Software Requirements Document

Aquarium Game

CS114 Introduction to Software Engineering

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# Revision History

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| --- | --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Responsible Person** | **Version** |
| Jennifer Kalies | 04/10/2022 | Project description changed as games and aquarium are not a split form anymore. Each game has its own form. Unity was not used for this project. Classes that we programmed were not the same as previously stated in the requirements document. | Every team member was involved in changes that resulted in changes to the requirements document. | 1 |
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# 1 Introduction

## 1.1 Project Scope and Purpose

This project aims to provide the user with a fun game that is satisfying and complete. There will be an aquarium form that includes buttons to play minigames. You can earn coins to use on fish and decorations for the aquarium in the game. The goal is to collect all the fish ad complete the collection book.

## 1.2 Intended Audience

The intended audience is anyone looking to enjoy a fun game.

# 2 Description

## 2.1 Product Description

There are different games to earn coins, which can be started by pressing buttons in the aquarium form. In the aquarium the user can buy fish and other decorations with the cash earned from the games. There will also be a collection book that shows all the fish in the game once they were collected. As the user collects more fish, it will fill the collection book until every fish in the game is obtained. Lastly, fish can be sold, which is called adoption because there can only be a certain number of fish in the aquarium at one time.

## 2.2 Operating Environment

We are using Windows Forms on Visual Studio for the application. Visual studio is an effective tool to ensure functionality and an aesthetically pleasing program.

## 2.3 User Classes

### 2.3.1 Class 1

We will implement a fish class that holds attributes of the fish, such as name, size, fun fact, if fish was obtained and which fish are currently in the aquarium.

### 2.3.2 Class 2

There is a class for the guessing game that handles functionalities for determining bad boxes, keeping track of them and the score and most of the game’s functionality

### 2.3.3 Class 3

The trivia game has a class that holds all questions and answers for the game.

### 2.3.4 Class 4

The coin class keeps track of how many coins the user has and allows to add or subtract coins and has a getCoins function.

# 3 Features

This game will have a bunch of features. First, there will be multiple games to play. There will also be an economy where you can buy and sell fish, as well as decorations. There will also be a collection book. This book will track every fish the user has bought.

## 3.1 Feature 1

Display fish and show them swimming around in the aquarium.

## 3.2 Feature 2

Play mini-games (trivia game, guessing game, hunting game, flappy fish) and collect coins by winning the game.

## 3.3 Feature 3

Collection book that shows which fish have been collected. The collection book includes a picture of the fish, the name, the size, and a fun fact that can be helpful for the trivia game.

3.4 Feature 4

Mystery fish gives the player a random fish, just like a mystery box—the rarer the fish, the lower the possibility of obtaining it.

# 4 Interface

## 4.1 User Interface

Windows forms with buttons

## 4.2 Hardware Interface

Computer, keyboard, mouse

## 4.3 Software Interface

Visual Studio and GitHub

# 5 Other Requirements

We might use SQL to let the users save their progress allow more than one user to play.

After working on the project and being in the final phase this possible feature was not implemented. It would have taken a while to learn to work with SQL and this time was not available to us as the main project took a long time. Still, this is a feature that could be included in future functionalities.