A Pirate's Life Project Report

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I Project Description

The main objective of this project is to create a massively multiplayer online roleplaying game (MMORPG) that will be centered around the genre of pirates. Players will be able to select whichever region they wish to be immersed in and each region will have a unique atmosphere and environment to it. The reason why this project needs to be produced is because the pirate theme is very underrepresented in the video games industry. The product would be purchased by both pirate connoisseurs and people who have any interest in the genre. The customers who have purchased the product will be able to continuously play the game as long as their membership lasts and be immersed in the environment as well as making progress towards the endgame. The game will be designed using the newest Unreal Engine in order to create the most hyper-realistic environment possible and platform release is tentative depending on if any exclusive partnership opportunities arise.

1 Project Overview

As mentioned above, the project is based on the development of a hyper realistic online multiplayer role playing Pirate simulation game. The game in its entirety will focus on bringing the user the most immersive experience possible. In the current market there are very few games that are the same if not similar in the genre the team are trying to target, however, they do not truly give the most immersive experience, nor are they as hyper realistic. The game will begin where the player chooses what server to start off in, where this location decides the player's experience until they unlock the other region. Once a server is joined the adventure begins and the player must create their character, where once finished they can finally explore the world and experience the game.

2 The Purpose of the Project

2a The User Business or Background of the Project Effort

The idea for this project arose from an observation about the state of pirate games in general. The team noticed that there is a distinct lack of representation for pirate games, particularly realistic pirate games, and that the truly great pirate games are so few and far from what it can be. The team sees great potential for a new hit game to take over a significant portion of the market with not many competitors. Not only is there a lack of pirate games, but there is a lack of games that can truly keep their target market engaged long enough to reap the benefits of a devoted fan base. This is why the team decided to create a game that uses a subscription based payment system, which will allow us to consistently fund new content that will keep the players coming back for more. Once this project has been completed, players will have a game that they will be able to play for as long as their heart desires, and should they choose to leave for a time, they will be able to return at a later date to more content for them to dive into.

The last truly great "realistic" pirate game (depending on who one asks) can be traced all the way back to 2013 with *Assassin's Creed: Black Flag*. But this was a single player game and thus it eventually runs out of content for players to do, but this will not be the case with *A Pirate's Life*. Nowadays the project's main competitors are more cartoony versions of pirate games, and thus the team believes when *A Pirate's*

Life is first announced it will be a game unlike anyone has seen for many years. The development of this game will not only address a lack of representation in the gaming industry, but it will bring a brand new experience that blends the best aspects of previous pirate games to deliver a AAA experience.

2b Goals of the Project

The goal of this project from the client's viewpoint is to provide an exhilarating experience that players will be able to continuously revisit time and again. This experience will drive players to subscribe and renew their subscriptions for as long as they are playing the game. With this product, the team would like to capture a majority of the pirate game market, as well as attract gamers from all genres to give the game a try. The main objectives are as follows

1. Cultivate a devoted fanbase that enjoys not only playing the game but also interacting with any media related to the game.
2. Pave the way for an expanded universe that can extend beyond just the initial game. Books, movies, shows, merchandise etc.
3. Maintain the fanbase by providing consistent updates to the game, thereby keeping the subscription numbers at a healthy level.

2c Measurement

Each objective mentioned in the previous section can be measured so that the team is able to determine when these goals have been reached.

1. **Cultivate a devoted fanbase**
   This objective is hard to measure exactly, however the team believes that two measurements will be able to tell us if the goal has been met. The first will be player count, the project's main competitor, *Sea of Thieves*, maintains an average of 15-25k players on any given day via their steam charts. If A Pirate's Life can achieve 30-45k players on an average day within the first few months post release, the team will consider this a major success. The other measurement is time played, although play time will not affect the fact that they are subscribed, players that play more are much more likely to resubscribe. And thus, the team would strive for an average player to play 10-15 hours a week. If both goals are met, this can be considered massive success.

2. **Pave the way for an expanded universe**
   This objective will take time to be measured, but the way to measure it is quite clear. If the team is able to expand into a different business within the first two years, be it books, movies, shows, or merchandise, this objective could be considered a success.

3. **Maintain a fanbase**
   In order to measure whether the team is maintaining a well sized fanbase, the team will need to wait until a time after release in order to determine whether players are sticking with A Pirate's Life or not. To disregard the initial excitement

of the game, the team will need to measure the player base after 6 months and compare it to the launch month player base. If A Pirate's Life can achieve a 75% retention rate for players in this first 6 months, this goal can be considered a success.

3   The Scope of the Work

The scope of the work for the project is very broadly aimed at players of all interests as well as well-known publishers. While the overall theme will be sailing the sea as pirates, there will be a constant flow of updates that will introduce all sorts of new features that will involve gardening, building, fishing, and more in order to keep players engaged.

3a The Current Situation

Currently, the state of video games in the pirate genre is very little in terms of what can deliver a true pirate experience. If players enjoy the pirate genre they are forced to play from the small pool of games that currently exist. Players that have already played all these games are currently forced to just play them again as opposed to having the extra option of playing the project "A Pirate's life".

3b The Context of the Work
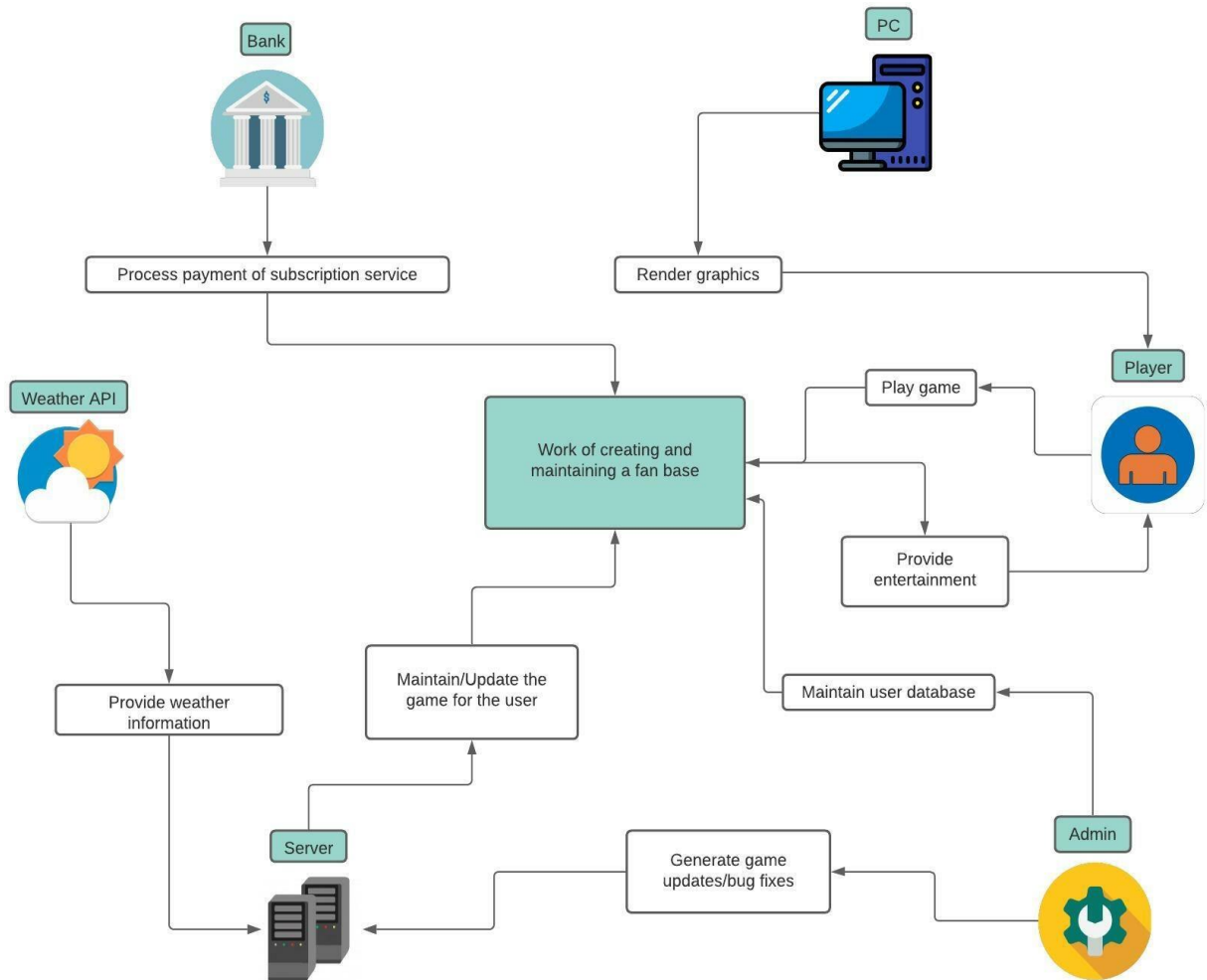
Event Name	Input and Output	Summary
1. **Provide weather information**	Weather API (in)	Server will use weather information to update in-game weather.
2. **Generate game updates/bug fixes**	Admin (in)	Administrators will be generate updates for the game and fix bugs
3. **Process payment of subscription service**	Bank (in)	The bank will handle all methods of payment regarding users.
4. **Maintain/update the game for the user**	Server (in)	The server for the game will be constantly updating information for players
5. **Engage the player**	Work of creating and maintaining a fanbase (in)	The fanbase that is currently made will aid in engaging the player while the game is being played.
6. **Render Graphics**	PC (in)	The computer will handle rendering the graphics for the player.
7. **Maintain user database**	Admin (in)	The admin will handle the database information for the user.

| 8. Provide Entertainment	Work of creating and maintaining a fanbase (out)	The fanbase created will entertain all of the players as well.

3d Competing Products

Currently the competing products include *Sea of Thieves*, *Atlas*, *New World* and "*Assassins Creed Black Flag*". The reason why the project still needs to be made is because all of the competitors cater more towards the fantasy side of MMORPG's whereas A Pirate's Life would be aiming to focus more on a realistic type of environment and gameplay. A Pirate's Life is also aiming to release content at a much faster pace than any of these competitors with just as much content in order to keep the players more engaged.

4 The Scope of the Product

This section provided different scenarios of the product along with diagrams and stories that are likely to happen. This application will primarily involve the interactions from the player, with the game communicating with the Admin/server, which will communicate with the weather api for additional information to load within the application and the final interaction will be of communicating with the bank to process payments from the user to the game. The application will also have a database that will contain the user information of the players that will be maintained and updated by the admin.

4a Scenario Diagram(s)

System

Start up Application

Create Account

Login

Actor

Update Database

Admin

Start Game
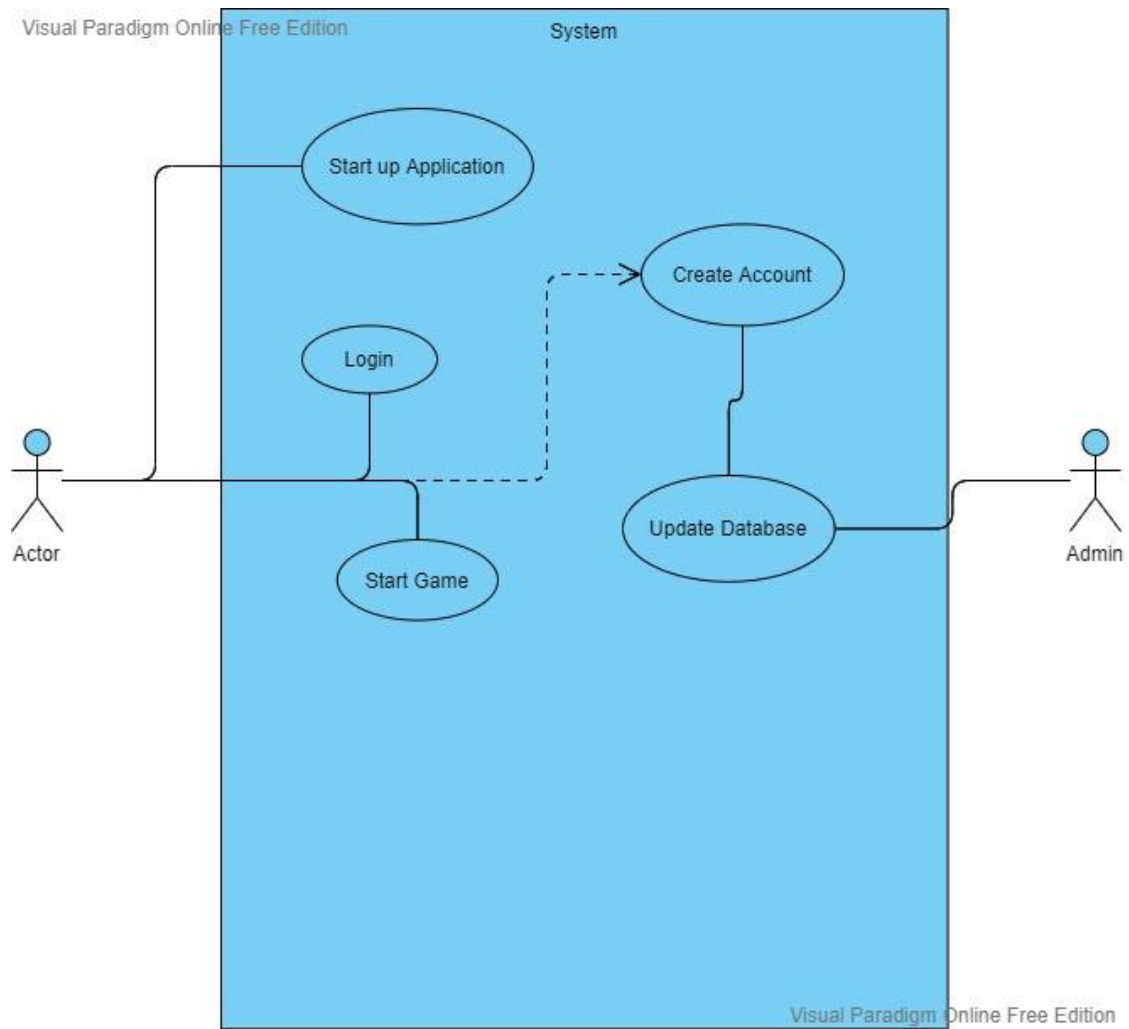
[Scenario: Start application]
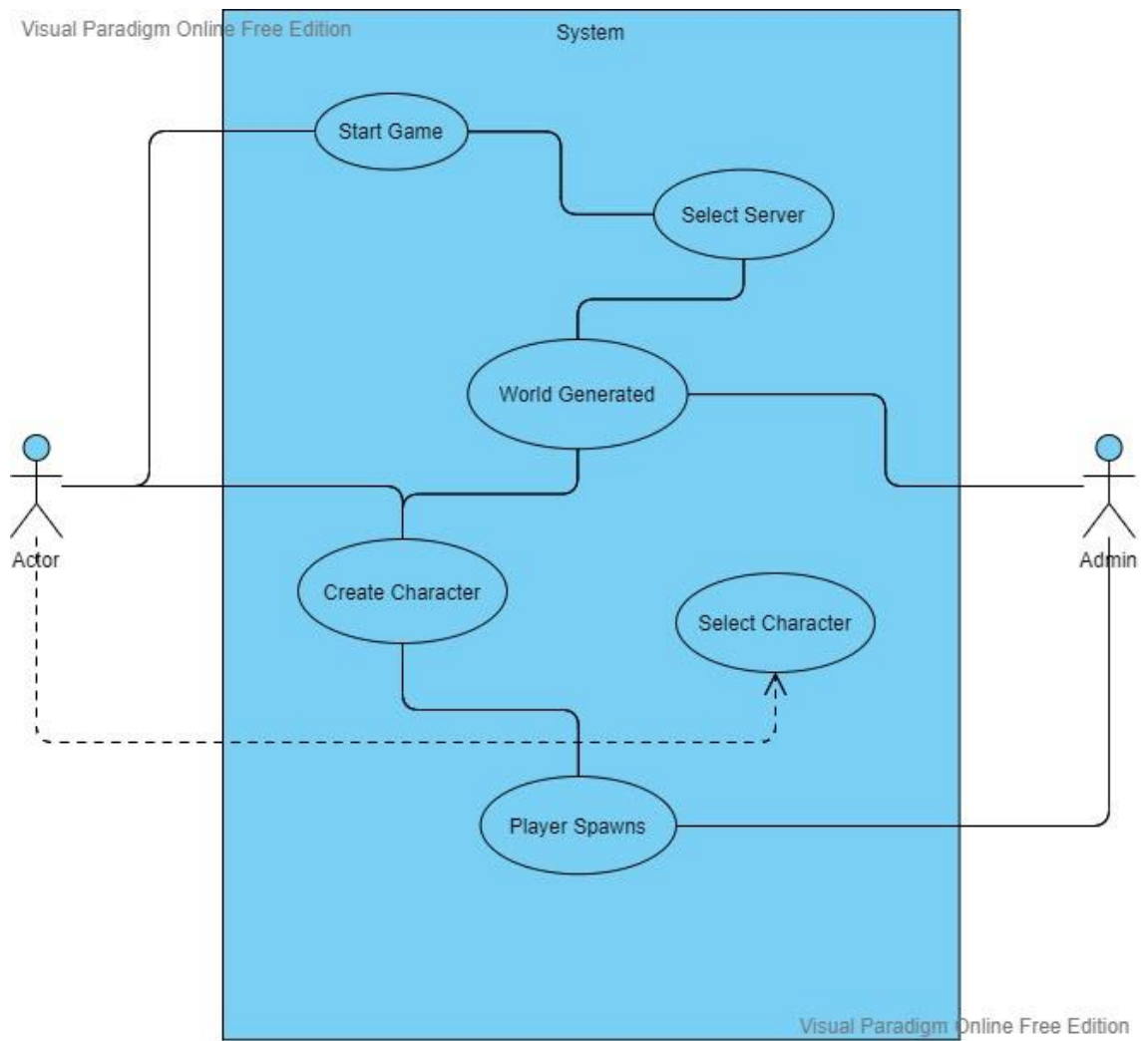
[Scenario: Player logs in/Creates new character]

System

Open Main Menu

Go to Subscription Screen

Purchase Subscription

Actor

Admin

Renew Subscription

Update Player Membership

Bank

Process Payment
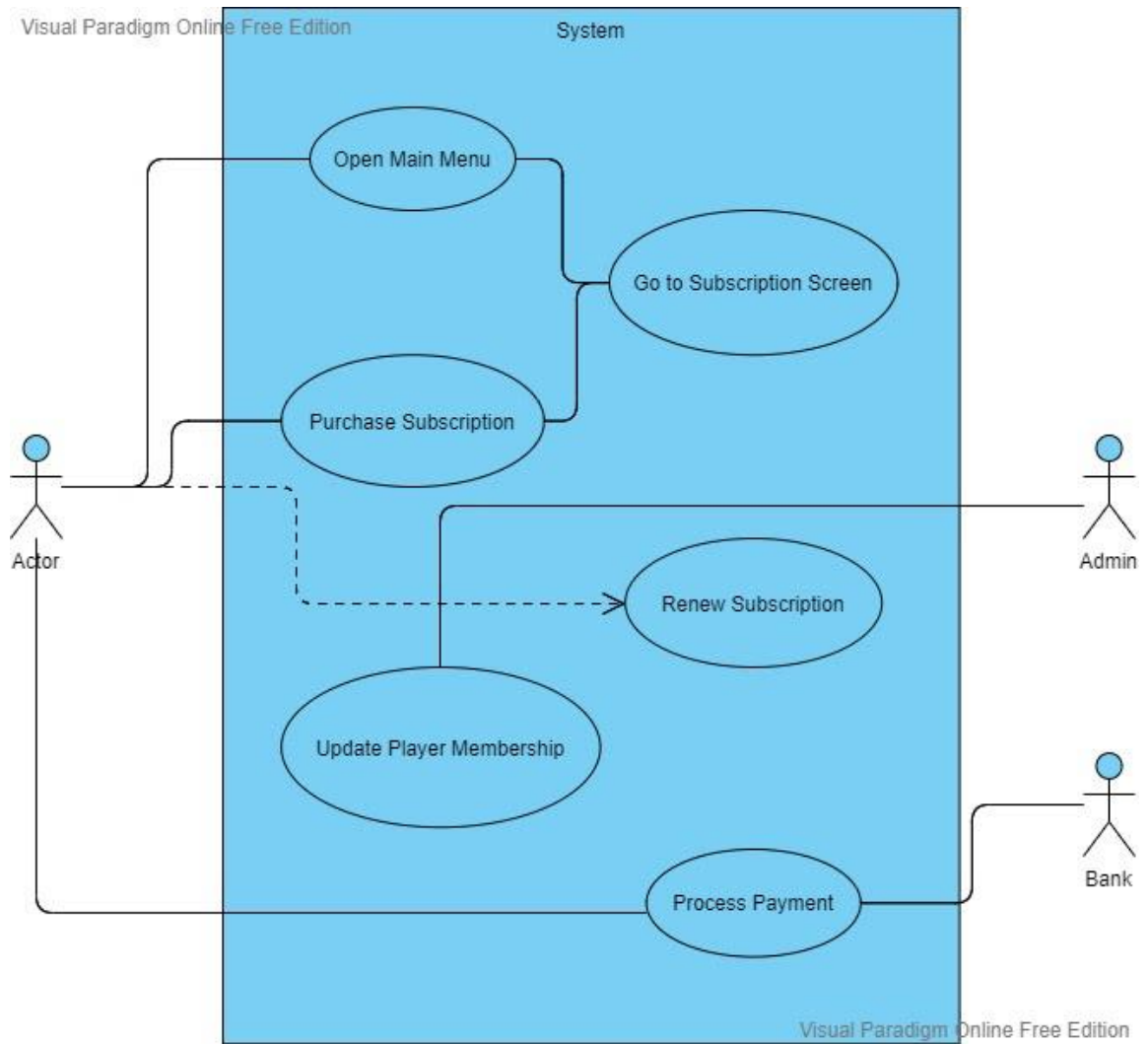
[Scenario: Player purchases subscription/Renews Subscription]
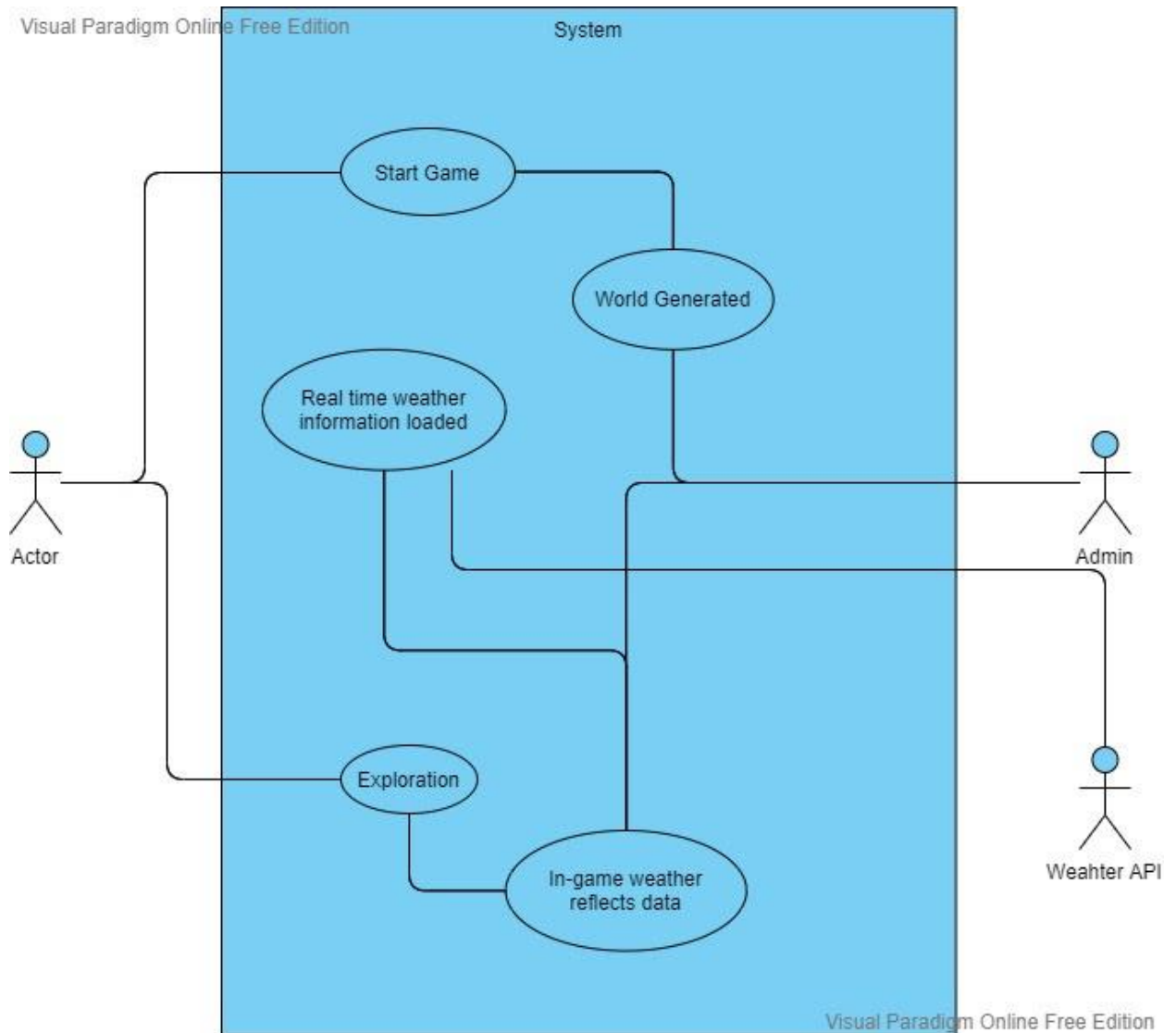
[Scenario: General Gameplay/Exploration]

4b Product Scenario List

Figure 2 - List of scenarios for the product

SL #	Scenario name	External Actors
1	Player starts the game	Player, server, hardware
2	Player renews subscription	Player, bank
3	Player enters new region	Player, server, hardware

4c Individual Product Scenarios

Player starts the game: Jimmy decides to play *A Pirate's Life* with his friends. The first thing he will need to do is launch the executable file which was installed from the installer. Once he has run the executable he will be greeted by a launch window. This window will prompt him to log in to his account. After Jimmy has entered his account name and password the game will launch. Once the game has fully launched, he will be at the server selection screen, which will contain all different servers and their respective time period and region (Caribbean or South China Sea). After selecting a server, the software will then show the character selection screen, which will display all of the characters Jimmy has created on that server. Once he has chosen a character, he will be able to press the play button, which will then connect him to the server and start his game. Once everything has finished loading, his character will spawn into the world in the last location he logged out. If he did not log out in a valid location, then he will be spawned at the nearest harbor.

Player renews subscription: Timmy sees that all of his friends are playing *A Pirate's Life* and he decides that he wants to play with them as well. Timmy launches the game and is greeted by the launch window. When Timmy tries to login after entering his username and password, he will see a message stating that he does not have an active subscription on his account. The message will be accompanied by a link to the team's main website, particularly the subscription page. Once Timmy clicks this link he will be redirected to the subscription page of the website. Here, he will log in with his username and password. Once he has logged in, he will be able to hit the "Renew subscription" button. Once he has clicked this button his browser will display a new page containing a form where he can enter his payment information. There will be an option to save payment information for ease of use but Timmy did not do this. Once Timmy has entered in all of his payment information he will be able to send a subscription request by hitting the "Submit" button at the bottom of the form. Once this submit button has been clicked, a request will be sent to the servers, which will then route that request to the bank. The bank will then verify the payment information and return either a success or failure. Fortunately for Timmy his subscription renewal was successful and he will be able to play *A Pirate's Life* with his friends.

Player enters a new region: Ginny has been sailing around the beginner seas of the Caribbean of *A Pirate's Life* for the past few hours. Her raids have been going very well and she has decided she is ready to head into a more dangerous region. Ginny begins to head for the edges of the map which point to the next regions. She lands on the North-west region, and thus she adjusts her bearing. Once she has reached the edge of the map she will hit an area that will send her to a loading screen. During this loading screen the entire area will be rendered, and the weather will be dynamically changed to match the weather setting that the server has set for that region, which will be dynamically sourced from the weather API every 10 minutes in order to replicate rapidly changing conditions on the seas. Once the loading screen is over, Ginny and her crew will now be in the new more dangerous

area, ready to cause a load of mischief for anyone unfortunate enough to cross her path.

5 Stakeholders

5a The Client

Publishers - Video game publishers that will help endorse and market the game. Ideally these publishers will allow the development team to freely work on the product without any sort of issues with the monetization ideas that the team has.

Ubisoft

Ubisoft has already placed their foot in the door by creating one of the rivals to this idea. If they wanted to further pursue and explore the limits of their original idea, this idea can achieve that.

Amazon

Recently just released New World, a MMORPG that has similar features to this idea. If they wanted to branch out and go more depth into a specific genre of game, this idea could help them be the frontrunner.

Bethesda

Bethesda is known to make games that can vary between realism and fantasy such as the Fallout series and Elder Scrolls. The publisher would be a good fit for A Pirate's Life since they have already published games that have similar traits.

Microsoft

Microsoft has a good standing history of publishing well made games and allowing development teams to manage themselves which is what would be ideal for A Pirate's Life. Since Microsoft owns Windows and the Xbox series it would allow the product to have multiple platform releases maximizing profits.

5b The Customer

Players - Individuals/groups of individuals wanting to play the game. These players will be either interested in the genre or avid pirate enthusiasts which would lead them to purchase A Pirate's Life. The players themselves will vary from handicapped players, younger players, and older players.

5c Hands-On Users of the Product

Figure 3 - Table of Hands-On Users

Username	User Role	Subject Matter	Technology Experience	Other characteristics
Streamer (Influencers)	Person who streams the game	Journeyman	Journeyman	Variation of everything from gender, age, handicap status, etc.
Historian	Provides accurate historical descriptions of the area.	Master	Journeyman	Any gender, handicap status does not matter, ideally loves games.
Oceanographer	Provides feedback on environment designs and how realistic they are.	Master	Journeyman	Any gender, handicap status does not matter, ideally loves games.

5d Maintenance Users and Service Technicians

The people who can maintain and service the project will include customer service representatives, the development team, and database administrators/experts, and moderators.

Customer Service Representatives - Will handle all ticket submitted issues that users may submit that can be resolved without too much difficulty. These representatives will be trained to handle customers in a very polite and professional manner since they represent the entire company as well. More complicated tickets may be forwarded towards either the development team or the database administrators depending on who's expertise would be more useful.

Development team - The team will aid in maintaining the game by providing a healthy flow of content to the player base of the game. It is important that the content released will provide more meaningful gameplay to the user and set new milestones for the players to achieve while providing entertainment or providing quality of life (QOL) changes.

Database Administrators - In charge of handling all database related features and will constantly be ensuring that no issues arise during the development of new features that may possibly affect the database.

Moderators - Ensures that players in game may have the safest and most enjoyable experience by making sure that players that behave inappropriately are punished or removed from the game. These moderators will be monitoring the in game chat and making sure no bugs or exploits are being abused in game.

5e Other Stakeholders

The other stakeholders for the project will include the historians who aid in making sure the game is as true to history as possible in order to help keep the game realistic and historically accurate.

Oceanographers will also be referred to as the game will mainly be based around being overseas. Since oceanographers are familiar with what species of plants and animals live in each respective region of the ocean, they can be referred to when creating species in game to help ensure that it could be realistic.

Below are other shareholders who help in building the project:
- Beta testers
- Meteorologists
- Marketing experts
- Legal experts
- Translators
- Business partners
- IT professionals.

5f User Participation

Players - Closed alpha keys will be distributed to users who sign up for the test after the product is announced for release after 2 weeks. The test periods will be weekends in order to maximize the amount of playtime these users may get and will give them a feedback slip after each period ends so the team can read the feedback and make any changes necessary before the official release.

Historians - Historians will constantly be in contact with the development team as the team adds new content and areas to ensure that most of the content is historically accurate. There may be times where something is slightly inaccurate, and the historians will be referred to in order to see how outlandish the idea may seem.

Oceanographers - The team will also be in contact with oceanographers as well as some of the key features may be linked to the environment the player is in. The team will need the aid of oceanographers in order to properly model the life forms that the player will encounter throughout their game. The behavior of the life forms will also need the feedback of oceanographers in order to portray the most realistic experience for the players.

5g Priorities Assigned to Users
Key users:

- Dedicated players: Players that play the game 30+ hours a week
- Influencers: Streamers and content creators

Key users will be the audience that we most try to cater the game to. These are the players that are very dedicated and most likely to interact with anything to do with the game, as well as keep their subscription constantly updated. Influencers such as streamers and content creators will be extremely important to the mission, as they can provide a wide range of exposure to communities of gamers. As such, we will take feedback from these users with the utmost importance. These content creators will prove invaluable in the months leading up to the game launch, as they will be the best way for us to build hype for the product.

Secondary users:

- Standard players: Players that play the game between 10-30 hours a week
- Casual players: Players that play the game less than 10 hours a week.

Secondary users are still a very important part of the audience as they will likely make up a large portion of the player base, however they are also more likely to unsubscribe and move on to other games. As such, the team will still consider their feedback, but it will not be as crucial as information gained from the key users.

6 Mandated Constraints

6a Solution Constraints

Description: The game will be required to be played on standard internet connection for requirements such as payments, rendering game and easy communication between players and the admin.

Rationale: The player will pay the subscription fees to the game publisher through the bank with the third-party application's online payment feature. The rendering of the game to the player by the publisher is also done via active internet connection. Also, communications between players and the admin/publisher are also made possible through the internet. Therefore, if standard internet could not be used by the game, then it will delay/stop the working of the game with proper notification being sent to other users of the game.

Fit-criterion: The game will regularly check for Internet connection of at least 3 Mbps download speed and 0.5 Mbps - 1 Mbps upload speed.
Description: Players are required to make successful payments to the publisher through a third-party payment application that is accepted by the publisher.

Rationale: The subscription fees for the game are paid through a third-party application accepted by the publisher such as PayPal, payTM or ChasePaymentech

Fit criterion: If the publisher finds the player is not subscribed to the game with payment, he will be rejected to have access to the game by the publisher.

6b Implementation Environment of the Current System
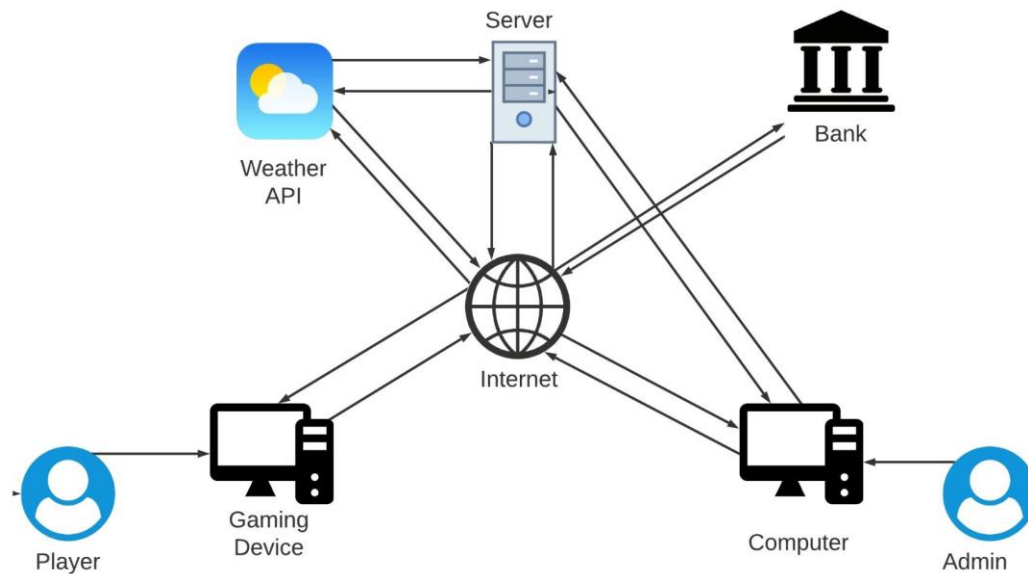
6c Partner or Collaborative Applications

The game is expected to be played by many players with a subscription. Also, they would be provided with individual accounts to identify their gaming history. Therefore, to accomplish efficient retrieval and storage of data relating to subscription and accounts, effective communication with publisher database

The game provides maximum possible real gaming experience to the player. This includes providing actual weather data for the region selected by the player. To accomplish this, effective communication with an external weather data api is required. The selection of external weather data api depends on the targeted expense of the game. Based on this, the team can provide access to either free or paid weather data api available online.

The players are required to make the payment to be subscribed in the game. These payments meet up the overall expense of the game in general. Therefore, these payments to the publisher by the player can be made through a third-party application such as PayPal, payTM or ChasePaymentech.

6d Off-the-Shelf Software

The off-the-shelf software that would be useful to the product would be Nvidia's software since it would enable features such as Ray Tracing and HairWorks in the game which would ultimately increase the realism and immersion the players may experience.

6e Anticipated Workplace Environment
This game is mainly operated from a computer, enhanced with other electronic devices such as simple headsets, keyboards and mouse. The game also provides an option to be played with VR devices. Therefore, considering the electricity requirement of the game, it is suggested to be played at a place where the power source is easily accessible. Similarly, since the game requires interactions through the internet it is mandatory that the location where the game is played should be internet accessible.

7 Naming Conventions and Definitions

7a Definitions of Key Terms
MMORPG - An acronym for a genre that the game will encompass which stands for Massively Multiplayer Online Role-Playing Game.

NPC - An acronym for Non-Playable Characters

AI - An acronym for artificial intelligence

Exp - An acronym for Experience, which player's gain in order to level up

Infamy - A player's reputation, which affects their ability to purchase better armaments, ships, and venture into more dangerous regions. This can be increased by raiding, fighting ships, and other various activities.

7b UML and Other Notation Used in This Document
Scope of Work Diagram [3b]: This diagram shows within the application which individuals/groups will send information and which will receive it. Starting at the Admin, they generate updates to the game and fix any bugs, while also maintaining the player database. Going clockwise, the Server applies the updates from the Admin to the game for the user, while also receiving the weather information from the weather api. The weather api's sole purpose is to send the weather information of the area to the server. The Bank will process payments for the game from the users who purchase the subscription or renew it. The PC is the player's computer that will be used to play the game, and it will render the game's graphics to the user. Lastly, the Player will play the game, and at the end be provided with entertainment.

Scenario Diagram [Start Application]: This diagram shows the process for when the user starts the application. Once the user starts, the main screen will pop up allowing the user to either login or create an account. If the user has no current account, then

they press the account button following the process there. Once the user has an account they will be brought back to the main screen where they can login now. Additionally, once the account is created, the admin will update the database, entering the information that the user just entered to acknowledge an account was created.

Scenario Diagram [Player logs in/Creates new character]: This diagram illustrates the process of when the user chooses to login and create a new character or select a created one. Once the player logs in, they are given the option to select which server they would like to join, where each server is different in region and story. Once the player chooses a server the world is generated by the server. Once they load into the server if they have not made a character for the selected region, they are then prompted to create a new character. If the player selects a previously made character, then they will load where they last left off. For the new characters, once they finish creating their character, the plaster will spawn in the game.

Scenario Diagram [Player buys subscription/Renews subscription]: This diagram illustrates the process the player will take if they want to purchase or renew the subscription to their account. From the game's main menu, the player will navigate to the subscription screen of the menu. Once there the player will click on purchase subscription where the screen will allow for the player to enter their payment information. Once the player submits the payment the Bank will process the payment, and the administrator will update their membership.

Scenario Diagram [General Gameplay/Exploration]: This diagram shows the process of how the weather api delivers data to the game to add in game effects that the player will encounter. Once the player starts the game and the world is generated, the server will be communicating with the weather api to grab accurate weather information. The acquired weather data will be sent to the server so that the in-game weather will reflect the real conditions, both on land and at sea.

7c Data Dictionary for Any Included Models

SQL Database Player Information: Name, UserName, Password, Date of Birth, Age, playerID.

SQL Database Moderators Information: Name, UserName, Password, Date of Birth, Age, playerID.

List Database for all creatures in server (one for each server): Creature Name, location/s

List Database for all NPCs in server (one for each server): Name, location/s

8 Relevant Facts and Assumptions

8a Facts
Pirate - an individual who robs and attacks ships at the sea
Piracy - the act of robbery by using a ship at sea, stealing the valuables of other ships, or cargo.
Players will face real diseases that may give the characters side effects/debuffs exactly the same as it would in real life. Leaving some untreated will result in death.
Weapons and technology will be historically accurate for the time period.

8b Assumptions
Assumptions:
- Product will be used on the operating system and console: Windows 10, Xbox, and PlayStation. Product will work on previous releases of the software that are still supported from the operating system, and consoles used.
- Players will have compatible computer hardware components to be able to run the game.
- Mobile versions of this project are not planned at the moment.
- Users will have a stable internet connection
- Users will have an understanding on how to navigate the internet and websites
- Users will have understanding on account creation via websites, and paying for subscriptions (step by step tutorials can be included to help make the process as easy as possible)