

Weapon Smith Game Design Document

Prototype Overview

Weapon Smith is a unique blend of discovery-based crafting and fighting game input combinations. To smith weapons, players must input a combination before the brief countdown timer runs out. The player can then sell these weapons to purchase upgrades; allowing them to unlock more inputs for combos, increase the countdown timer and unlock banking options.

Mechanics

Gameplay Loop Overview

Weapon Smith contains several key mechanics across four U.I. screens, which make up the core gameplay loop.

Pre-Game Loop Screen



In-Game Controls Panel

This is a toggleable informative panel that allows the player to view the controls both before and during the gameplay loop, rather than from the pause or main menu. To avoid confusion, the panel only shows the controls for the available actions and updates after each upgrade the player purchases. This panel can be viewed before and during the gameplay loop.

Previous Combination Panel

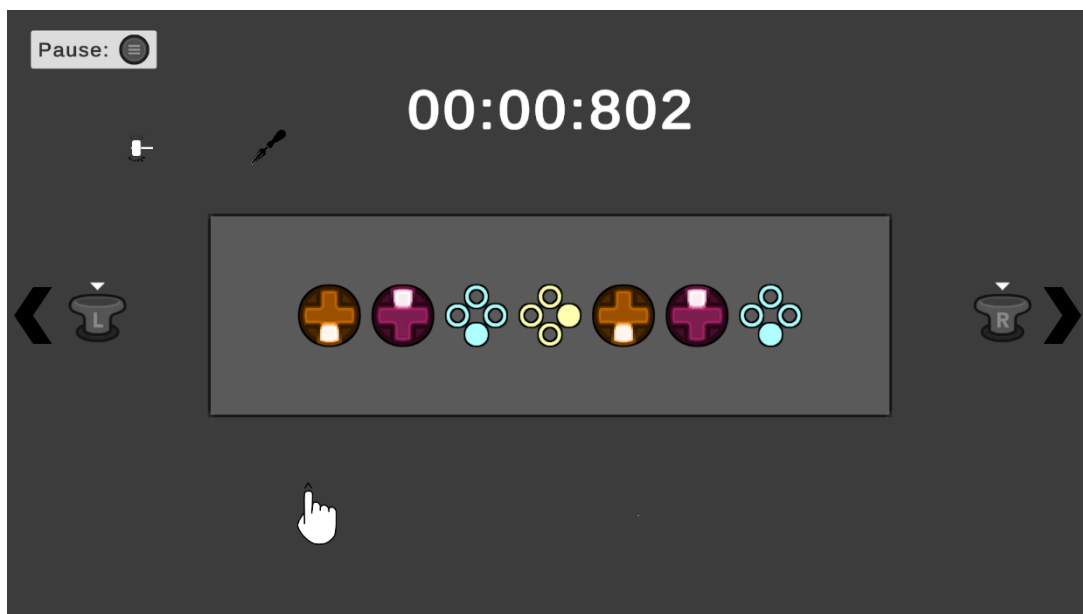
This is a toggleable informative panel that allows the player to view their previous combination, before and during the gameplay loop.

Starting Countdown

By providing simple visual feedback, this countdown allows the player to prepare before the gameplay loop starts.



Gameplay Screen



Timer

This is a short, two and a half second countdown timer which is visible to the player during the gameplay loop. This pressures the player to complete their combination in the given timeframe.

Smithing/Input Combinations

This is the core of the gameplay loop. The player has to quickly create a combination using the available input buttons of their device. While the countdown timer is active, each button pressed adds a character to a string and triggers two pieces of visual feedback. The first is a permanent visual showing which button has been pressed. The second is a temporary animation briefly showing the action which corresponds to that button.

Combination Processing

Before the player sees the final result, the combination is processed and checked for several different conditions:

- Does the combination match a predefined unique combination within a list?
- Is the combination empty?
- Is the combination the same as the previous?
- Does the combination consist of only one input?
- Does the combination consist of a balanced use of the inputs?

Creating Weapons

Depending on which conditions were or weren't met, a weapon or a punishment item will be created.

- a. If the combination is empty, a worthless weapon will be created.
- b. If the combination consists of only one input, then a punishment item will be created.
- c. If the combination is imbalanced (i.e. one input pressed more than the rest), then the weapon statistics are reduced.
- d. If the combination is the same as the previous, then the weapon statistics are reduced. This will stack with the imbalanced condition.

Weapons are made using procedural generation which allows for a near infinite number to be created. This also allows for each combination to produce a unique, random weapon every time.

Shop Screen: Selling Weapons



After smithing weapons, the player can hover over each weapon to see its statistics or sell it by clicking on each weapon.

Upgrade Shop



Once the player has acquired enough gold, they can purchase more actions, which unlocks more buttons to use for their combinations. Alternatively, they can upgrade the length of the countdown timer.

There are also options to purchase a bank account and upgrade it to generate interest. This is intended to motivate the player, should they choose to, to continue playing once they have purchased all of the additional actions.

Data Collection

Overview

The player data collected will be used to make informed decisions to achieve the design goals of fun and player engagement. Qualitative data needs to be prioritised because it is better suited to these goals. However, quantitative data is required to use as supporting evidence when evaluating the qualitative results.

Methods

1. Playtesting

During playtesting, non-intrusive observations of the player's emotional responses, reactions and subsequent feedback will be recorded. This will allow for the thorough testing of design intentions and provide a gauge of whether these are working towards or away from the design goals.

2. User Feedback Survey

Before a playtesting session, the player completes the first section of the survey to assess whether they are suitable for playtesting. This provides valuable insight into the player and allows the observer to judge what observations should be prioritised.

Once the playtesting session is finished, the player will complete the remaining sections of the survey. To provide more accurate qualitative responses, this must be answered while the playtesting is still fresh in the player's mind.

3. In-game analytics

During the game, quantitative data will be collected using the Abertay analytics package and saved to the root folder of the prototype. This data will be used to analyse whether the weapon statistics are balanced and to support the evaluation of the survey responses.

Data hooks

In-game analytics will monitor:

- Whether the player has played or skipped the tutorial.
- Number of times each input button is pressed during the gameplay loop.
- Each input combination.

- The statistics of the weapon smithed: damage, rarity and sell value.
- Which upgrades the player has purchased from the upgrade shop.
- The amount of money the player has.