The Alchemist's Apprentice
DESIGN DOCUMENT

By Josep Valls for the 2024 [Pirate Software Game Jam](#)

Introduction

Game Summary Pitch

The Alchemist's Apprentice is a physics-based puzzle game where the player needs to sort objects based on their shadow's shapes.

Inspiration

Pinball
Gameplay

Fruit ninja
Physics behavior

Traditional shadow theater
Aesthetics and recognizing shapes
Reference

Disney's "The sorcerer's apprentice"
Overall and theme visuals
Minions out of control you need to direct

Player Experience

A single crafting environment a sequence of recipes for mixtures are shown and the player. The player needs to redirect floating ingredients into the appropriate locations to complete the recipes using physics based movement using the mouse. The player needs to properly identify the ingredients given some hints provided by their shape as the gameplay area happens in the shadows. Once a recipe is fulfilled points and additional crafting ingredients are awarded to progress the gameplay.

Platform

The game is platform agnostic to be played on a computer.

Development Software

- Godot

Genre

Singleplayer, physics-based action puzzle, casual

Target Audience

Without heavy or complicated ideas, and intuitive-to-grasp mechanics, this game is marketed to at least **casual game players** who are up for puzzling challenges as well as more veteran players up for action-oriented challenge around maximizing their score.

Concept

Gameplay overview

The player controls a floating obstacle that can interact with the floating elements in the physics environment to deflect their trajectories.

Theme Interpretation: Shadows and Alchemy

There are two intertwined themes:

- Alchemy: Alchemists attempted to purify, mature, and perfect certain materials. Common aims were the creation of an elixir of immortality;[2] and the creation of panaceas able to cure any disease. The game is around mixing ingredients following a recipe to create additional ingredients towards the goals of a final elixir.
- Shadows: The storytelling portion of the game revolve around a character working from the shadows and most of the gameplay happens in a shadow-theater environment where that's all the player sees.

Primary Mechanics

Mechanic
Items
The items will be floating in the game environment driven by the physics engine.
Walls
A stopping force to restrict player body movement and items.
Player body

Mechanic
The main obstacle for the items to collide against and change course.
__Recipes__
Recipes with a set of ingredients will be shown for the player to complete.
__Recipe receptacles__
The goalpost where items will need to be redirected towards.

Secondary Mechanics

Mechanic
__Item rotation__
To increase the challenge items need to be recognized from a rotating shape.

Art

Theme Interpretation

The main gameplay happens within the shadows projected into some background. The main elements will be black with some alpha.

Design

A very **minimalistic** approach will go into the design of the game, heavily relying on the severe contrast of the shadows against the lit background.

Audio

Music

To add to the overall theme and vibe of the game, there will be some classical music inspired by the Sorcerer's apprentice soundtrack (which the original is already in the public domain)
Update: After discussions with the composer we decided to go with an up-beat jazzy score at 120 BPS so we can coordinate the gameplay with the music.

Sound Effects

To add more flare and polish to the experience, a multitude of environmental sound effects will give weight and feedback to the player's actions.

Game Experience

UI

A smooth, higher definition style will be incorporated in the UI. The UI will mostly feature white elements to contrast against the dark background.

Controls

<u>Mouse</u>

Mouse movement only

Development Timeline

MINIMUM VIABLE PRODUCT

#	Assignment	Type	Status	Finish By	Notes
1	Design document	Other ▾	Finished ▾	Jul 21,...	
2	Source visual assets	Art ▾	Finished ▾	Jul 22,...	
3	Gameplay prototype	Coding ▾	Finished ▾	Jul 23,...	
4	Main menu	Coding ▾	Finished ▾	Jul 27,...	
5	Recipes and progression	Other ▾	Finished ▾	Jul 24,...	
6	Scoring and UI	Coding ▾	Finished ▾	Jul 27,...	
7	Visual effects implementation	Coding ▾	Finished ▾	Jul 27,...	
8	Music	Art ▾	Finished ▾	Jul 29,...	
9	Sound effects	Art ▾	Finished ▾	Jul 29,...	
10	Pause menu	Coding ▾	Finished ▾	Jul 28,...	
11	Playtesting	Other ▾	Finished ▾	Jul 24,...	
12	Upload to itch	Other ▾	Finished ▾	Jul 31,...	
13	Submit to jam	Other ▾	Finished ▾	Jul 30,...	

Assets

https://nanokohi.itch.io/halloween-asset-pack

https://kenney.nl/assets/food-kit
https://kenney.nl/assets/monster-builder-pack
https://devilsworkshop.itch.io/low-poly-pixel-3d-mechanics-tool-set-asset-pack
https://gualtierisgg.itch.io/low-poly-mini-rpg-bundle-gold-gems-etc
https://gualtierisgg.itch.io/3d-low-poly-potions-and-flasks
https://www.flickr.com/photos/webtreatsetc/4740847847/in/album-72157625919510010/
https://ggbot.itch.io/arrose-font
https://ggbot.itch.io/juliett-font
https://kenney.nl/assets/particle-pack

Tentative sounds:
https://freesound.org/people/ultraaxvii/sounds/591151/
https://freesound.org/people/qubodup/sounds/714258/
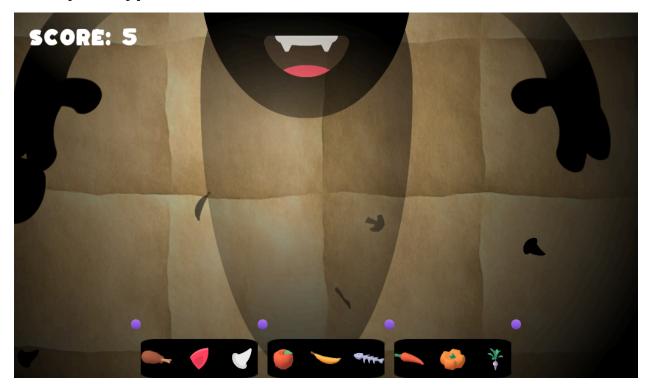https://freesound.org/people/Mateusz_Chenc/sounds/512217/
https://freesound.org/people/Q.K./sounds/56251/
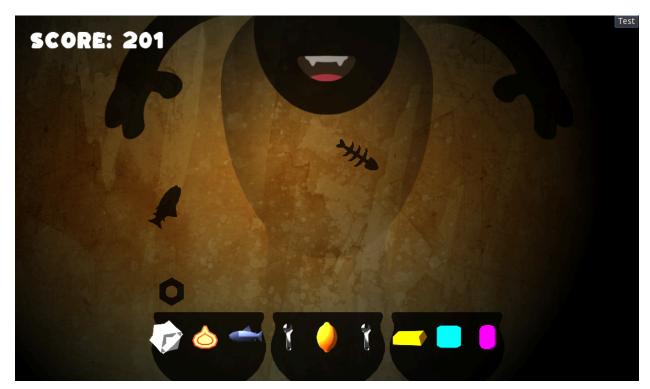https://freesound.org/people/SypherZent/sounds/420668/
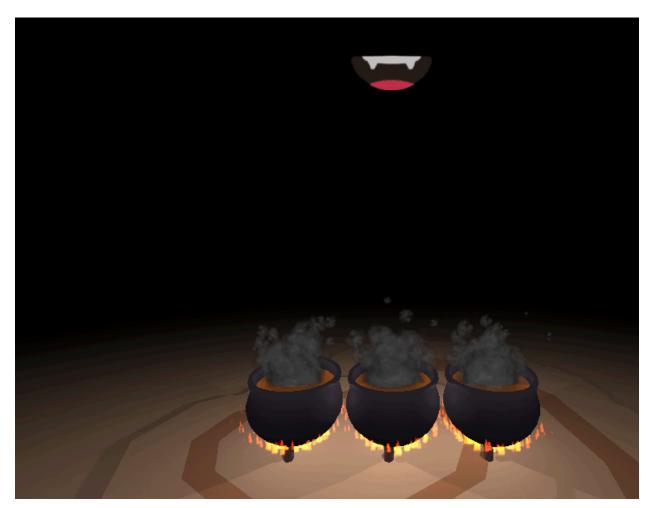https://freesound.org/people/OtisJames/sounds/249613/

Progress Screenshots

2D prototype

3D tests

Leaderboard

SCORE: 339

PURITY:

WASTED RESOURCES: 5

GAME OVER

YOUR INSTRUMENTS BECAME
CONTAMINATED.

YOU CANNOT TRANSMUTE THE ELIXIR OF
IMMORTALITY WITHOUT ENOUGH PURITY.

CLICK ANYWHERE TO TRY AGAIN.

TOP SCORES

SCORE	NAME	DATE
1221	ANONYMOUS	07/29/24
1120	ANONYMOUS	07/27/24
1002	ANONYMOUS	07/26/24
715	ANONYMOUS	07/27/24
673	ANONYMOUS	07/29/24
664	ANONYMOUS	07/27/24
533	ANONYMOUS	07/27/24
506	ANONYMOUS	07/27/24
371	ANONYMOUS	07/27/24
339	YOU	TODAY
268	ANONYMOUS	07/27/24
210	ANONYMOUS	07/27/24
192	ANONYMOUS	07/29/24
188	ANONYMOUS	07/29/24