

## CS 5602 – Game Design and Development

### Fall 2024 – Unity Assignment 3 – 2D Tilemap and User Control

In this assignment, you will learn to use basic 2D platformer tools in Unity. Research through Unity documentation, YouTube, and other sources will be required.

Download this free tileset: <https://craftpix.net/freebies/free-green-zone-tileset-pixel-art/>



Paint a small level using the sprites in the above tileset. Environmental objects such as trees are not required; background graphics are not required; all that your level requires is a ground and 2-3 platforms for the player to jump on.

Once you are done creating the level, import the character sprite from Assignment 2; there is no need to animate it, so use just the first slice to have a static image available. Write a C# script, attach it to the player, and using either the legacy input system or the new input system (see YouTube link on the course web page), write code to get the character to move left and right based on WASD input or the arrow keys. Use the space bar to jump. The jump should allow the player to land on the elevated platforms that you have created in the level.

Your code should ensure independence from computer performance.

Zip your Unity project folder and upload the file to any free online storage system. Provide the link in the LMS assignment submission form, and ensure proper read/download permissions. Invalid links, invalid download permission, corrupt zip files, or any other issue will result in 0 marks being assigned.

Note the following .gitignore entries; to limit the zip file's size, do not add the following files and directories to your zip file.

```
[L]ibrary/  
[T]emp/  
[Oo]bj/  
[Bb]uild/  
[Bb]uilds/  
[Ll]ogs/  
[Uu]ser[Ss]ettings/  
  
# MemoryCaptures can get excessive in size, and may contain sensitive data  
[Mm]emoryCaptures/  
  
# Recordings can get excessive in size
```

```
/[Rr]ecordings/

# Uncomment this line if you wish to ignore the asset store tools plugin
# /[Aa]ssets/AssetStoreTools*

# Autogenerated JetBrains Rider plugin
/[Aa]ssets/Plugins/Editor/JetBrains*

# Visual Studio cache directory
.vs/

# Gradle cache directory
.gradle/

# Autogenerated VS/MD/Consulo solution and project files
ExportedObj/
.consulo/
*.csproj
*.unityproj
*.sln
*.suo
*.tmp
*.user
*.userprefs
*.pidb
*.boopproj
*.svd
*.pdb
*.mdb
*.opendb
*.VC.db

# Builds
*.apk
*.aab
*.unitypackage
*.app

# Crashlytics generated file
crashlytics-build.properties

# Packed Addressables
/[Aa]ssets/[Aa]ddressable[Aa]ssets[Dd]ata/*/*.bin*

# Temporary auto-generated Android Assets
/[Aa]ssets/[Ss]treamingAssets/aa.meta
/[Aa]ssets/[Ss]treamingAssets/aa/*

# Blender backups
*.blend1

# vscode editorconfig
.editorconfig
```