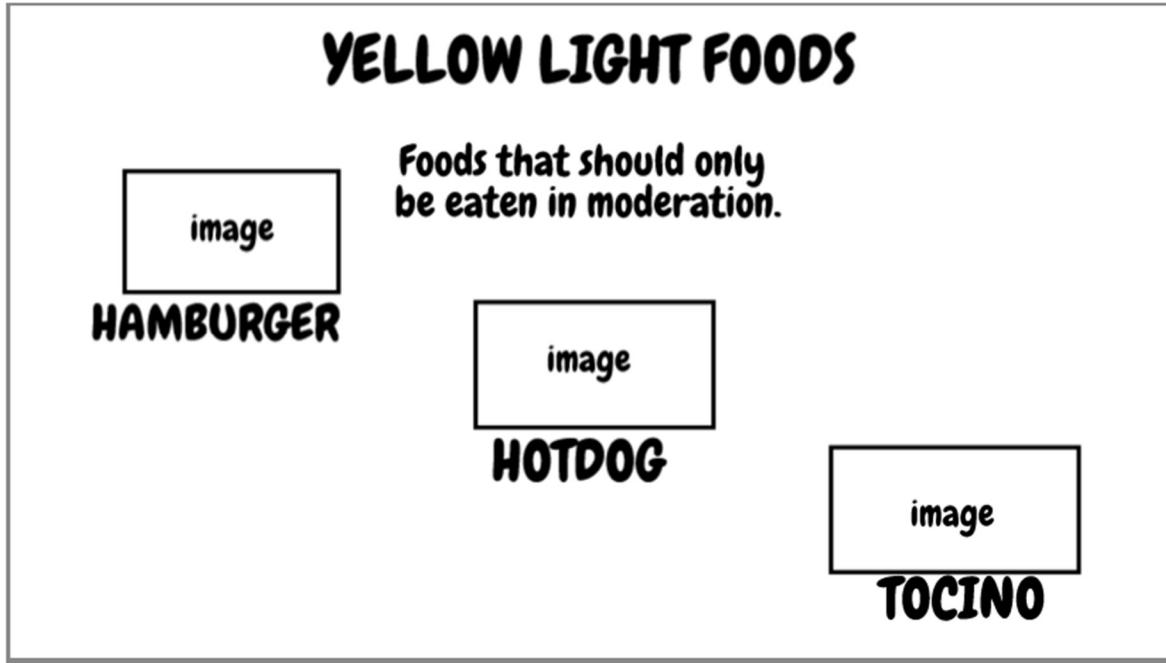


Figure 3.1.12.1: describe Yellow light foods and shows a sample of it

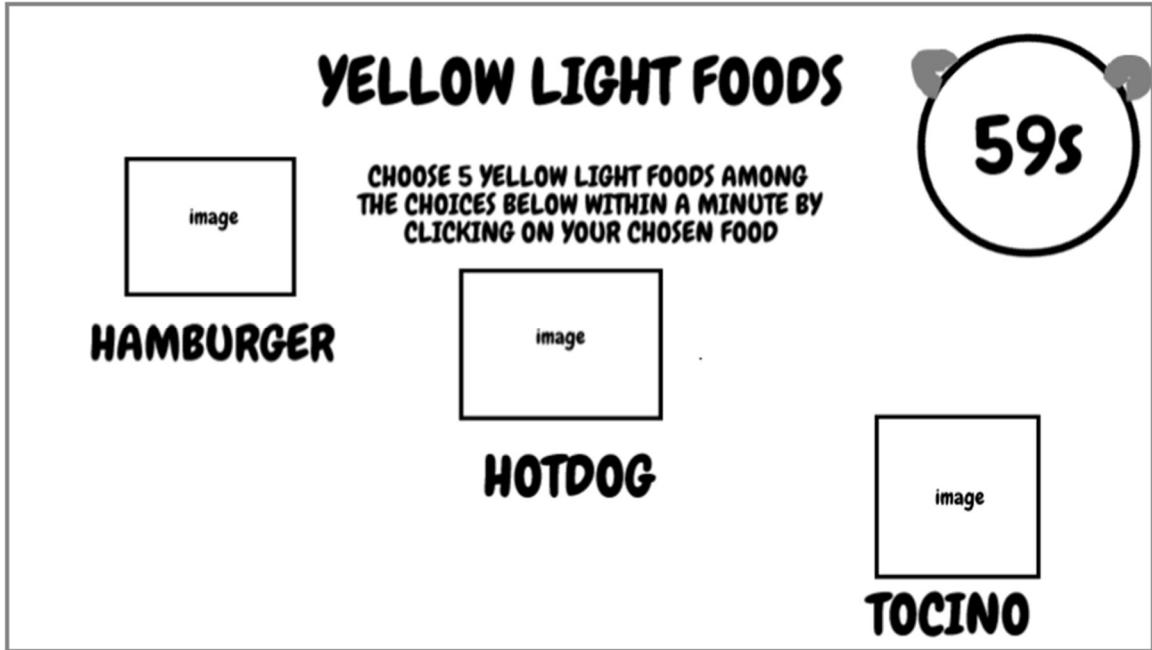
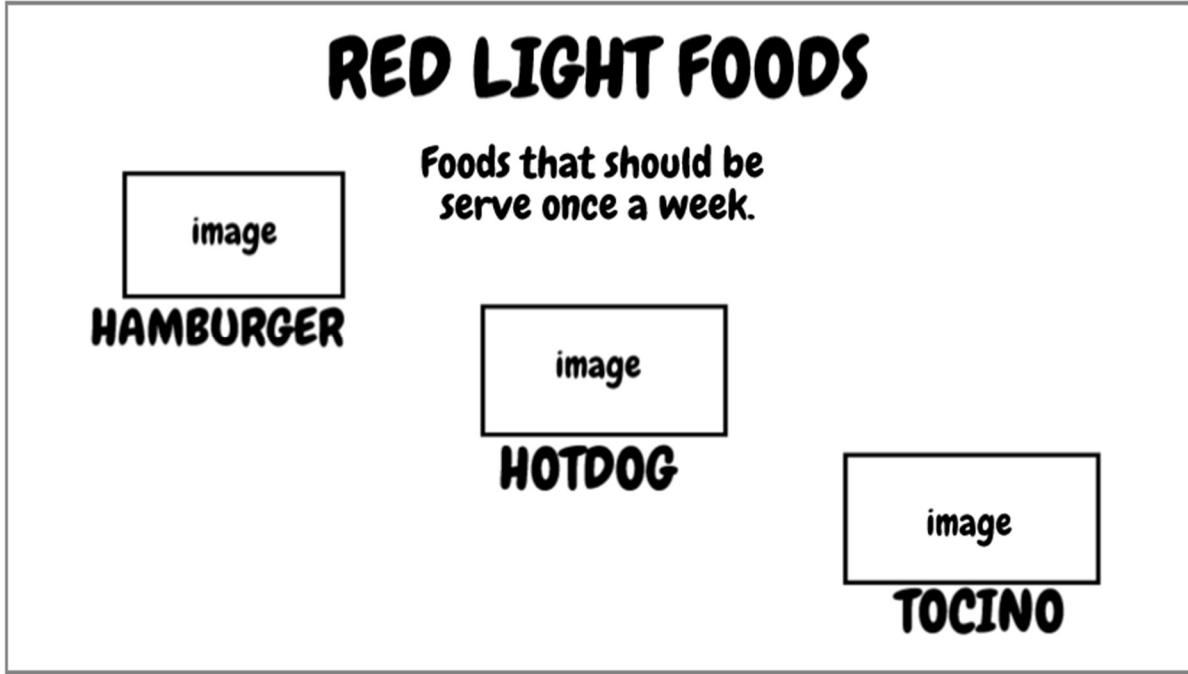


Figure 3.1.12.2: Yellow light foods will be selected as follows

### 3.1.13 Red light food group game and instructions



foods and shows a sample of it

Figure  
3.1.1  
3.1:  
Describ  
Red  
light

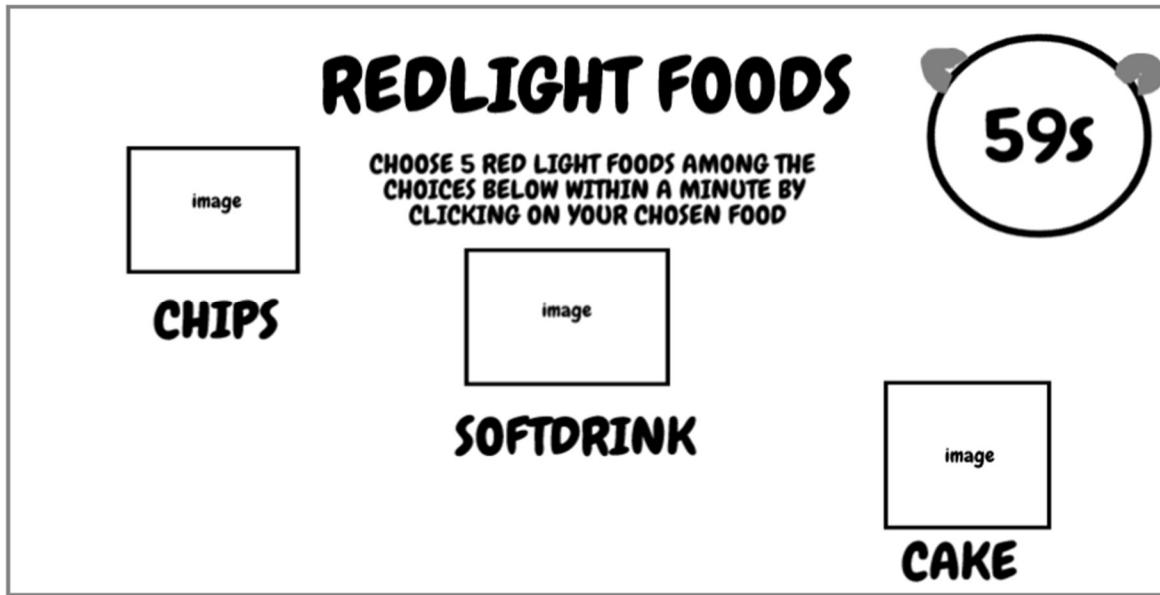


Figure 3.1.13.2: Red light foods will be selected as follows

### 3.1.14 Food pyramid

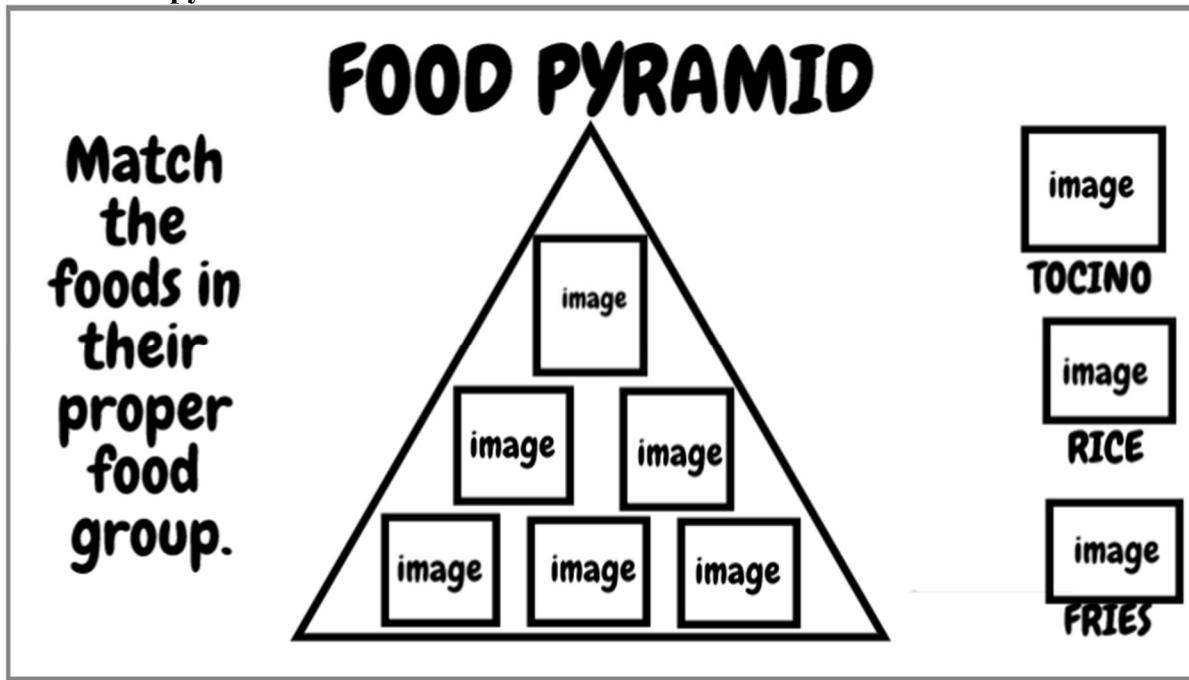


Figure 3.1.14: shows the food pyramid game that plays through drag and drop concept

### 3.2 Hardware Interfaces

The System need the following hardware devices to work:

- Complete Computer units
  - Monitor - enables the user to see the system's interface and view school records.
  - Keyboard - allows the inputting of data to the system
  - Mouse - helps a smooth navigation through the system
  - CPU - Processes the data received
- Database - It is where the scores of the students will be stored and shown.
- Power Supply -provides power to the Computer Units.

### 3.3 Software Interfaces

The healthy foodie nutrition web-based application is a program that helps people especially children to test their basic knowledge about nutrition, at the same time it will help the users not only to gain more information but also to have entertainment through the application and apply it on their daily lives.

It is connected to a database in order to store the data created in the progress. A specific browser will be used to run the game application.

### 3.4 Communications Interfaces

The following are the requirements associated with the communication functions of the system:

- The results from the program must be encrypted for the privacy purposes.
- The healthy foodie nutrition app should run smoothly throughout the process of running the program.
- The program shall use database to store the results.

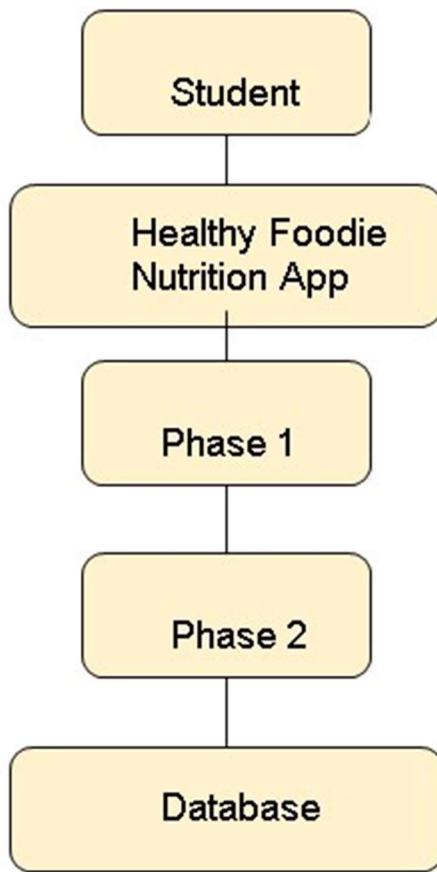


figure 2: communication function of the system

## 4. System Features

The web-based game application is the main feature to successfully implement the system. These requirements are highly needed for the system to work properly.

### 4.1 Go, Glow, Grow Food Game

#### 4.1.1 Description and Priority

- The game helps users to learn about go, grow, and glow foods through playing some mini-games and answering questions.

#### 4.1.2 Stimulus/Response Sequences

- Display the food names and figure for the given group.
- Mini-game where the player must pick all the right food of the given food group in a given amount of time and lives.
- There will be questions that must be answered to progress.

- Mini-game where the player must put the food in a plate with only 1 Go Food, 1 Grow Food and 2 Glow Foods.

#### 4.1.3 Functional Requirements

- There will be an overview on food's information and classification.
- There is a feature that pronounces the food's name
- Students must choose 5 proper foods in the given category.
- There will be questions for each food group.
- Students must choose 1 Go Food, 1 Grow Food and 2 Glow Foods.

REQ-1: Click the figure/name of the food/words.

## 4.2 Traffic Light Food Game

### 4.2.1 Description and Priority

- The game helps users to learn about green light, yellow light and red foods through playing some mini-games and answering questions.

### 4.2.2 Stimulus/Response Sequences

- Display the food names and figure for the given group.
- Mini-game where the player must pick all the right food of the given food group in a given amount of time and lives.
- There will be questions that must be answered to progress.
- Mini-game where the player must arrange the foods in the proper food group.

### 4.2.3 Functional Requirements

- There will be an overview on food's information and classification.
- There is a feature that pronounces the food's name
- Students must choose 5 proper foods in the given category.
- There will be questions for each food group.
- Students must match all the foods in the proper food group.

REQ-1: Click the figure/name of the food/words.

## 5. Other Nonfunctional Requirements

### 5.1 Data Confidentiality

Data gathered in the application is not explicitly shown to provide confidentiality and to focus on the learning of the clients without pressure and criticism.

### 5.2 Security

Authorized personnel or particularly the Doctor can access the database where the scores of a particular student can find.

### **5.3 Scalability**

The system also provides scalability since it is a web-based game application, therefore it is accessible via the internet and it is able to accommodate many clients as long as they have access to an internet with the supervision of their teachers, parents, or any other qualified personnel.

## **6. Other Requirements**

- Device that can access the internet
- any kind of browser

## **Appendix A: Glossary**

- Web-based application – any program that is accessed over a network connection using HTTP
- Database - a comprehensive collection of related data
- Swimlane Diagram - used in process flow diagrams, or flowcharts, that visually distinguishes job sharing and responsibilities for sub-processes of a business process
- Prototype - sample or model of a product built to test a concept or process or to act as a thing to be replicated
- Interface - program enabling a user to communicate with a computer

---

# **Software Design Description (SDD)**

**UST Pay Hospital Nutrition Center**

**Healthy Foodie Nutrition App**

**Document Revision #:**

**01**

**Date of Issue:**

**Project Manager/Group Members:**

**Legaspi, Celso Adrian D.**

**Pons, Scott Salvador**

**Esteva, Darryl**

**Lucena, Marga**

## TABLE OF CONTENTS

1. INTRODUCTION.....	3
1.1 Purpose.....	3
1.2 Scope.....	3
1.3 Overview.....	3
1.4 Reference Material.....	3
2. SYSTEM OVERVIEW.....	4
3. SYSTEM ARCHITECTURE.....	4
3.1 Architectural Design.....	4
3.2 Decomposition Description.....	6
3.3 Design Rationale .....	6
4. DATA DESIGN.....	7
4.1 Data Description.....	7
4.2 Data Dictionary.....	7
5. COMPONENT DESIGN.....	9
5.1 Class Diagram.....	9
5.2 Flow Chart.....	11
6. HUMAN INTERFACE DESIGN.....	15
6.1 Overview of User Interface.....	15
6.2 Screen Images.....	15
6.3 Screen Objects and Actions.....	29
7. REQUIREMENTS MATRIX.....	30

# **1. INTRODUCTION**

## **1.1 Purpose**

The proposed system is intended to develop a Healthy Foodie Nutrition App that creates and validates a modern interactive nutrition teaching module for the children, providing a fun activity to learn more about nutrition. This application is designed to answer by children ranges from six to ten years old, and it consists of different phases that are presented in English language that includes a of Filipino translation. This will serve as a guide to the components and features of our proposed system. This document is intended for our clients' approval.

## **1.2 Scope**

The “Healthy Foodie Nutrition Application” is a modern interactive nutrition teaching module for children to learn the basic nutrition food groups and healthy food practices. The game application will consist of two phases such as the concept of Go, Grow or Glow and the concept of traffic light food groups. Main features also include trivia question at end of every stage of each phase.

The main goal of the system is to create and validate a modern interactive nutrition teaching module for children, providing participants with an alternative fun activity to learn more about nutrition. This will enhance the user's knowledge on choosing the right amount and kind of food that they should have taken every day and it will help to develop good health and proper nutrition are essential for a child to fully achieve his full potential for growth and development.

## **1.3 Overview**

The document consists of the features concerning our web-based game application we created for our client. This document will clarify the requirements of the application that we will develop for the client for them to use it properly and with ease. It will also identify the content to be involved in the game application. This document also consists of the structural design of the data and the data flow and its architectural design to know its functionality and how it works.

## **1.4 Reference Material**

- **PowerPoint Presentation** - a slide presentation entitled “Development and Validation of Healthy Foodie, A Nutrition Application for Kids” was used as the source of information
- **Word Document** - it was provided by our client to have a reliable source of food classification
- **Web/Internet Images** - it provided us some images to use in the food group selection

## 2. SYSTEM OVERVIEW

As stated in our Software Project Management Plan, our game application aims to prevent future complications of malnutrition. The concept is to produce an innovative web-based game application teaching concept that enables the children to learn the basic food nutrition groups and food practices which plays an important part in helping the students to wisely choose healthy food options.

## 3. SYSTEM ARCHITECTURE

### 3.1 Architectural Design

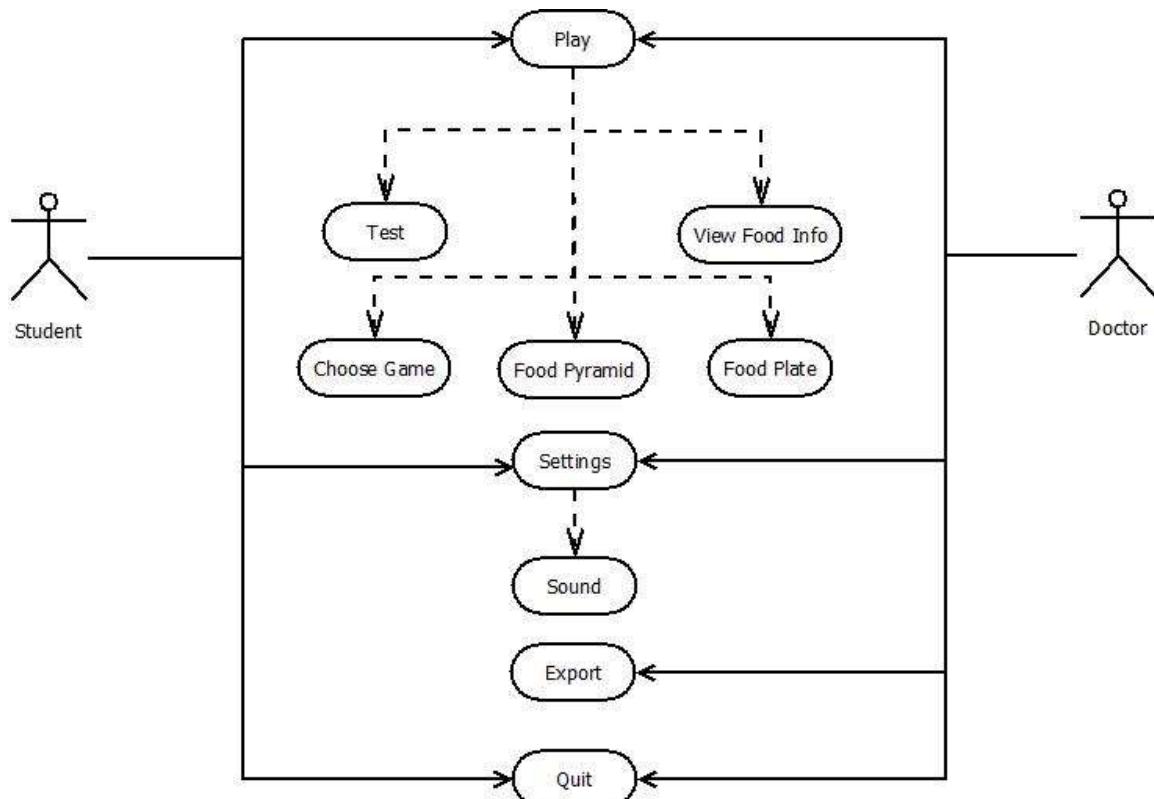


Figure 3.1.1: Use case diagram

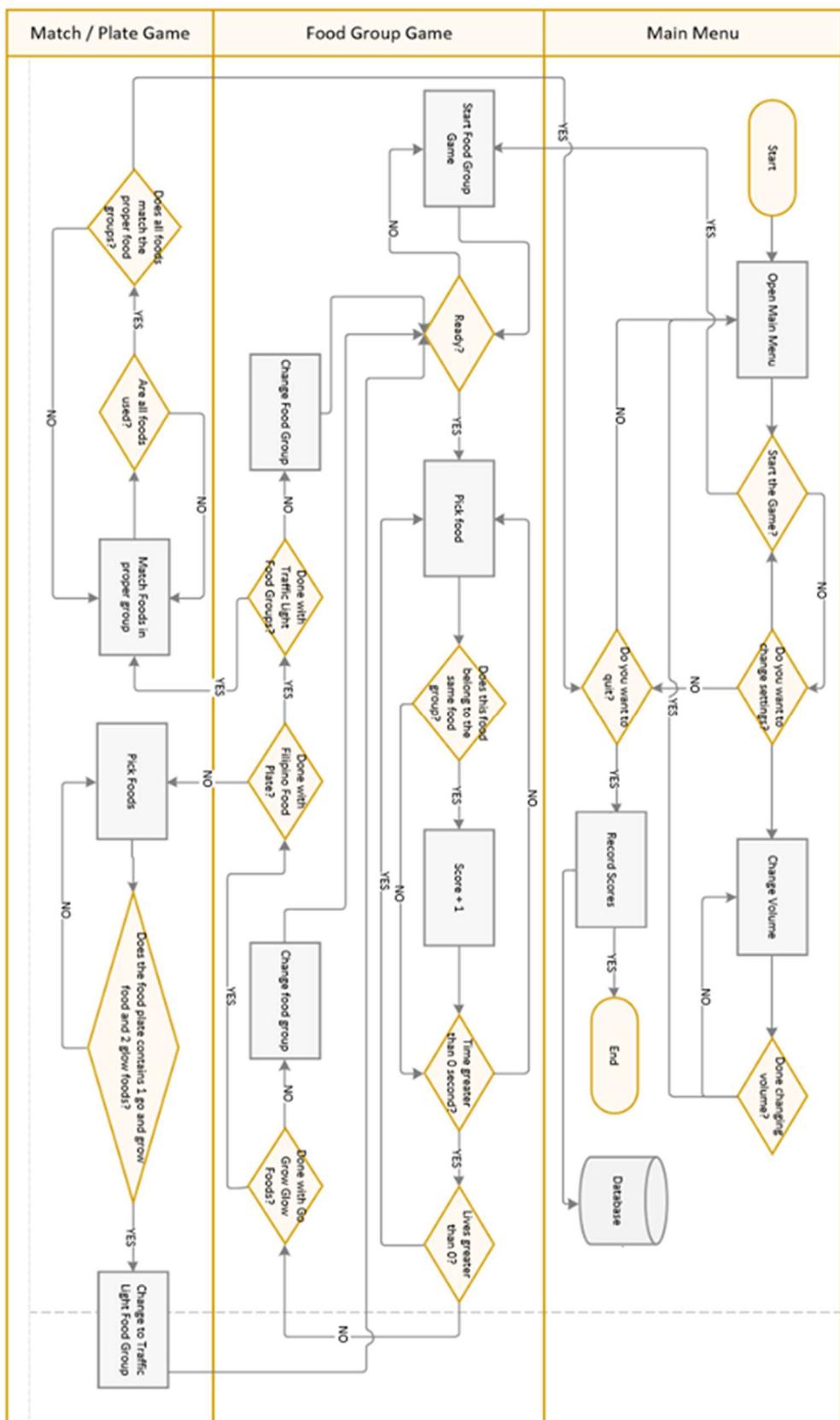


Figure 3.1.2: Swimlane Diagram

### 3.2 Decomposition Description

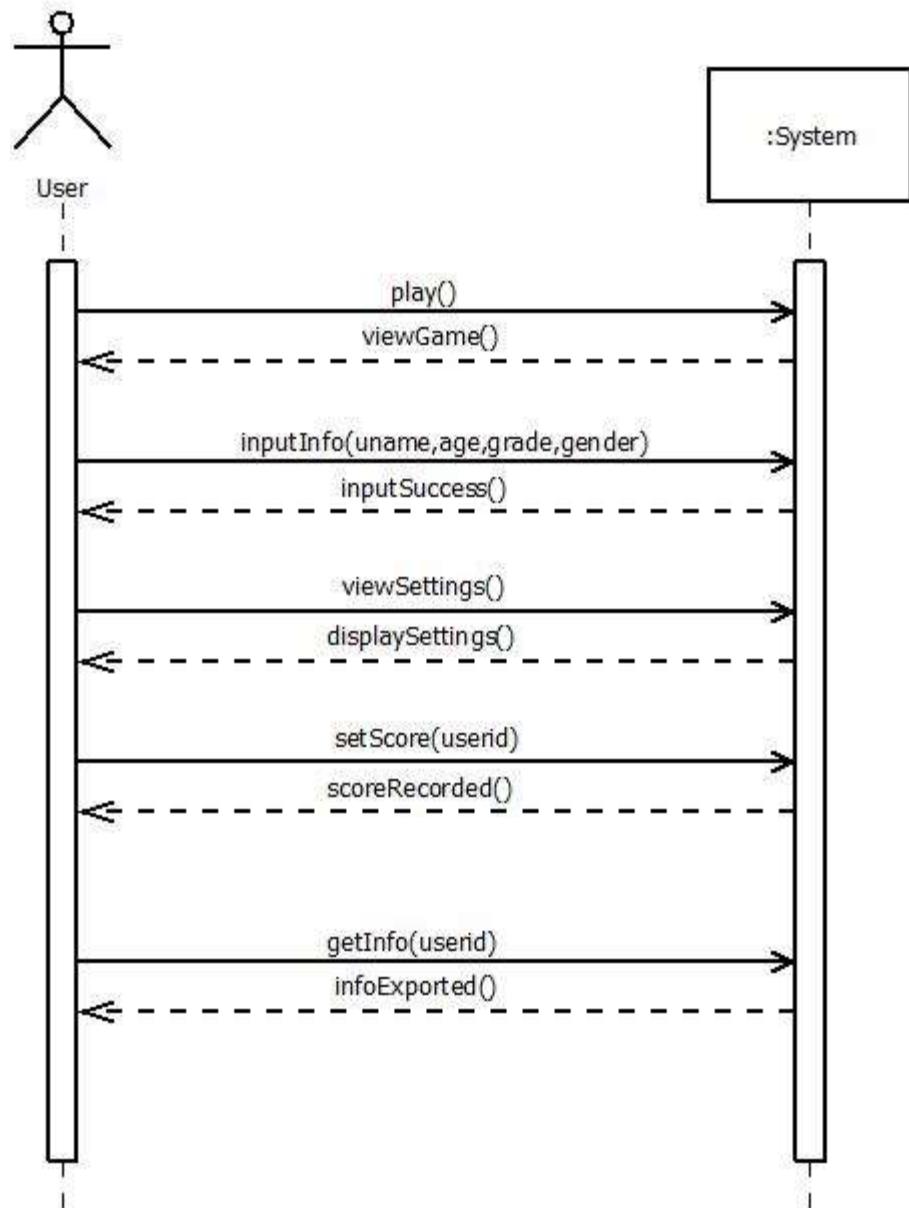
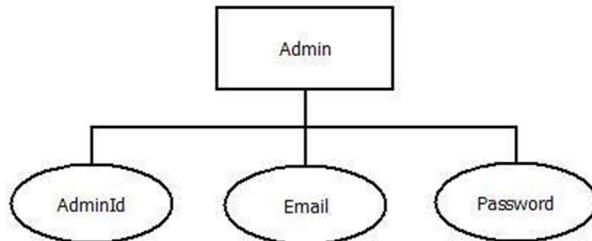
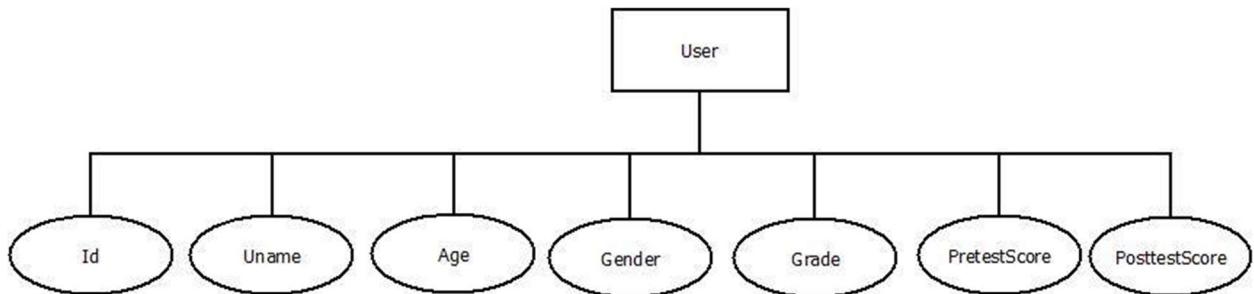


Figure 3.2.1 System Sequence Diagram

## 4. DATA DESIGN

### 4.1 Data Description

MySQL will be the program that the group would most likely use to store data into the server. The group chose this software in order to maximize every segment of information through questions and answers converted as the overall results. Output that will be given, shall be the overall performance done by the user itself.



**Figure 4.1 ER Diagram**

## 4.2 Data Dictionary

### 4.2.1 Summary of Tables

List of Tables	Name	Description
1	User	User's information

Table 1: summary of tables

### 4.2.2 User Table (tbl\_user)

Column Name	Type	Description or Notes
User_id	int(50)	User's unique ID
Uname	String	Username
Age	int	Age of user
Grade	String	Grade of the User
Gender	String	Gender of the User
Totalscore	int	Total score of the user

Table 2: User table

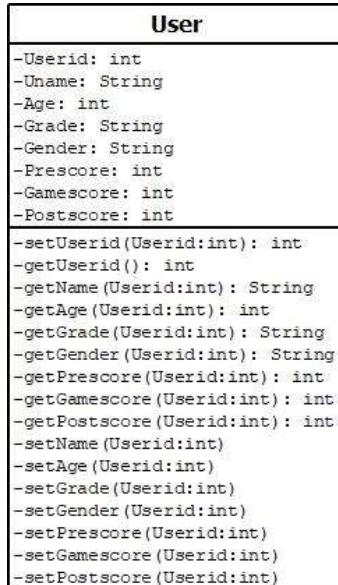
## 5. COMPONENT DESIGN

### 5.1 Class Diagram

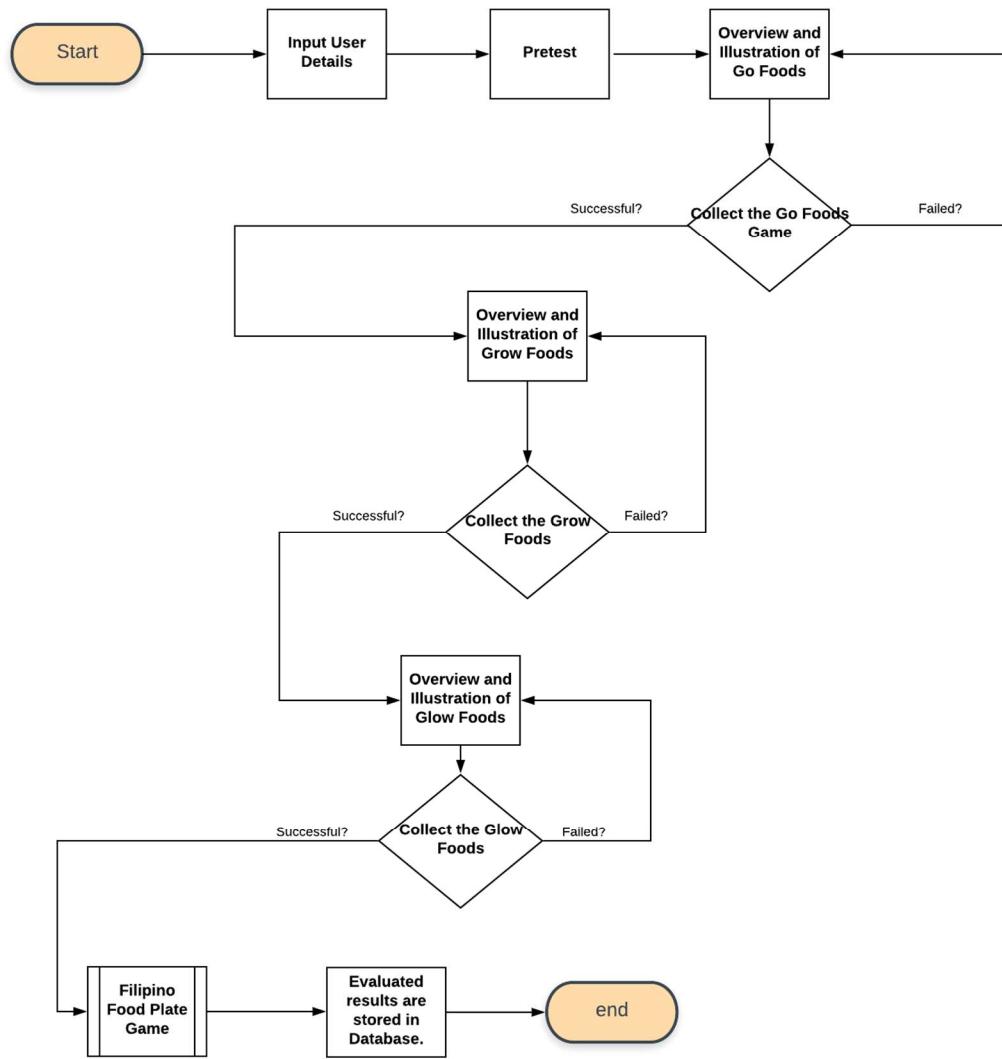
The class diagram shows the static structure of the system. The upper part of the box is the class name. The second part of the box is the attributes and the third part are the methods used in the system.

The “-” sign represents an attribute or method is set to private and the “+” sign means that the attribute or method is set to public. The Game class contains 2 attributes and 1 methods. The User class contains 8 attributes and 16 methods which are all set to private.

### 5.1 Class Diagram



## 5.2 Flow Chart



Flow Chart Diagram – Phase I, Part I (The Healthy Foodie Nutrition App)

## Pseudo code – Phase I, Part I (The Healthy Foodie Nutrition App)

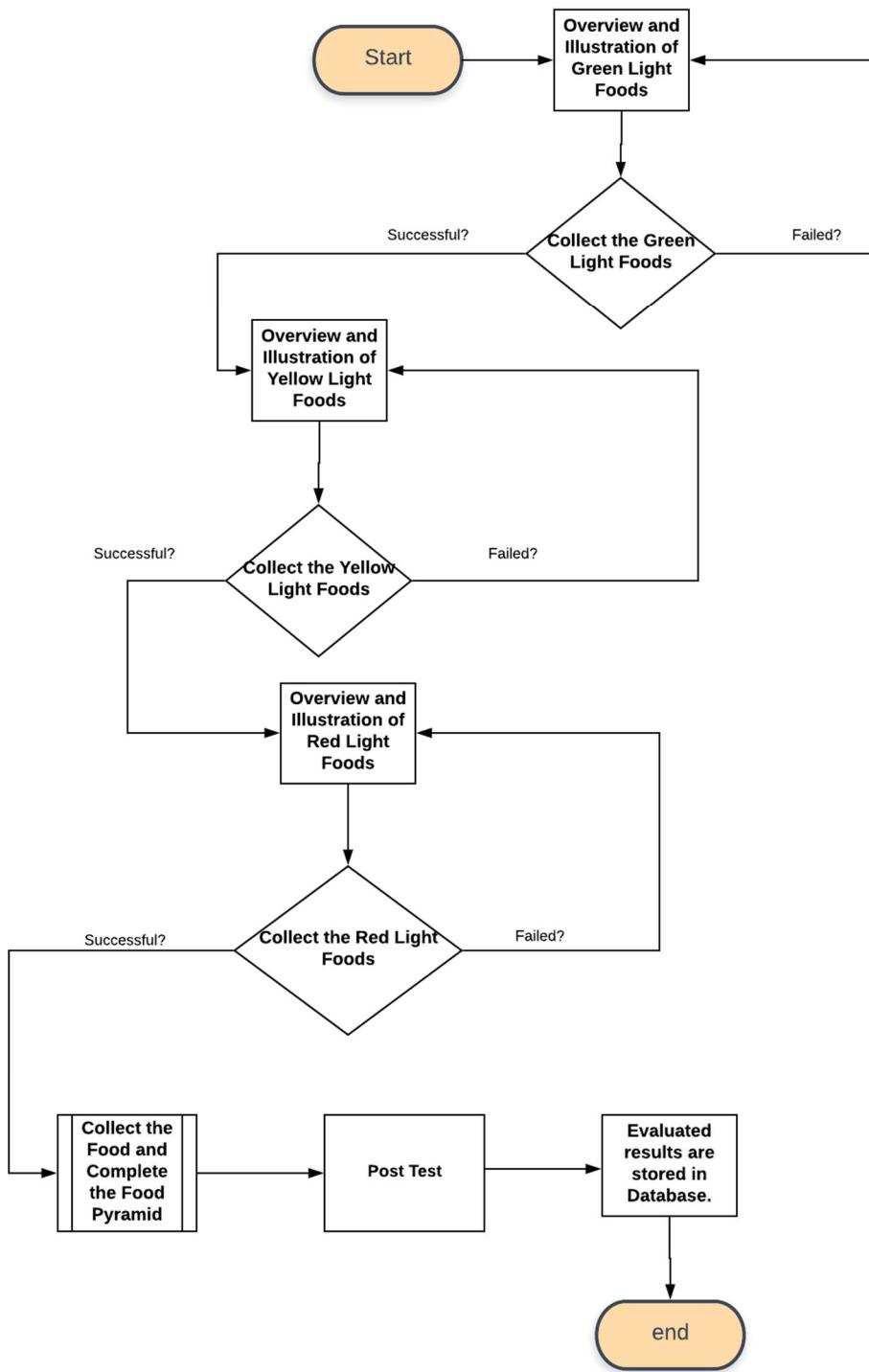
### Start

```
Start Game
Input user details.
Pretest
Overview and Illustration of Go Foods
Collect the Go Foods Game
Overview and Illustration of Grow Foods
Collect the Grow Foods Game
Overview and Illustration of Glow Foods
Collect the Glow Foods Game
Filipino Food Plate Game
Evaluated Results are stored in database
```

### STOP

Given the Figure above, the Chart presents how the flow of the Healthy Foodie Application operates. Since the application consists of two parts, there are two separate algorithms used in the program.

In part 1, the first step of the user is to Select a character, preceded with the presentation of the number of stages, and so forth. The logic behind the pseudocode is that if the user fails the current level (example: **Collect the Go Foods**), the program will loop back to the previous page where it displays the **Overview and Illustration of Go Foods** for them to review the Information about the Go Foods. Eventually, the user will end up with successfully completing the stage and will move on to the next level. The logic behind the pseudocode used to the next stages is similar to provide consistent data flow.



**Flow Chart Diagram – Phase I, Part II (The Healthy Foodie Nutrition App)**

## Pseudo code – Phase I, Part II (The Healthy Foodie Nutrition App)

### Start

Overview and Illustration of Green Light Foods  
Collect Green Light Food Game  
Overview and Illustration of Yellow Light Foods  
Collect Yellow Food Game  
Overview and Illustration of Red Light Foods  
Collect Red Light Food Game  
Collect the Food and Complete the Food Pyramid

### Post Test

Evaluated results are stored in Database

### End

### STOP

In phase 2, It also provides similar data flow with the logic used in phase 1. The additional data flow added is the **Summary of The Traffic Light Food Group**, where the algorithm gathers up all the information displayed in the previous **Overview and Illustration of the Green, Red, and Yellow Light Food Groups**. The preceding step is the Evaluation of the Trivia Questions (Without disclosing this information to the user), then the results will be stored in their current user session to be accessed only during the user's evaluation process.

### Data Structure

Credentials =	Select a Character
User Performance =	Trivia questions result +Time left + Number of lives left of the User.+ trivia question summarization

## **6. HUMAN INTERFACE DESIGN**

### **6.1 Overview of User Interface**

The user interface of the program is user-friendly. Our target users are children, so the words and pictures that will be used for the game must be understandable for the children. Our program is a web-based game application, so internet connection is a must. Before starting the game, there is title page in which the user must click Start to begin.

### **6.2 Screen Images**

We will be using graphical user interfaces (GUI) for the parts of the game that include the button's functions, text and the pictures. The GUI elements will be able to help the children throughout the game.

#### **6.2.1 Home Screen/Main Menu**



The title page is the first thing that you will encounter after executing the program. The user must click the Start button to start the game.

### 6.2.2 Adjust Volume



The user can adjust the volume before entering the game.

### 6.2.3 Input Username



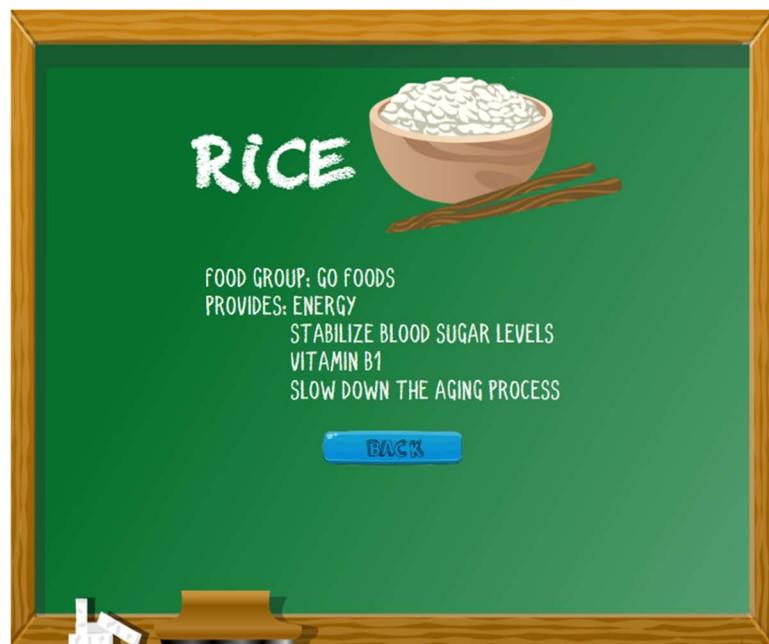
The user will input their name before the game starts to have a information on who is currently playing.

#### 6.2.4 Go Foods



This is the first topic that the user will be encountering after clicking start. It shows the Go Foods and the foods that belong to that group.

#### 6.2.5 Food Information



When you click a food that you want, a popup will appear showing the food's classification and nutrients you will get.

### 6.2.6 How to Play



After familiarizing with Go Foods, the user will have to click Continue to proceed to the game. This page shows the instruction on how to play the game.

### 6.2.7 Go Collect



The user must choose 5 Go Foods at a given time limit. For this example, the limit is 1 minute.

### 6.2.8 Grow Foods



After answering, Grow Foods are introduced.

### 6.2.9 Grow Collect



The user must choose 5 Grow Foods at a given time limit.

### 6.2.10 Glow Foods



The last classification of foods is introduced which is Glow Foods.

### 6.2.11 Glow Collect



The user must choose 5 Glow Foods at a given time limit.

### 6.2.12 Pop Quiz #1



A pop quiz will be given to the user to check if the student (user) has learned something

### 6.2.13 Pop Quiz Answer



It will show the answer from the given question.

#### 6.2.14 Pop Quiz #2



A second pop quiz will be given to the student.

#### 6.2.15 Pop Quiz Answer



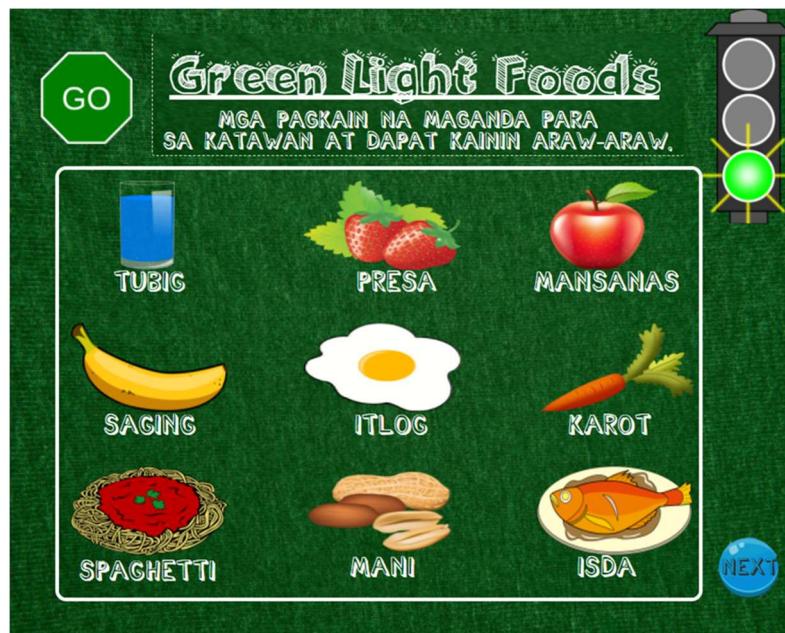
It will show the answer from the given question.

### 6.2.16 GGG Foods



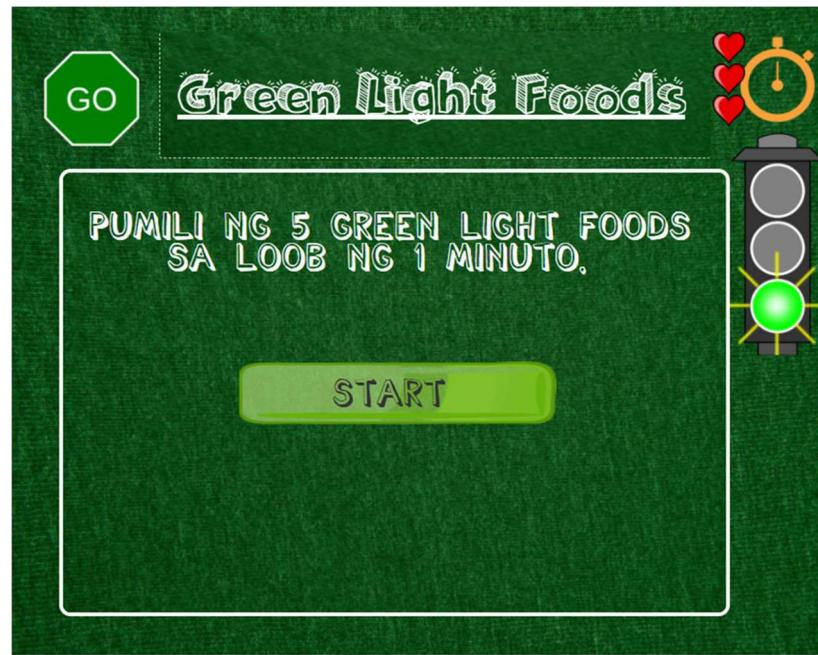
In here, you will create your own plate by dragging 1 Go, Grow and Glow each. This is to verify that the children learned throughout the game

### 6.2.17 Green Light Foods



After completing the first stage, it will introduce a new classification of foods which is Green Light Foods.

### 6.2.18 Green Light Instructions



This page shows the mechanics of the game

### 6.2.19 Green Light Collect



The user must choose 5 Green Light Foods at a given time limit.

### 6.2.20 Yellow Light Foods



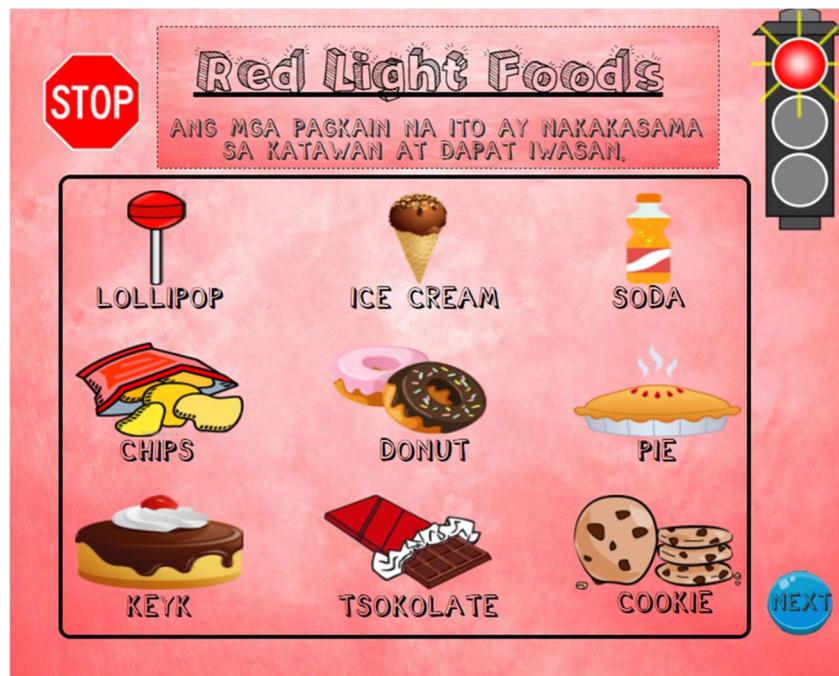
This page introduces the Yellow Light Foods and the foods they belong to the group.

### 6.2.21 Yellow Light Collect



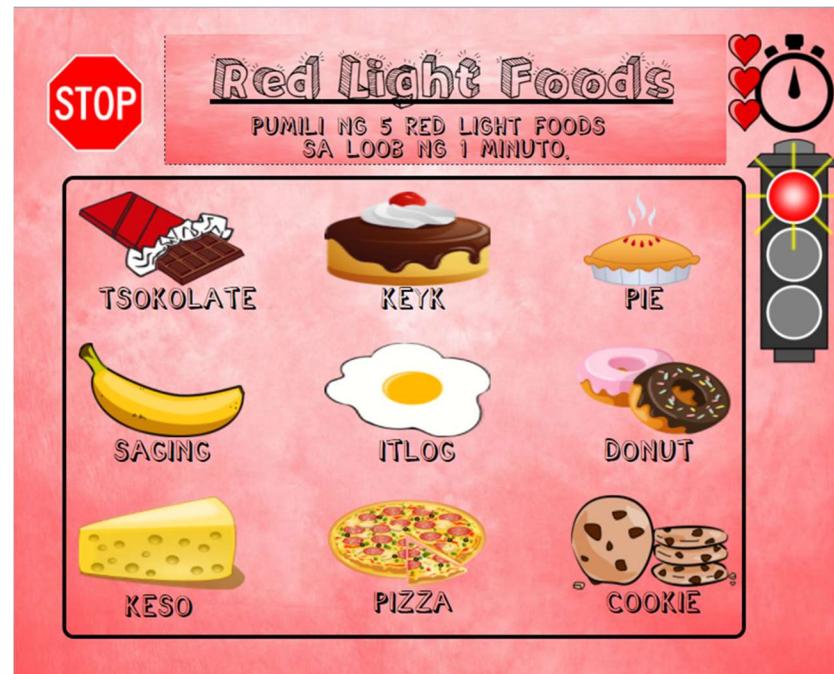
The user must choose 5 Yellow Light Foods at a given time limit.

### 6.2.22 Red Light Foods



This page introduces the Red-Light Foods and the foods that belong to the group.

### 6.2.23 Red Light Collect



The user must choose 5 Red Light Foods at a given time limit.

#### 6.2.24 Trivia For Traffic Light



A trivia question will be given about the classification of foods through traffic lights.

#### 6.2.25 Answer for “Trivia for Traffic Light”



It will show the answer after answering.

#### 6.2.26 Access to the Database



The authorized personnel has a choice on what to update to the app

#### 6.2.27 Updates for Food Info



It shows the blank content of the food choice.

#### 6.2.28 Update Food Info Content



Information that should fill up to alter the food choices.

#### 6.3 Screen Objects and Actions

1. To be able to start the program, the user must click Start at the Main Menu to proceed.
2. Buttons are very limited all throughout; this is to prevent the children from being distracted and to be able to focus on learning.
3. For each of the food you selected, it will be highlighted as an indicator for the children

## 7. REQUIREMENTS MATRIX

Functional requirements that refers to the SRS document:

Code(SRS)	Features	Requirements
4.1	<b>Go, Glow, Grow Food Game</b>	<ul style="list-style-type: none"><li>● Display interface</li><li>● Questions and Answers</li><li>● Time</li><li>● Interactive</li><li>● Food information</li><li>● Sound implementation</li></ul>
4.2	<b>Traffic Light Game</b>	<ul style="list-style-type: none"><li>● Display interface</li><li>● Questions and Answers</li><li>● Time</li><li>● Interactive</li><li>● Food information</li><li>● Sound implementation</li></ul>

Appendices may be included, either directly or by reference, to provide supporting details that could aid in the understanding of the Software Design Document.

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# Software Tests Document (STD)

UST Pay Hospital

Healthy Foodie Nutrition Application

Date of Issue:  
11/26/2017

Project Manager/Group Members:

Legaspi, Celso Adrian

Pons, Scott Salvador

Esteva, Darryl

Lucena, Marga

## Revision and Signoff Sheet

**Document History- To maintain a list of changes being made**

Version	Date	Author	1 Description of Change
1	29/11/2017	Legaspi, Celso Esteva, Darryl Pons, Scott	entry and exit criteria test cycles testing environment

**Approvers List- To track who has reviewed and signoff on the Test plan**

Name	Role	Approver / Reviewer	Approval / Review Date
Esteva, Darryl	Quality Assurance	reviewer	05/12/2018
Lucena, Marga	Business Analyst	approver	05/15/2018

**Reference Documents-Clearly mark the document used as an input to create the test plan**

Version	Date	Document Name
1.0	25/11/2017	Healthy foodie app

## Table of Contents

1.	INTRODUCTION	4
1.1.	Purpose	4
1.2.	Project Overview	4
1.3.	Audience	4
2.	TEST STRATEGY	5
2.1.	Test Objectives	5
2.2.	Test Assumptions	5
2.3.	Test Principles	5
2.4.	Data Approach	5
2.5.	Scope and Levels of Testing	6
2.5.1.	Exploratory	6
2.5.2.	Functional Test	7
	TEST ACCEPTANCE CRITERIA	7
	TEST DELIVERABLES	7
	MILESTONE LIST	7
2.5.3.	User Acceptance Test (UAT)	7
	TEST DELIVERABLES	7
2.6.	Test Effort Estimate	8
3.	EXECUTION STRATEGY	8
3.1.	Entry and Exit Criteria	8
3.2.	Test Cycles	9
3.3.	Validation and Defect Management	9
3.4.	Test Metrics	10
3.5.	Defect tracking & Reporting	11
4.	TEST MANAGEMENT PROCESS	11
4.1.	Test Management Tool	11
4.2.	Test Design Process	12
4.3.	Test Execution Process	13
4.4.	Test Risks and Mitigation Factors	14
4.5.	Communications Plan and Team Roster	14
4.5.1.	Role Expectations	15
4.5.2.	Project Management	15
4.5.3.	Test Planning (Test Lead)	15
4.5.4.	Test Team	15
4.5.5.	Test Lead	16
4.5.6.	Development Team	16
5.	TEST ENVIRONMENT	16

## 1. INTRODUCTION

### 1.1. Purpose

This test plan describes the testing approach and overall framework that will drive the testing of the Healthy foodie Nutrition game application

- Test Strategy: rules the test will be based on, including the givens of the project. And providing a detailed of the projects as well as the descriptions of the processes.
- Execution Strategy: the test will be performed by giving an pre-test and post-test before and after the game respectively.
- Test Management: the process to handle the logistics of the test and the events included such as communications and escalation procedures.

### 1.2. Project Overview

The Healthy foodie nutrition game application helps to prevent future complications of malnutrition and to provide an innovative teaching concept that will provide a window of opportunity for children to learn the basic nutrition food groups and healthy food practices, and these will also help inculcate in children good judgment in opting for healthy food options as early as possible. Good health and proper nutrition are essential for a child to fully achieve his full potential for growth and development.

### 1.3. Audience

- Project team members perform tasks specified in this document, and provide input and recommendations on this document.
- Project Manager Plans for the testing activities in the overall project schedule, reviews the document, tracks the performance of the test according to the task herein specified, approves the document and is accountable for the results.
- The adviser and the panel members make sure that the given project will be truly benefits the clients demand and the project team is on the right track on how to analyze the project team results.

## 2. TEST STRATEGY

### 2.1. Test Objectives

The objective of the test is to verify the functionality of the Healthy Foodie Nutrition app whether it is working according to the specifications given by the client.

The test will execute and verify the buttons if they are functional and working properly.

The Final product of the test will result in:

- A child -friendly program mainly the content is suitable for their age.
- A functional program without bugs and error throughout the game.

### 2.2. Test Assumptions

#### Key Assumptions

- The program is fully functional without bugs.
- In case of errors and suggestions, the app is willing to update and be more user-friendly.

#### General

- Bugs and Errors encountered during the testing will be listed to come up with a solution
- The Bugs and Errors would come along with a snapshot PNG format
- The QA is in charge of performing the tests.

#### Functional Testing

- During Functional testing, testing team will use preloaded data which is available on the system at the time of execution

#### UAT

- UAT test execution will be performed by end users (L1, L2and L3) and QA Group will provide their support on creating UAT script.

### 2.3. Test Principles

- Testing will be focused more on the children's perspective. On how they will be able to understand the content of the program.
- All the testers will be given the same program to be used.

### 2.4. Data Approach

- In functional testing, the program is fully functional with the texts being readable and the pictures viewed.

## 2.5. Scope and Levels of Testing

### 2.5.1. Exploratory

**PURPOSE:** the purpose of this test is to reassure that the Application or the Game contains no bugs and errors are removed and resolved before the testing phase starts.

**SCOPE:** User Interface or Home of the Application Interface

**TESTERS:** Testing team. Involves QA officers, developers and System Analyst

**METHOD:** The testing is carried out in the client side part of website. The testing method is carried out by the QA officers to confirms, search for flaws and perform the necessary adjustments

**TIMING:** at the beginning of each phase.

### 2.5.2. Functional Test

**PURPOSE:** Functional testing will be performed to check the functions of the website. The functional testing will be carried out by inputting data to be processed and stored as a user session in the game.

**Scope:** The Programming(Java, JavaScript with the use of sessions to store data)

**TESTERS:** Testing team. Involves QA officers, developers and System Analyst

**METHOD:** The test will be performed by inputting multiple requests.

**TIMING:** after Exploratory test is completed.

#### **TEST ACCEPTANCE CRITERIA**

1. Tested multiple times by the assigned personnel and if ever to be successful, it will be deployed to children to be tested and to confirm that it is fully operational and functional.
2. Testing completed, with the confirmation of the Quality Assurance Officers.
3. Development completed, unit tested with pass status and results shared to Testing team to avoid duplicate defects
4. Established Prototype that is validated by the Quality Assurance Officers and the Testing Team before deployment.

### **TEST DELIVERABLES**

S.No.	Deliverable Name	Author	Reviewer
1.	Test Plan	Test Lead	Project Manager/ Business Analyst's
2.	Functional Test Cases	Test Team	Business Analyst's Sign off
3.	Daily/weekly status report	Test Team/Test team	Test Lead/ Developer
4.	Test Closure report	Test Lead	Test Lead/ Project Manager

### **MILESTONE LIST**

The milestone list is tentative and may change due to below reasons

- A. Issues in the Illustration used in the System
- B. Erroneous lines of code.
- C. Wrong logic implementation.
- D. Lack of time.
- E. Difficulty in understanding of information present in the system

### **2.5.3. User Acceptance Test (UAT)**

**PURPOSE:** This test is to focus on the simulation of how the intended users will make use of the System or the Game. It is also the method to validate the logical part of the system.

**TESTERS:** the UAT is performed by the end users. (Random Sample).

**METHOD:** The user will make use of the system for educational purposes and entertainment.

**TIMING:** After all other levels of testing (Exploratory and Functional) are done. Only after this test is completed the product can be released to production.

### **TEST DELIVERABLES**

S.No.	Deliverable Name	Author	Reviewer
1.	UAT Test Cases	Test Team	Project Manager/ Business Analyst's

## 2.6. Test Effort Estimate

The overall purpose of testing is to ensure the Healthy Foodie Nutrition Application meets all of its technical, functional and business requirements. The objective of this document is to describe the overall test plan and strategy for testing the Healthy Foodie Nutrition Application. The approach described in this document provides the framework for all testing related to this application. Individual test cases will be written for each version of the application that is released. This document will also be updated as required for each release.

The Test Effort Estimate Documentation lists out all the activities that have to be performed by the QA team and estimates how many man-hours each activity is going to take.

TEST #	ACTIVITY	ESTIMATED MAN-HOUR(S)
1	EXPLORATORY TESTING	8 Hours
2	PROTOTYPE TESTING	3 Hours
3	FUNCTIONALITY TESTING	9 Hours
3	USER ACCEPTANCE TEST	12 Hours

Table 1: Test Effort Estimate Documentation

## 3. EXECUTION STRATEGY

### 3.1. Entry and Exit Criteria

The entry criteria pertains to the requirements that is needed before the production of the prototype. While the exit criteria is the overall output of the prototype before implementing it as the actual application.

Specifications like login entries, database , front end design and representation of foods are considered as the entry criteria for creating the prototype. Without these the whole process cannot be started or if one of the conditions is lacking the prototype cannot be executed.

The exit criteria is determined if the gameplay has been loaded and is proceeding with its expected operation.

### 3.2. Test Cycles

- \* A maximum of 3 cycles of testing shall be implemented to the prototype to ensure the effectiveness of the application's future capabilities.
- \* The goal of the first cycle is to examine if every phase of the application would function precisely altogether.
- \* The aim of the second cycle is to validate if the images appear in the program and can be easily distinguished by the users.
- \* The purpose of the third cycle is to evaluate if the results or data are transferred correctly into the database.

### 3.3. Validation and Defect Management

- Quality analyst shall be the one to initiate on the testing of the program
- The software analyst would be the ones to improve the application.
- Developers are responsible for finding and applying solutions to the detected errors.

Severity	Impact
1 (Critical)	<ul style="list-style-type: none"><li>▪ This bug is critical enough to crash the system, cause file corruption, or cause potential data loss</li><li>▪ It causes an abnormal return to the operating system (crash or a system failure message appears).</li><li>▪ It causes the application to hang and requires re-booting the system.</li></ul>
2 (High)	<ul style="list-style-type: none"><li>▪ It causes a lack of vital program functionality with workaround.</li></ul>
3 (Medium)	<ul style="list-style-type: none"><li>▪ This Bug will degrade the quality of the System. However there is an intelligent workaround for achieving the desired functionality - for example through another screen.</li><li>▪ This bug prevents other areas of the product from being tested. However other areas can be independently tested.</li></ul>
4 (Low)	<ul style="list-style-type: none"><li>▪ There is an insufficient or unclear error message, which has minimum impact on product use.</li></ul>

5(Cosmetic)	<ul style="list-style-type: none"> <li>▪ There is an insufficient or unclear error message that has no impact on product use.</li> </ul>
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Table 2: Severity and Impact of the validation

### 3.4. Test Metrics

Test metrics to measure the progress and level of success of the test will be developed and shared with the project manager for approval. The below are some of the metrics

Report	Description	Frequency
Execution of the Application	A weekly report will undergo on the uptime and downtime of the application	Weekly
Performance checking of database	Daily reports will be done to the effectively and deficiency of the database also with the data stored in it.	Daily
Interaction between the client and the server	Communication analysis between the client and server will be done weekly	Weekly (after the reports of the Execution of the Application)

Table 3: Test Metrics

### 3.5. Defect tracking & Reporting

Following flowchart depicts Defect Tracking Process:

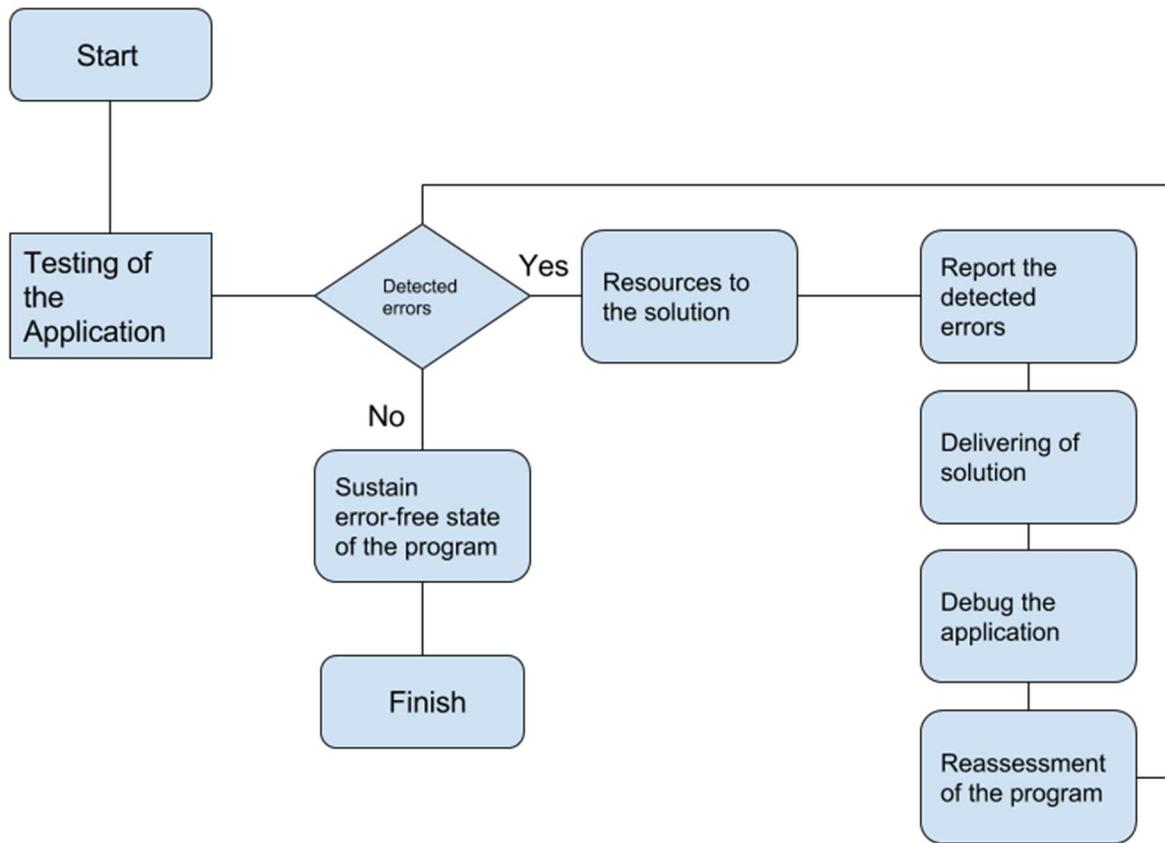


Diagram 1: Flowchart for tracking process

## 4. TEST MANAGEMENT PROCESS

### 4.1. Test Management Tool

qTest will be the tool used for Test Management. All testing datum, info, results are updated in the qTest Configuration System and Project Organizer.

Monitor the movements that will be provided to the whole project.

- Lists sources that is used for altering the data input.
- Every Test Cases can be modified through qTest.
- During Test design phase, all test cases are written directly into their own subfolders. Any changes or alteration to the test cases shall be written or recorded directly through the Test Management Tool.
- Each tester will be given their respective test cases and update the status of each test through the use of qTest.
- Any defect/bugs encountered shall be reported and recorded thoroughly through qTest.
- After Defect fix testing, the test case shall be re-assigned back to the tester to see if the bug/defect is now fixed. The results shall be recorded in qTest.
- Suggestions on how to upgrade or to make the program better have their own respective folders.

#### 4.2. Test Design Process

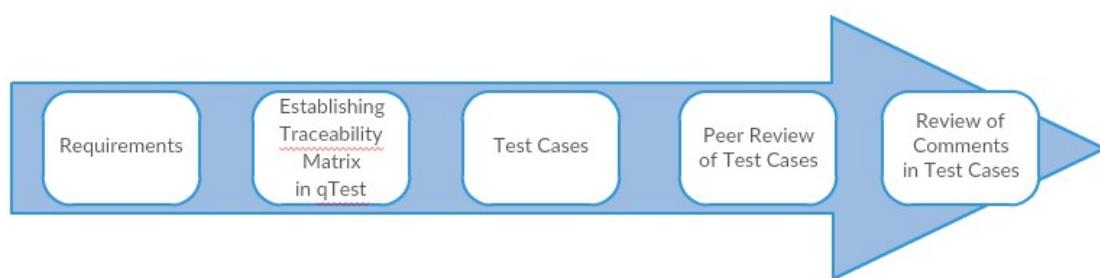


Diagram 2: Test Design Process

- Testers will understand all requirements and preparation corresponding to all test case.
- Each test case will be wired for the Traceability on what is going on in the Matrix.
- Test Cases will undergo review by the Business Analyst and review the Defects/Bugs and is share to the Test team. The testers will review on the defects to finally gain approval.
- Tester will use the prototype.
- Testers shall report on what is going on with the test cases to the test team. The test case shall be updated.
- Test cases will be finalized by the Business Analyst.
- Any changes shall be reported or recorded in the qTest application.

#### 4.3. Test Execution Process

- Once all Test cases are approved and the test environment is ready for testing, tester will start a exploratory test of the application to ensure the application is stable for testing.
- Each Tester is assigned Test cases directly in HP ALM.
- Testers to ensure necessary access to the testing environment, HP ALM for updating test status and raise defects. If any issues, will be escalated to the Test Lead and in turn to the Project Manager as escalation.
- If any showstopper during exploratory testing will be escalated to the respective development SPOCs for fixes.
- Each tester performs step by step execution and updates the executions status. The tester enters Pass or Fail Status for each of the step directly in HP ALM.
- Tester will prepare a Run chart with day-wise execution details
- If any failures, defect will be raised as per severity guidelines in HP ALM tool detailing steps to simulate along with screenshots if appropriate.
- Daily Test execution status as well as Defect status will be reported to all stakeholders.
- Testing team will participate in defect triage meetings in order to ensure all test cases are executed with either pass/fail category.
- If there are any defects that are not part of steps but could be outside the test steps, such defects need to be captured in HP ALM and map it against the test case level or at the specific step that issue was encountered after confirming with Test Lead.
- This process is repeated until all test cases are executed fully with Pass/Fail status.
- During the subsequent cycle, any defects fixed applied will be tested and results will be updated in HP ALM during the cycle.

As per Process, final sign-off or project completion process will be followed

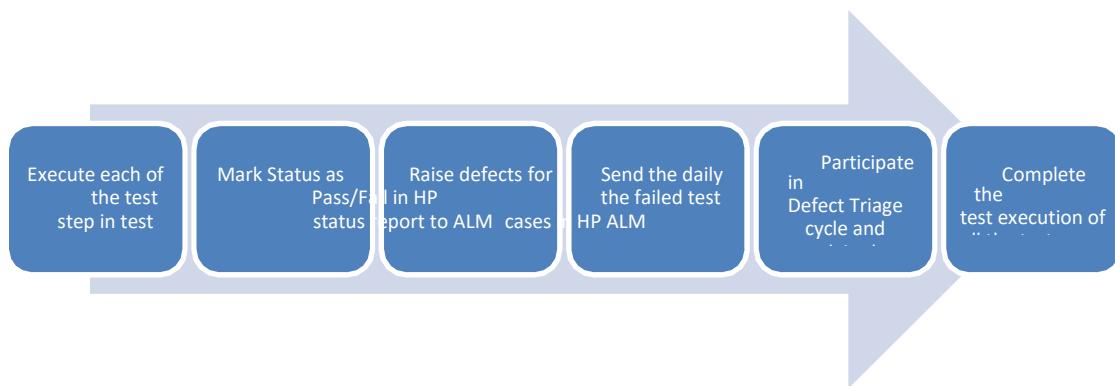


Diagram 3: Project Completion Process

#### 4.4. Test Risks and Mitigation Factors

Risk	Prob.	Impact	Mitigation Plan
SCHEDULE Testing schedule is tight. If the start	High	High	<ul style="list-style-type: none"> <li>The testing team can control the preparation tasks (in advance)</li> </ul>
Information/Resources -Information given by the client about the food's details and food groups	Medium	High	Research about the the food groups and food's information
Testing Delays -Testing is delayed due to new issues.	Medium	High	If new defects are detected, make sure to take note of the problem and it might take some time to resolve to the problem.
Defects -Defects that are found on the late stage of cycle and is probably because of unclear requirements	Medium	High	Prepare a defect management plan to ensure fixing of issues.
Scope completely defined -Scope is well defined but the changes in functionality keeps on changing.	Medium	High	Make sure to clarify all the process of the system and it's functionalities.

Table 4: Risk and Mitigation Errors

#### 4.5 Communications Plan and Team Roster

##### 4.5.1. Role Expectations

The following list defines in general terms the expectations related to the roles directly involved in the management, planning or execution of the test for the project.

	Roles	Name	Contact Info
1.	Project Manager	Celso Legaspi	09278517958
2.	Test Lead	JB Mariano	0935 855 1838
3.	Business Analyst	Miguel Nicolas	09271635838
4.	Development Lead	Scott Salvador Pons	0916 315 8186
5.	Testing Team	John Benedict Mariano Fredriek Navarro Miguel Nicolas	0935 855 1838 0995 815 6171 0927 163 5838
6.	Development Team	Scott Salvador Pons Aron Justin Granada Darryl Esteva	0916 315 8186 0917 627 6850 0995 728 1208
7.	Technical Lead	Fredriek Navarro	0995 8156 171

Table 5: Roles Expectation

#### 4.5.2. Project Management

- Project Manager: reviews the content of the Test Plan, Test Strategy and Test Estimates signs off on it.

#### 4.5.3. Test Planning (Test Lead)

- Ensure entrance criteria are used as input before start the execution.
- Develop test plan and the guidelines to create test conditions, test cases, expected results and execution scripts.
- Provide guidelines on how to manage defects.
- Communicate to the test team any changes that need to be made to the test deliverables or application and when they will be completed.
- Provide functional (Business Analysts) and technical team to test team personnel (if needed).

#### 4.5.4. Test Team

- Develop test conditions, test cases, expected results, and execution scripts.
- Perform execution and validation.
- Identify, document and prioritize defects according to the guidance provided by the Test lead.
- Re-test after software modifications have been made according to the schedule.
- Prepare testing metrics and provide regular status.

#### 4.5.5. Test Lead

- Acknowledge the completion of a section within a cycle.
- Give the OK to start next level of testing.
- Facilitate defect communications between testing team and technical / development team.

#### 4.5.6. Development Team

- Review testing deliverables (test plan, cases, scripts, expected results, etc.) and provide timely feedback.
- Assist in the validation of results (if requested).
- Support the development and testing processes being used to support the project.
- Certify correct components have been delivered to the test environment at the points specified in the testing schedule.
- Keep project team and leadership informed of potential software delivery date slips based on the current schedule.
- Define processes/tools to facilitate the initial and ongoing migration of components.
- Conduct first line investigation into execution discrepancies and assist test executors in creation of accurate defects.
- Implement fixes to defects according to schedule.

### 5. TEST ENVIRONMENT

Windows OS would be the main operating/testing environment to be considered to use this application to avoid compatibility problems and for better resource utilization for the software.

### 6. Computations:

#### FP:

**EIs – Login (2), Register (9), Tests (150) = 161**

**EOs – Messages (10), Alert (55) = 65**

**EQs – Buttons (68), Drag & Drop (20), Clickable Images (114) = 202**

**ILFs – User Data, Admin Account = 2**

**EFs – CSV File (1), Sounds (3) = 4**

Information Domain Value	Count	Simple	Average	Complex	Total
EIs	161	3	4	6	483
EOs	65	4	5	7	260
EQs	202	3	4	6	606
ILFs	2	7	10	15	14
EFs	4	5	7	10	20
				COUNT TOTAL:	<b>1383</b>

$$\sum F_i = 42$$

$$FP = \text{Count Total} \times [0.65 + (0.01 \times \sum F_i)]$$

$$FP = 1383 \times [0.65 + (0.01 \times 42)] \rightarrow 1383 \times 1.07 = 1479.81$$

$$FP = 1479.81$$

## SMI:

$$M_T = 69, F_c = 9, F_a = 6, F_d = 0$$

$$SMI = [M_T - (F_a + F_c + F_d)] / M_T$$

$$SMI = [69 - (6 + 9 + 0)] / 69 \rightarrow (69 - 15) / 69 \rightarrow 54 / 69$$

$$SMI = 0.78$$

## DRE

E is the number of errors found before delivery of the software to the end-user = 3

D is the number of defects found after delivery = 2

$$DRE = E / (E + D)$$

$$DRE = 3 / (2 + 3)$$

$$DRE = 3 / 5$$

$$DRE = 0.60$$

If DRE <= 0.8 then that is a good product, our product is a good product

