# Buckle & Swash
Game Design Document

Introduction

Game Summary
Buckle & Swash is a survival hack and slash game that requires one or two players to coordinate two unique weapons in order to guide the wielding character and defeat enemies in an infinite survival mode.

Inspiration
Inspiration was taken from the Flash game Fireboy & Watergirl, which encourages two players to play on the same device, with one controlling the WASD keys as Watergirl, and the other

using the arrow keys to control Fireboy. The players must navigate various puzzle levels which often require coordination to be winnable, sometimes in a frantic manner with various moving parts of the level. This game is also technically playable with a single player, simply requiring a high level of coordination and control between the player's two hands.
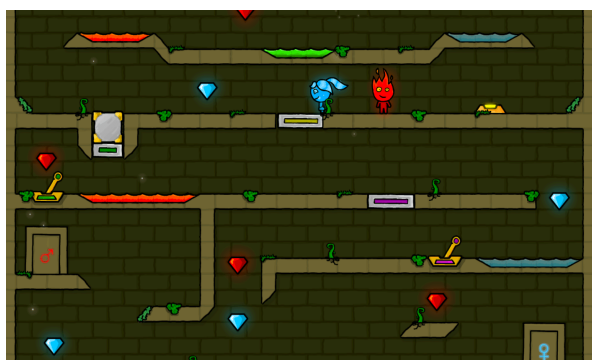
Much of the overall level of difficulty is inspired by games such as Getting Over It and Chained Together. These games have very simple controls-- often frustratingly simple, as the level of difficulty in navigating the environment of the game plays a crucial part of the play experience. Examples such as these acted as frames of reference for balance, as the game would need both a properly engaging level of frustration and an amount of achievability that kept the game fun for players.

For the combat and physics of the game inspiration was taken from Totally Accurate Battle Simulator, with similar stylistic choices being made. These games share a low-poly art design as well as similar ragdoll movement from the characters as they are buffeted by various forces in combat.

Player Experience
In a single player experience, the player will have to coordinate independent controls in order to utilize the gun and sword to destroy waves of enemies, in order to survive as long as possible in an infinite survival stage. In a two player experience, each player will control one weapon, requiring an additional level of communication and coordination.

Platform
This game is developed to be released on Windows PC.

Development Software
- Unity version 2022.3.53 was utilized for programming
- Blender was utilized for modeling
- FL Studio was utilized for music composition
- Audacity was utilized for SFX editing

Genre
Single player or two player infinite action shooter.

Target Audience
While gameplay is designed to create an engaging amount of frustration, the base controls and mechanics of the game are simple, lending to accessibility for a casual audience. There is also wide appeal in the two-player gameplay, drawing in audiences who enjoy gameplay with high levels of cooperation for a pair of players.

Concept

Gameplay Overview
The player or players control the two weapons a single character wields-- however, they have no direct control over the character itself. The gun and sword in the hands of the wielding character have to work together in order to pull the wielder in the correct direction to dodge attacks from oncoming enemies, while also having to aim to destroy the enemies in between bursts of movement.

Theme Interpretation (You Are The Weapon)
In the most literal interpretation of this statement, the perspective of the player changes as they no longer play as the typical well-equipped hero, but as the laboring tool. Weapons with their own agency have to work to direct the unwitting hands that wield them, and there is a level of physicality and effort that the gameplay will convey to the player as they have to work from the perspective of the weapon itself.

Primary Mechanics
      Walk

The player character walks at a slow pace following the direction the gun is pointing, making that the primary method of traversing the level.

Lunge
When the sword is brought from the default position to pointing, the player character will follow the direction it is pointed in a quick burst of movement.

Sword Attack
While using the sword to kill enemies requires they must be close enough to touch, the sword's attack instantly kills an enemy.

Gun Attack
The gun shoots projectiles at a slow and consistent speed, which allows enemies to be killed at a distance, but slowly.

Health
The player character has enough health to survive two attacks, before being killed by a third attack.

Secondary Mechanics

Limited Movement
Each arm cannot bend across the body, limiting the motion possible for each weapon. This requires the player to adapt to the unique combinations possible to traverse.

Obstacles
Objects within the level such as exploding barrels allow the player to plan attacks that can kill multiple enemies, but might also backfire and harm the player character.

Art

Theme
Aligning with the theme of the game jam overall, a pirate aesthetic will act as the setting for the game, with pirate enemies on a ship. A top-down perspective was selected for this game, and while this would often lend to a 2D art style, a 3D art style was selected in order to contribute to a more physical style overall. All models will be in a simple, low-poly style, with select accessories to decorate the characters and stage.

Design
Simplicity guided much of the design for this game, with bright colors and stark lines. Each element was altered to match the style of the low–poly 3D models used for the majority of the game. For example, particle effects were created for various actions using simple and clean shapes, allowing even the smallest elements to maintain consistency with the overall style.

Audio

Music
The music was created with electronic elements to fit the low–poly aesthetic, but also incorporates elements of music often heard in relation to pirates, particularly in action–packed media, with a quick pace. The music also adapts to certain aspects of gameplay, such as a fade in volume when the player character dies.

Sound Effects
The primary audio effects added to the game are sounds to accompany movements of the weapons, in order to draw attention to them as the main focus of the game, and to add more physicality to the game. This physicality was further enhanced by adding audible steps synced with the movement of the player.

Game Experience

UI
The game has a very simple UI, designed to streamline the tutorial process by displaying the title and controls simultaneously, with no starting menu. This UI will be displayed until the player inputs controls for both the gun and the sword, at which point it fades and the level begins.

Controls
WASD keys to control the gun/left hand, arrow keys to control the sword/right hand.

Development Timeline
Jan. 22:   Design document began
Jan. 22:   Repository setup

Jan. 25:   Player movement and attacks
Jan. 25:   Enemy AI, spawning, and health

Jan. 25:   Stage, player, and enemy modeling

Jan. 26:   Fall death
Jan. 26:   Particle effects
Jan. 26:   Exploding barrels
Jan. 27:   Dithering effect on masts

Jan. 29:   Music & SFX designed

Jan. 30:   Enemy ragdolls
Jan. 30:   Score & high score UI
Jan. 30:   Music and SFX implemented
Jan. 30:   Bug fixing
Jan. 30:   GDD finished
Jan. 30:   Credits & Itch page