

Technical Document

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# Project Overview

## Game concept

In the game the player will take on the role of a pirate as part of a pirate crew. They can either play solo by themselves or online co-op with friends as part of a crew. The player may choose to progress through story based quests or explore the world and battle other crews.

## Technical goals

The following are technical goals we wish to achieve in the game:

Primary Goals:

* Ground breaking 3D graphics
* A large dense open world
* High Quality water effects and realistic physics
* Immersive sound design
* Well-designed user interface
* Collision physics
* Smooth controls for operating boat
* Competent AI
* Detailed character models and animations

Secondary Goals:

* Realistic boat collision physics
* High Quality AI
* Custom camera settings

Tertiary Goals:

* Custom graphic settings on console (FOV, framerate)
* Mod support

## Technical risks

* Having realistic water physics may be difficult to optimise for all platforms.

## Platforms

Current platform goals:

* Windows
* Mac OS
* PlayStation 4
* Xbox One

# Gameplay

## Game structures/game objects

## Physics

## Player Actions

## Goals

## Skill trees

# Game World

## Design

## Game Objects

### Human

### Creatures

### Ships

## Water

## Ship Collisions

# Weapons

## Weapon 1

## Weapon 2

## Weapon 3

## Weapon 4

## Weapon 5

# Artificial Intelligence

# Multiplayer

### Online Multiplayer

The online multiplayer will be set up in parties of 4 players. Users can either enter with a party of friends, or simply search for other online players to team up with.

Before a user enters a game, each player must choose their character for this game session, in the load screen it will display all of the online player’s character choices. Then the users must choose which area they would like to initially spawn into, they of course can travel to other locations once in game. If no one votes for a specific area or there is a tie in votes, the game will randomly choose an area for the party to spawn into.

Form here the part will be entered into one of many servers that will host online matches. The format of the online game will open world, meaning that crews can travel all over not only to find other crews/strongholds but also to explore the world. Periodically new treasure and side objectives will spawn all over the map. This is to give users different options on how they would like to play.

When a crew enters battle with an enemy crew it will highlight this rival ship as enemy and per the captains orders this will be the crew’s main focus. However, this does not mean that this is a closed off battle. If other crews stumble across the battle they can choose to either join in or simply wait and observe. By adding this element in opens the possibilities for many different play styles.

### Co-op Mode

The co-op mode will also be set up in parties of 4 players that can be made up of either friends or other online players.

Again before a user enters a game they must choose the character class they would like to use for this session. However, the first point where this mode differs is that instead of playing in an online open world, the players will be playing through a version of the story line. With this they must choose a start point to begin playing. To make this work we have to create a system, which is as follows: When choosing the level selection the part cannot select a level that none of the players have reached. And to choose a level at least 2 or more players in the part must have reached said level. However, even at this point if there is a tie vote in which map to play, the game will automatically choose the lowest level that all players have reached.

Once a start point in the story has been reached they part will play through as they would normally, completing quest and fighting in battles. The difficulty and health of the enemies will be slightly increased to account for the amount of players. And with each successful mission and battle the players will gain XP in the co-op mode to level up and upgrade their characters.

# User interface

## Game Menus

### Main Menu

The main menu will be a 2D menu which has the following choices:

* “Story Mode” – This opens the Story Mode menu.
* “Multiplayer” – This opens the Multiplayer menu.
* “Co-op Mode” – This opens the Co-op Mode menu.
* “Options Menu”- This opens the Options menu.
* “Quit” – Quits the game and return to console home screen

### Story Mode Menu

This is another 2D menu that will have the story’s main character in the background, detailing the following options:

* “Continue”- This will continue the last played game save (this will only be available if the user has previously played and saved the game.
* “New Game” – This will begin a new story mode.
* “Load Game” – This will show all previously saved games and allow the user to choose which to continue with (Again this will only be available if the user has previously saved two or more games)
* “Options” – This opens the Options menu.
* “Quit” – This will return the user to the main menu.

### Multiplayer Menu

This is another 2D menu that will detail a realistic pirate map, with the world map detailing all the players around the playing the game.

* “Find game” – This will allow the user to find an online match in whichever game mode they choose.
* “Customise Characters” – This will allow the player to view all their different character classes and customise their: appearance, upgrade stats and upgrade/change skills.
* “Invite Players” – This will open up player’s friend list/player search so they can add other players to their party and search for online games with a party.
* “Options” – This opens the Options menu.
* “Quit” – This will return the user to the main menu.

### Co-op Mode Menu

This is another 2D menu that will rotate between showing all of the base character types each time the menu is entered.

* “Find game” – This will either: search for other players to make up the 4 players required and create a new game or it will take the four players in a party and create a game. From here it will allow the party leader to choose which stage of the story they begin playing from.
* “Customise Characters” – This will allow the player to view all their different character classes and customise their: appearance, upgrade stats and upgrade/change skills.
* “Invite Players” – This will open up player’s friend list/player search so they can add other players to their party and search for online games with a party.
* “Options” – This opens the Options menu.
* “Quit” – This will return the user to the main menu.

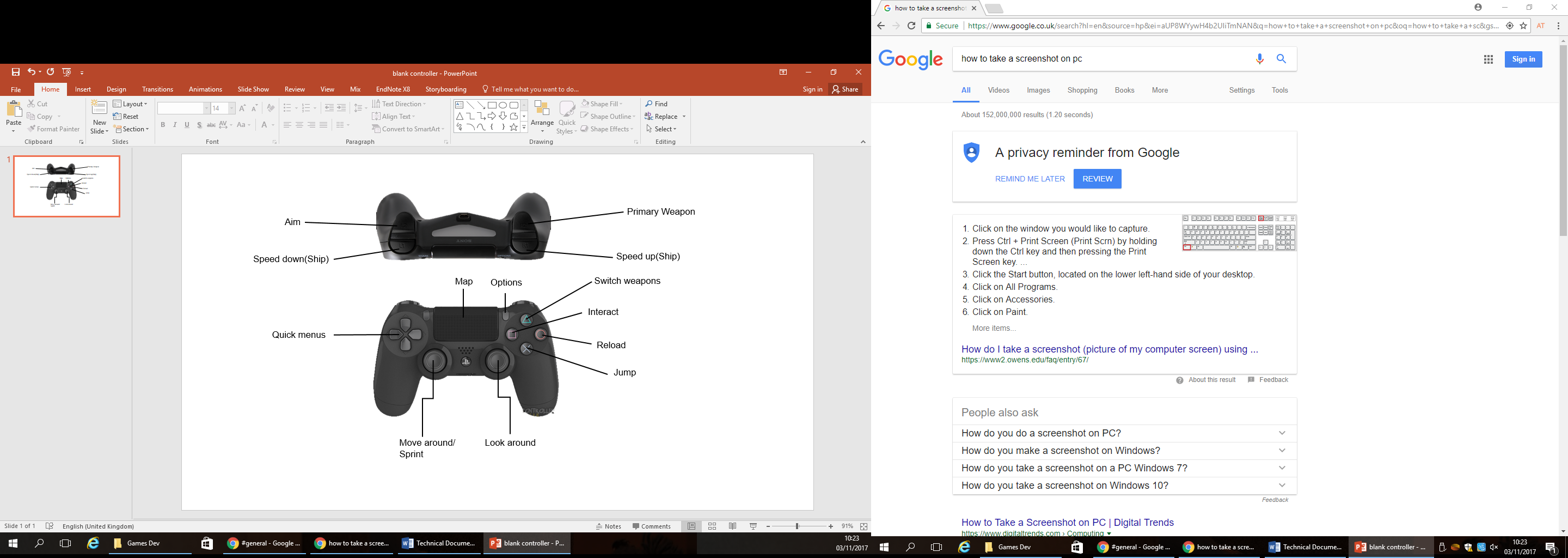
### Options Menu

The options menu will be a standard options menu with options for: gameplay, video, audio, controls and online.

* Gameplayer is where the user can control the games difficulty and how the game will play.
* Video is for all visual controls and whether or not the user will add subtitles or even correct colour-blind options.
* Audio is where the user can control audio levels and such.
* Controls will show all the different controller schemes and also allow the user the customise controls.
* Online is where the user can check online status and NAT types etc.

## In-game controls

### Controller maps



Our initial plan for the controller scheme will resemble the standard for most FPS games, but of course with differences being made to suit the game.

On the right is the initial mock-up of how we plan to map out the controls.

In the future we may alter this or even add completely different variations to suit each style of play.

### Movement

Movement in the game will follow the standard procedure of having it mapped to the left analogue stick. Of course pushing the stick either: forward, backwards, left or right will move the player in said direction.

By pushing in the analogue stick it will allow the user to change from normal movement speed into a sprint. This is beneficial as it allows the user to cover more ground more quickly.

### Looking Around

The game will use the standard of having the right analogue stick being used to control the camera. This will allow a full 360° range of view with very minimal movement from the user, unlike say they were using a mouse.

When a player is using either one of the ships weapons or even sailing the ship itself, it will change the range and scope of view. For example, when using one of the ships guns the user will be able to see further by zooming in but, they will be limited from side to side in how far they can look. This is to make it more realistic as guns can only be mounted to rotate a certain amount.

### In-Game menu

The in-game menu will be brought up by the user pressing the options button on the remote control they are using. This will then pause the game is single player but will only take the user out of the game in multiplayer, and show these options:

* “Resume” - Un-pause the game and return the user to playing.
* “Options” - This opens the Options menu.
* “Save Game” - This will save the users progress.\*\*
* “Quit” - This will return the user to the main menu.

\*\*Only apply to single player

### Death screen

When a player has been sufficiently damaged they will first have a red screen then they will go down and will have around 60 seconds for another teammate to revive them. If this does not happen the user will die and will be prompted with the option to either “wait for other players” or “Quit game”.

If they choose the wait option they will then spectate another member of the ship until either they win the battle and can return to a safe haven to allow other players to respawn or until all members die and it is game over. If they do choose to rely on their teammates and they successfully respawn, they will be rewarded with extra xp for not quitting.

### Win Screen

When a player/team successfully win a battle text saying “Victory!” will appear across the screen and victorious music will play.

Under the victory text it will show a slide bar with the users XP progression in the class they were using. It will also show how many kills and other statistic, as well as accolades they may have gained for their actions.

Then It will move onto another screen that will show unlocks they acquired.

Although this will show after every successful battle it is not mandatory to watch all of the unlock animations, all a user has to do to skip this breakdown is press the “X” or “A” button. Or to however the user has mapped the controls.

# Graphics

# Audio

## Features

### 3D sound

### Volume control

## Formats

### Speaker settings

### Headphones

# Installer

# Appendices