Code Design and Data Structures Project Design Document

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# Introduction

# Design Overview

# Game Design

## Introduction

This project runs a short 2D platformer game. The player controls a character who can walk on other objects, jump over or onto obstacles, and will fall when walking off an edge. The player wins by reaching a door at the end of the level.

## Controls and Gameplay

The player uses the WASD keys to control the character

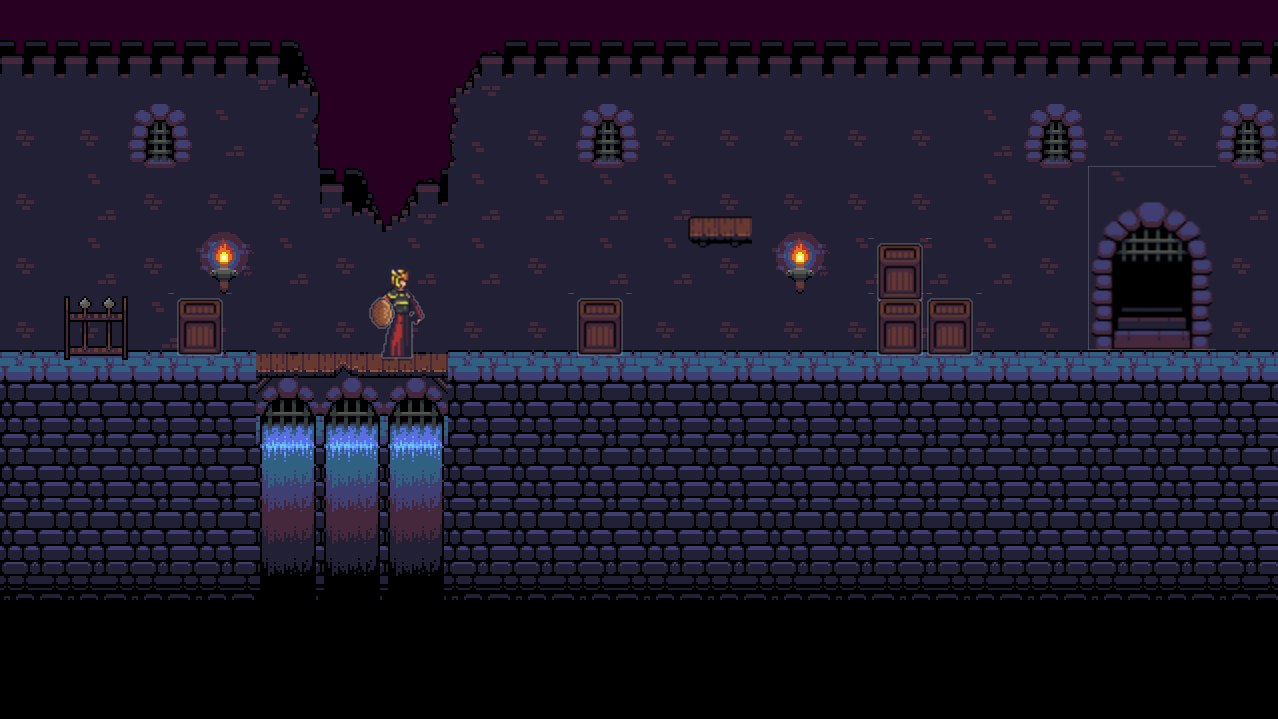
|  |  |
| --- | --- |
| **Key** | **Action** |
| A/D | Move left/right |
| W | Jump |
| S | Crouch |
| ESCAPE | Pause/Unpause |

The character can walk left and right, and move left and right while in the air, but cannot move while crouching. They are able to jump from a standing, crouching, or walking position, but cannot “double jump” while in the air.   
If the character walks off an edge, or is otherwise not supported by some object, they will fall until they land on an object which supports them.

Walking into the door at the end of the level triggers the win screen.

## Level Design

The level was designed to demonstrate basic platforming features. The player needs to reach the door (4) at the right, but the pile of blocks (3) is too high to jump over. So the player has to jump onto the block ahead (1), jump from it onto the platform(2) and then jump onto the pile of blocks(3) to get past them and reach the door(4).



4

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2

1

Player

# Container Classes

## Introduction

One of this project’s requirements was that

# State Machine

# Entities

# Observer System

# Resource Management

# User Interface