1. Introduction

The Software Project Management Plan for the US Dept of Health and Human Services and the Department of Education project describes the management goals of the project and includes a description of deliverables, development and goals.

1.1 Project Summary

The objective of this project is the development of a gaming based website that educates children on how to live a healthy lifestyle and tracks their progress while reporting to their teachers and parents.

1.2 Project Deliverables

The project will a produce a gaming based website (FitKidsGames.space) to educate school children on how to live a healthy lifestyle. It will be linked to their school and grant their teachers the ability to track their progress on what they have learned.

The Following will be produce and alink to the repo submitted to blackboard.

- **Requirements**
    - Document describing the requirements of the client
- **Use Cases**
    - Document detailing the different users and their expected and alternative interactions with the website
- **Sequence Diagram**
    - Document detailing object interactions in sequence order of events
- **HLA, Class Diagram, & Interface Spec**
    - HLA: Simple High level Architecture representation
    - Class DIagram: Visual Representation of Code Classes, their attributes, and how they interact with each other
    - Interface Spec: Document of user interface in written form
- **Repo Setup**
    - Setup of GitHub as a repository for continuous integration.
- **Software Project Management Plan**
    - Document communicating expectations to all involved in the project
- **A Mid project Tech Status Presentation**
    - Technical presentation on current development status and what is planned.
- **Tests**
- **Code Review**
- **Deployment Plan**
    - Document detailing how we plan to deploy the product and maintain it.

- **GitHub Usage**
    - Live demonstration to client that all team members are proficient in GitHub

1.3 Evolution of the Software Project Management Plan

The SPMP is under version control. All proposed changes and updated versions of the plan are submitted on blackboard and available to all members.

1.4 Definitions and Acronyms

API - Applications Programming Interface
GUI - Graphical User Interface
Repo - repository management tool (In our case GitHub)
SPMP - Software Project Management Plan

2.1 Process Model

The project was assigned on 9/04/18 and ended at the completion of the semester on 12/18/18. A major milestone was the Mid Tech Status Presentation on 10/16/18

The development process is organized with weekly deliverables to simulate a real development process. The members of the project work as a team collaborating on each deliverable which then gets uploaded to the repo and a link submitted to blackboard for our client. All team members have access to the repo and to the blackboard group page. All documents are under version control and deliverables are continually submitted until they meet the clients requirements.

2.1.1 Project Planning

Project planning includes description of project tasks, activities and functions, dependencies, resource requirements and a detailed schedule. This activity results in the software project management plan for the JAMES System. Another output of the planning phase is the project agreement, which is issued after the design activity is completed.

2.1.2 Requirements Analysis

We initially designed our project based on the proposed project. Throughout the project we talked weekly with the client on project requirements and updates. Half way through the project the client proposed a requirement change that involved allowing teachers to download a pdf report of the students progress. The site and all of our documentation have been designed and altered to meet the clients needs.

2.1.3 System Design

The system is designed so that users can interact with the game and each other. This is done by having the user information stored in a sql database. The sql database will also store necassy information like user progress. The game on the site has been designed so that it will interact with the users in the sql database storing and retrieving progress.

2.1.4 Analysis Review

We periodically review our documentation and code. We ensure that the two agree with each other. We also ensure functionality of our code by unit testing often. We test often so that we can catch any bugs in our system and implement measures to fix them. These measures may include reverting to previous function versions using our versioning control or altering other parts of the code.

2.1.5 Client Project Review

On December 8th we will submit all documentation to the client for final review. On December 18th when we demonstrate our prototype we will discuss our future plans of implementation with the client.

2.1.6 Functional Prototype Demonstration

We will prototype our implementation to the client on December 18th, 2018. Here we will receive feedback from the client and implement any changes.

2.1.7 Object Design Phase

Each user is its own object with specific functions and permissions. Our api's are objects that users can take advantage of to interact with the site.

2.1.8. System Integration Prototype Demonstration

This activity involves the demonstration of a fully functional system prototype based on the subsystem decomposition. Each subsystem is represented by its service. All service

operations can be called by other subsystems using remote method invocation. The implementation of the services can be stubbed out.

2.1.9 Implementation

We are implementing the system by using wordpress and a sql database. The game is embed in the site and retrieves and stores information to the sql database as needed

2.1.10 Unit Testing

Unit testing is described in our unit testing document. There we discuss how we will test the function of our system periodically to ensure functionality. By staying up to date on the unit testing we ensure functionality throughout the project and can catch possible problems early.

2.1.11 System Integration

The website and sql integration is ensured by testing the functionality of the site that depends on it. This includes user functions and game progress.

2.1.12 System Testing

System testing is completed by doing high level operations such as creating users. By staying up to date with systems testing we can ensure that our integration is functional and stable.

2.1.13 Client Presentation

At the Client presentation slides will be presented to a non technical audience. We will be competing with other teams for the best design. This presentation will be at Towson University on 12/18/18

2.2 Organizational Structure

Below are the roles in the development of fitkidsgames

- Andrew: Use case, HLA, database setup, user reports, deployment plan, SPMP, Class Diagram
- Akuete: requirements, website design, website hosting, payment api, code review, unit testing
- Alex: game development, deployment plan
- Dieringer: SPMP, Class Diagram, assist other team members, healthy lifestyle choices research