Abstract

A deceptive isometric puzzler. Not everything is as it seems with optical illusions to keep players on their toes

BEANS  
Cross Platform Development

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# Change Log

Updates made to the document should be described below.

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Author | Date of change | Description |
| 0.0.0 | AIE | 27/08/2020 | Initial Template created |
| 0.1.0 | Madcrafty | 27/08/2020 | Simple demo project |
| 0.1.5 | Madcrafty | 28/08/2020 | Made some new levels with moving platforms |
| 0.2.2 | Madcrafty | 03/09/2020 | added menu system, added URP |
| 0.3.2 | Madcrafty | 07/09/2020 | Made some new levels, texturing on pressure plates and a follow camera script |
| 0.4.2 | Madcrafty | 08/09/2020 | Camera Lerp works with any movement and added Birds eye view mode with m, remodelled level select menu, Improved Exit script with next level toggle, Added player activation toggle to moving platforms |
| 0.4.3 | Madcrafty | 09/09/2020 | Fixed Post processing package issues |
| 0.4.6 | Madcrafty | 09/09/2020 | Input manager and post processing fixed; added controller support |
| 0.5.2 | Madcrafty | 10/09/2020 | mobile functionality, fixed minor issue with exit door, added stage to main menu |
| 0.5.3 | Madcrafty | 11/09/2020 | Made aesthetic changes to the main menu |
| 0.5.5 | Madcrafty | 11/09/2020 | fixed level 6 to have a more consistent solution |
| 0.6.0 | Madcrafty | 11/09/2020 | fixed menu with scaling buttons and backdrop, made moving platforms have blue colour |
| 0.6.3 | Madcrafty | 14/09/2020 | menu works with controller now (a little weird when switching from KB to Controller) |
| 0.6.5 | Madcrafty | 15/09/2020 | improved controls, platforms change colours depending on if they are moving |
| 0.6.6 | Madcrafty | 16/09/2020 | fixed inverted menu controls for web |
| 0.6.8 | Madcrafty | 17/09/2020 | added installer |
| 0.6.9 | Madcrafty | 17/09/2020 | Added post-processing and backdrop for levels |

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# Development Environment

## Game Engine

Unity 2019.3.6f1 (Enterprise/Personal edition)

Proprietary/Unreal/Unity and version engine version number, provide reason for choice

## Source Control

Link to github repo: https://github.com/Madcrafty/Unity\_ISOPUZZLE

## Third-Party Libraries / assets

<State and explain the reason of use for any third-party libraries, assets from engine specific market places (Approval will be required) or packages.  
**All chosen third party libraries must be reviewed before adding to project by supervising teacher and licenses must be checked**>

|  |  |  |
| --- | --- | --- |
| Asset Name  License | Url | Reason for use |
| **Example:**  **Character Pack: Free Sample** Free –Unity Extension Asset | <https://assetstore.unity.com/packages/3d/characters/humanoids/character-pack-free-sample-79870> | Character asset use for main player in game. |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

# Game Overview

Describe

## Genre

Isometric puzzler:

This genre is all about solving puzzles

## Camera Perspective and Movement

Describe

## Platform

PC, Mobile and Web. what are the requirements for deployment to each platform.   
Setup process has been outlined and detailed >

## Technical Goals

* Player movement
* Interactable objects
* Camera control
* UI design
* Scene Loading

## Game Objects and Logic

* Door:
* Moving Platform:
* Pressure Plate:
* Camera:
* Player:

# Controls

State the proposed control scheme for each platform

## 3.1 Windows / Web

WASD: to move

Escape: to pause

M: to view whole map

## 3.2 Console / Xbox

D-Pad/Left-stick: to move

Start/Options: to pause

South Button: to view whole map

## 3.1 Android / Touch

On-screen buttons:

# Mechanics

A list of intended core game mechanics. I.e., what the player can do and how they achieve this, and what this will trigger in the game. For example, shooting enemies is a core mechanic in an FPS.

* **Moving**how does it work, direction of bulets, damage speed etc.
* **Camera Control**

how does it work, realistic, curved, double jump, how high?

* **Moving platforms**how or when do they move
* **Pressure plate**How does it work / active / inactive etc.
* Etc…

## Hazards

These are items or areas in the game that are considered dangerous, eg: jump gaps, spikes, lava.  
Depending on your game, this may or may not be relevant.

## Obstacles

These are thigs in the game that move and can provide additional challenges to reaching your goals, might include “Goomba” from Mario.

## Items / Collectables

Things in the game that can be collected. Coins, health packs, weapons, powerups etc… eg, for space invaders, enemies might drop a powerup for the player to collect. How are the items collected? Player collision, are they shot at? Etc.

# Graphics

Describe graphics features here. I.e., is your game top-down 2D? What post processing are you using? Include perspective, art style, graphic features. Justify graphics selection.

# Audio

Describe audio requirements. Sounds Effects, Ambient music etc.

# Artificial Intelligence

Describe how your AI will works, i.e. state machine, fuzzy logic, GOAP. Describe the various behaviours

# Game Flow

## ‘Mission’ / ‘Level’ structure

If applicable. Are all levels stored in memory? what data is saved across levels, are levels loaded synchronously to prevent pauses?

## Objectives/Goal

What does the player try to accomplish on each level/mission? How is the players progress evaluated?

1. Levels

If any of the Levels require specific behaviours, describe those here. UML chats provided if applicable.

Level tiling tool use identified if relevant, use by designer discussed, how was it built

1. Items

List of items you can pick up that can affect the player. Include details on how items influence gameplay or AI logic.

# Interface

Make sure to address the differences needed per platform.

## Menu

What are the menu options, how is it presented to the player? Provide wireframe.  
How does this work for each input device chosen (keyboard/mouse, controller, touch)

## High scores

how is it presented to the player? Provide wireframe.  
How does this work for each input device chosen (keyboard/mouse, controller, touch)

## UI/HUD

What is involved in the UI/HUB, what information is being provided to the player. Mock-up of intended UI/HUD design

# Progress report and feedback Meeting Minutes

## Friday 4th September

Describe state of project

* Thing
* Thing

Feedback from teacher and peers:

* Describe
* Describe
* Describe

Action Items:

* Describe
* Describe
* Describe

## Wednesday 9th September

Describe state of project

* Thing
* Thing

Feedback from teacher and peers:

* Describe
* Describe
* Describe

Action Items:

* Describe
* Describe
* Describe

## Thursday 10th September

Describe state of project

* Thing
* Thing

Feedback from teacher and peers:

* Describe
* Describe
* Describe

Action Items:

* Describe
* Describe
* Describe

## Friday 11th September

Describe what has been done since last time

* Thing
* Thing

Feedback from teacher and peers:

* Describe
* Describe
* Describe

Action Items:

* Describe
* Describe
* Describe