# Game Engine Scripting Midterm Project

#### Due 10/30

Using the basic 2D platforming framework we have developed in class, create a simple game that meets the following requirements:

## Overview

* The game must be a side-scrolling, 2D game using 2D art only.
* Your game must have a win state. Lose / game over state is optional.
* All assets must be used **legally**. I have provided [links](#_Resources) at the bottom of the assignment to help.
* **No external coding assets** may be used outside of code we’ve worked on in class.
* Remember, this is not an art class, **do not focus on producing or finding art assets!**

## Content

* Your game must have **three levels** (three separate scene files containing a level of gameplay). The player should be able to access each of them naturally during a single playthrough.
  + Levels must incorporate tile maps imported from [Tiled](https://docs.google.com/document/d/196x9G0xa1XJ1X9bO8D6vpgfnawGzAgF0QjDsbjkL13Q/edit#heading=h.jk4mrvtpgkd4)
  + Each level must include at least one platforming puzzle of a **reasonable** difficulty. The difficulty should curve up slightly in each successive level. (**err on the side of too easy**!)
* **Title screen with credits info** (likely a standalone scene that is loaded first when your game starts)
* **Background music** (for the title screen, and gameplay)
* **Jump sound effect**
* **Pickup collectible sound effect**
* **Death sound effect**
* Your game must have **idle, move, jump, and die animations**
  + The idle animation can just be one frame of not moving if need be

## Basic Features

* Your game must support jumping and moving left and right
* Your game must have collectible pickups.
  + The pickups must have some bearing on gameplay (even if it’s just a “score”)
* Your game must have a way for the player to die and respawn
* Your game must include checkpoints (a place the player respawns from after making progress in the level so they aren’t starting from square one)

## Special Feature

* You must come up with one new key feature that will be incorporated into puzzle solving in each of your levels. **You must get my approval for this by 10/16.** These puzzles will be in addition to your platforming puzzle requirement, though you can use both your new game mechanic and platforming in tandem to satisfy this requirement.

## Building and Submitting your Game

* Your game must be uploaded on a public GitHub repository. This includes all the project files, not just a build. **You must submit a link on Moodle to your repository.**
* You must provide a build in the Classfolders/Drop location for our class.

## Grading Criteria

First and foremost, your project will be evaluated based on completing all the above requirements. Avoid getting hung up on finding (or creating) the perfect assets. At the end of the day, a game that is fully playable is better than a half-functional Unity project with perfect assets.

* (60%) **All requirements met satisfactorily**
  + All the above features and content are implemented and fully functional
* (20%) **Usability**
  + How playable is your game? Can I figure out what to do? Is it too hard?
* (10%) **Production value / effort**
  + Does it look and play nicely and feel crafted, or does it feel thrown together haphazardly?
* (10%) **Style and organization**
  + Project follows our course’s [programming style conventions](https://docs.google.com/presentation/d/1aCUyhjgZfFmim-vv7q-C0UIgvPCe95eyuK82wiYS_kQ/edit#slide=id.g1679c58e71_0_73) and [Unity project standards](https://docs.google.com/presentation/d/1aCUyhjgZfFmim-vv7q-C0UIgvPCe95eyuK82wiYS_kQ/edit#slide=id.g184565d5c3_0_0)

## Resources

You may not use code assets you did not create, unless you get my permission. However, you are free to use any assets you can find that you have legal permission to use.

Here are some links that may help:

* [Unity asset store](https://www.assetstore.unity3d.com/en/) – remember, no code assets!
* [OpenGameArt.org](http://opengameart.org/) – royalty-free art
* [Bfxr.net](http://www.bfxr.net/) – online synthesizer for simple sound effects
* [Dova Syndrome](http://dova-s.jp/) – royalty-free music, kind of confusing Japanese site, make google translate it!
* [Tiled](http://mapeditor.org/) – free tile-based map editor
  + [Tiled2Unity](https://seanba.itch.io/tiled2unity) tool required for importing Tiled maps into Unity