8/31/2022

Lorem Ipsum

By Placeholder



<Insert members names here>

Placeholder

# **Executive Summary**

## **Our Mission**

The mission of Team Placeholder is to develop a web application that gamifies habit tracking.

## **Management Approach**

Team Placeholder has 6 members in its team, and it’s chaired by Choo Yu Hao Mulder together with Gregory Wong Chun Jie as its vice chair. The members of Placeholder are:

* Choo Yu Hao Mulder – Project Manager
* Gregory Wong Chun Jie – Back-end Developer
* Bryan Chatsirichai – Lead Engineer
* Tabussum Nazir – QA Engineer
* Sarvesh – QA Manager
* Sheng Huai – Front-end Developer

## **Technical Approach**

Team Placeholder will utilize JavaScript, ReactJS and NodeJS along with CSS to create the web application. MongolDB, a NoSQL database, will also be used as a data storage solution.

## **Our Product**

Our product aims to gamify habit tracking; that is to turn the menial and boring task of habit tracking into a daily activity that is more fun and engaging. The product aims to emulate a Role-Playing Game or RPG styled experience, allowing users to create and level up their avatar by performing quest in the form of daily habits assigned by the users themselves. Users will then be rewarded with gold and experience points every time they complete their daily quest. They can then further spend those rewards to level up their avatar or buy cosmetics to upgrade their avatar.

Table of Contents

[Executive Summary 1](#_Toc112946693)

[Our Mission 1](#_Toc112946694)

[Management Approach 1](#_Toc112946695)

[Technical Approach 1](#_Toc112946696)

[Our Product 1](#_Toc112946697)

[Problem Statement 3](#_Toc112946698)

[Objectives 3](#_Toc112946699)

[Technical Approach 3](#_Toc112946700)

[Project Management 4](#_Toc112946701)

[Task Phases Description 4](#_Toc112946702)

[Roles and Responsibilities 4](#_Toc112946703)

[Project Roadmap 4](#_Toc112946704)

[Deliverables 5](#_Toc112946705)

[Budget 5](#_Toc112946706)

[Communication and Coordination with Sponsor 5](#_Toc112946707)

[Special Topics 5](#_Toc112946708)

[Team Qualifications 5](#_Toc112946709)

# **Problem Statement**

The Health Promotion Board or HPB is a statutory board under the Ministry of Health of the Government of Singapore. It was established in 2001 to act as the main driver for national health promotion and disease prevention programmes. Research has and surveys have indicated a rise of health issues in Singapore as well as concerns relating to such matters and they are now more prevalent than ever. The Health Promotion Board has tasked various company to find solutions to promote heathier living amongst Singaporeans.

# **Objectives**

To promote healthier living amongst Singaporeans, we decided to develop a web application that gamifies the task of daily healthy habit tracking. We intend to emulate a Role-Playing Game or RPG style system to enabled users to have a much enjoyable and ending experience. We intend to implement these features into our web application, these include:

* Avatar system – Represents its users in the web application virtually
* Tracking system – Allows users to set objectives for themselves for the day. They will then fulfil those objectives once there are completed.
* Reward system – Rewards users when they complete daily objectives using the tracking system. Users can then use these rewards to purchase cosmetics to customize their avatar character.

There are several constraints that must be considered both prior and during development, these include:

* Version Compatibility – Later versions might be incompatible with earlier versions
* Platform Coverage – Web applications can be run on mobile phones as well
* Security – Potential security flaws must be considered to ensure the system is safe to use

# **Technical Approach**

The technical approach taken will employ the use of JavaScript, ReactJS, HTML, CSS and NodeJS to build the web application. We will further use MongolDB, a NoSQL database, as our storage solution. This approach is advantageous to us as most of these systems are well-documented and widely use by developers all around the world. The web application can also be quickly developed and deployed, and easily changed as needed. The application allows the user to track their daily habits, buy cosmetics and customize their avatar based on those cosmetics. The system architecture will implement the Interaction-oriented architecture.

# **Project Management**

## Task Phases Description

|  |  |
| --- | --- |
| **Phase** | **Description** |
| Planning | Brainstorming Ideas and initial project specification requirements planning |
| Concept | Define all core design principles and concepts.  Standardize workflow and coding principles  Refine project specification requirements. |
| System Level Design | Initial system architecture of the application.  Skeleton of the Application |
| Detailed Design | Detailed system architecture of the application.  Refined application implementation |
| Testing | Testing the implementation |
| Refinement | Implementing the Design  Refining the design based on testing feedback |
| Production | Release |

## Roles and Responsibilities

|  |  |
| --- | --- |
| **Role** | **Team Member** |
| Project Manager | Choo Yu Hao Mulder |
| Lead Developer | Bryan Chatsirichai |
| Front-end Developer | Sheng Huai |
| Back-end Developer | Gregory Wong Chun Jie |
| QA Manager | Sarvesh |
| QA Engineer | Tabussum Nazir |

## Project Roadmap

Timeline

Description automatically generated

*Figure 1. Roadmap*

# **Deliverables**

* Web Application with all functionalities described above
* User friendly documentation
* Detailed Documentation
* Detailed requirement specification

# **Budget**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Item** | **Supplier** | **Quantity** | **Unit Price** | **Total** |
| Project Team members | - | 6 | $10000 | $60000 |
| Web Server | Google Cloud | 1 | $1000 | $1000 |
| Database | Google Cloud | 1 | $1000 | $1000 |
| Office rental | - | 1 | $10000 | $10000 |
|  |  |  | **TOTAL** | $72000 |

# **Communication and Coordination with Sponsor**

* Updates sent weekly by email to personnel appointed by HPB for information only.
* Conference calls between Project Manager and HBP appointed personnel scheduled weekly for any feedback and requests for change.
* Report from Quality Assurance testers sent weekly by email to HBP appointed personnel and Project Team for information only.

# **Special Topics**

* User data not shared with other companies or organizations.
* Confidential information stored securely in the database with restricted access control.
* User able to request data deletion
* Application should be scalable according to demand

# **Team Qualifications**

Experienced in software engineering from undertaking courses in NTU. Experienced in creation of games from Final Year Project in Polytechnic courses.