Global Frog Games

Sir Stanley's Well Rounded Adventure
Software Development Plan
Version 1.5

Global Frog Games

Revision History

Date	Version	Description	Author
23/10/19	1.0	Initial writeup, (a lot was still left out)	Brooke Smith
24/10/19	1.1	Document revision	David Rasberry
26/10/19	1.2	Added links to referenced material, and small edits	Nick Bonavia
16/1/20	1.3	Revised the timeline and added to some of the sections.	Brooke Smith
16/1/20	1.4	Added to introduction section	Nick Bonavia
13/4/20	1.5	Final additions and edits	Whole Team

Global Frog Games

Table of Contents

Software Development Plan

1.   Introduction

The following points provide a brief overview of the software development plan document. This should be read first in order to better understand the rest of the software development plan document.

1.1   Purpose

The purpose of this document is to outline a high level plan as well as provide information for the project. The team lead will use this document to plan the project schedule and define the needed resources. The team members will use this document to understand what needs to be completed and by when.

1.2   Scope

This *Software Development Plan* describes the overall plan to be used for the *Sir Stanley's Well Rounded Adventure* project. The plans in this document are meant to be a high-level and general view of the development plan. The plans as outlined in this document are based upon the product requirements as defined in the *Vision Document* and various Use Cases.

1.3   Definitions, Acronyms, and Abbreviations

See the Project Glossary for definitions, acronyms, and abbreviations.

1.4   References

Team website:

http://riogrande.cs.tcu.edu/1920GlobalGameApp/index.html

Glossary

Vision Document

Developers Guide

Software Development Plan

Installation and User Guide

Software Requirements Specification

Testing Plan

Github Repository:

https://github.com/tcuseniordesigncourse/globalgameapp

1.5   Overview

This *Software Development Plan* contains the following information:

Project Overview — provides a description of the project's purpose, scope, and objectives. It also defines the deliverables that the project is expected to deliver.

Project Organization — describes the organizational structure of the project team.

Management Process — explains the estimated cost and schedule, defines the major phases and milestones for the project, and describes how the project will be monitored.

2. Project Overview

2.1 Project Purpose, Scope, and Objectives

The purpose of our product is to provide a fun and educational platform for children to learn about nutrition and physical activity. Our product will be a mobile game that will teach children about these subjects through engaging minigames. Our deliverables will include the mobile game that will be available on both android and iOS and various documentation that we are required to manage during our class.

2.2 Assumptions and Constraints

Assumptions:

- The students who will be piloting the game in the spring/summer of 2020 have access to phones/tablets

Constraints:

- Art: Two of our team members will work on art for the game
- Time: We are required to hit certain benchmarks based off of our Senior Design schedule.
- Staff: We are all relatively new to making mobile games.

2.3 Project Deliverables

1. Development Plan
   a. This document
   b. Iteration Documents
2. Software Requirements Specification (and Use Cases)
3. Testing Plan
4. Design Document
5. Installation and User Guide

2.4 Evolution of the Software Development Plan

The *Software Development Plan* will be revised prior to the start of each Iteration phase. A general timeline for the end of each phase and iteration are shown below.

3. Project Organization

3.1 Organizational Structure

Currently we have a team lead, several game programmers, and a web developer working on our game. We also report to Dr. Scherger and Dr. Wei.

3.2 External Interfaces

At the start of the project, we worked with several business students who helped our client with the branding of the game.

We are also in contact with several graphic design students. They defined an initial art style and color pallet for the game.

Finally, we have been working with nutrition and child development students as well as our client to make decisions about the content of the game.

3.3 Roles and Responsibilities

Person	Rational Unified Process Role

Brooke Smith, Team Lead	Project Manager Designer Systems Analyst Software Architect Test Manager Test Analyst Tech Writer Requirements Reviewer Architecture Reviewer Implementer Sound Designer
Nick Bonavia	Software Architect Designer Implementer Test Designer Tester
David Rasberry	Software Architect Designer Implementer Test Designer Tester
Sellars Levy	Software Architect Designer Integrator Implementer Test Designer Tester Deployment Manager
Shane Mitchell	Software Architect Designer Implementer Test Designer Tester
Westen Riley	Software Architect Designer Implementer Test Designer Tester

4. Management Process

4.1 Project Estimates

The main cost for the project is the licence for the iOS and Android store. This should be handled by Dr. Scherger (TCU) for when we hand over the app. Other costs included the cost for music.

4.2 Project Plan

4.2.1 Phase Plan

Date	Title	Description
November	Prototype	Prototype and small working demo completed
December	Iteration 1 Complete	Title screen, map screen, 3 minigames, tutorials
January 31th	Iteration 2 Complete	Falling Food (level 1), Stan's Snacks (level 1), Goalie Shootout (level 1) polish and completed. Sound added. Tips and Collection screen should have a general prototype/demo. Ideas for minigames 4 and 5 should be selected.
Feb 10th (week of)	Iteration 3 Complete/Sprint Deadline	Polished Map 1 screen, Map 2 screen completed. Goalie Defender, Polish UI, and Color Categories should be completed. Save system implemented.
Mar 2 (week of)	Iteration 4/Sprint Deadline	Falling Food (Level 2), Stan's Snacks (Level 2), and Goalie Shootout (Level 2), Tips Screen, Collection/Achievement Screen. Remake tutorials.
Mar 16 (week of)	Iteration 5/Sprint Deadline	Polishing art, sound, and content.
Mar 23 (week of)	Client Acceptance	Client acceptance test, most of the visual polishing should be complete.
Apr 17	SRS	SRS poster/presentation (canceled)
Apr 25	Project completion	All testing is complete, all bugs

		are fixed
Apr 30	Final Presentation	Final Presentation date.
May	Project Handover	Handover project with all documentation

4.2.2 *Iteration Objectives*

Iteration 1

1. Title
2. Map screen
3. 3 mini games (as described by our use-cases), not including sound or original art yet
4. Basic tutorials for each minigame

Iteration 2

1. Falling Food (level 1)
2. Stan's Snacks (level 1)
3. Goalie Shootout (level 1)
4. Sound added to title screen, map screen, and the three first minigames
5. Tips screen basic skeleton
6. Collection screen basic skeleton
7. Ideas for minigames 4 and 5 should be selected

Iteration 3

1. Polished Map 1 screen
2. Map 2 screen
3. Minigame 4 - Goalie Defender
4. Minigame 5 - Color Categories
5. UI Themes
6. Save system

Iteration 4

1. Falling Food (level 2)
2. Stan's Snacks (level 2)
3. Goalie Shootout (level 2)
4. Collection screen finalized
5. Tips screen finalized
6. Remake tutorials and basic UI tweaks

Iteration 5

1. Polish art, sound, music, and content

4.2.3   Releases

Our final release will be a pilot for a class of students to test. However, we will have a working demo throughout development. However, it is to be noted that the final release is not considered to be a complete game, it will include the features listed in the design plan. Additional elements to include in this game in future iterations are additional mini games, professionally polished art assets, additional achievements, and replayability.

4.2.4   Project Schedule

The project schedule is outlined above with the target dates. We will demo the project for our client every two weeks and to our professor every week. Major milestones are also listed above.

4.2.5   Project Resourcing

All of our members of our team are learning Godot on the fly.

For the first phase of the project (pre-iteration 1) we collaborated with business students for help with the vision and branding. We also collaborated with graphic design students on the initial art style of the game.

4.3   Project Monitoring and Control

Requirements Management

The requirements for this system are captured in the Vision document.

Schedule and Budget Control

We don't have a budget to be worrying about. We also have most of our needs readily available to us so we don't really need a budget for anything as of right now.

The project manager will maintain a schedule. As we work on the first iteration and we all get more comfortable with the game engine and programming language, the iteration plan will be updated according to how much time tasks took for the first iteration. Because we are all new to programming in this environment, this first iteration will be an important time to figure out things like this. Our progress on each piece will be tracked in our WARs.

We can also track tasks on Monday.com.

Quality Control

Any bugs we find will be added to our list on Monday.com. Each team member should test the whole app, not just the minigames or parts that they worked on.

Overall, our app and progress will be reviewed on a weekly basis by our professor and by our client every two weeks. This is a good time to bring up "quality of life" or bug concerns.

Risk Management

Risks will be identified in Inception Phase using the steps identified in the RUP for Small Projects activity "Identify and Assess Risks". Project risk is evaluated at least once per iteration and documented in this table. The risks of the greatest magnitude are listed first in the table.

Risk Ranking	Risk Description and Impact	Mitigation Strategy and/or Contingency Plan
Medium	School cancelation due to Covid-19.	Use various software to communicate online and to track

		progress.
Medium	Struggling to implement a certain feature. The impact depends on the feature and how important it is to the game.	We have made sure not to promise too much and to have reasonable expectations as we learn Godot.

5. Annexes

The project will follow the RUP for Small Projects process, as tailored by the project Development Case.

Other applicable process plans are listed in the references section, including Programming Guidelines.