Introduction to Mobile Game Development

The goal of this workshop is to get participants up and running with Unity, specifically its suite of 2D mobile features. As participants work through the activities, they will build a 2D mobile game from the ground up, learning skills like sprites, animation, game mechanics, analytics, monetization, and publishing. The project in this workshop is a side-scrolling, endless-runner game that will run on touch input.

By the end of the workshop, participants will have used the 2D toolset to build characters, scenes, animations, and game mechanics for mobile deployment of their game.

Level: Beginner

Prerequisites: No prior experience required

Duration: 7-8 hours

Class size: 15 people

Trainer: Unity Certified Instructor

Learning Objectives and Outcomes

Distinguish features that enable mobile deployment versus other platforms
- Identify the platforms the Unity Engine can deploy to plan building content once and deploy across platforms
- Identify trade offs made for mobile deployment versus PC/Console deployment
- Identify optimization considerations to the provided assets and why they were made for the 2D mobile game project.

Navigate in the Unity Editor to create a simple mobile game
- Identify the different Editor windows and their purposes
- Use common hotkeys and shortcuts to navigate in the Editor
- Configure a Unity Project for 2D development

Use the Unity 2D toolset to set up characters and scenes
- Use the Sprite Editor to slice Sprite Sheets for use in the Scene
- Apply 2D colliders for Physics interactions

- Configure Prefabs for use throughout the Scene
- Use Tilemap to build multi-layered Sprite based Scenes
- Use Scriptable Tiles to
- Adjust Sprite Z-positioning to create a parallax effect

Create in-editor animations to generate animations for scene elements and the character
- Import character sprite sheet animations
- Create keyframe animations to create smooth transitions for the character animations
- Enable the control of multiple animation sequences with the Animator
- Enable the Sprite Packer to automate and optimize textures applied to Sprites
- Create Scriptable brushes for the platforms.

Build 2D game mechanics that enable mobile gameplay
- Use scripts to implement gameplay
- Configure a Cinemachine camera to create a follow camera
- Apply and configure mobile gestures (touch, tap and swipes) to implement Player controller.
- Build a simple UI to display gameplay behavior

Plan for using services to improve long term game play and build mobile monetization and business strategies
- Identify analytics services for mobile games
- Identify monetization services for mobile games
- Identify retention services for mobile games
- Identify Google Cloud save for storing information for multiple devices
- Create a basic plan for implementing services for future 2D mobile game development

Prepare for mobile deployment
- Publish the completed 2D Game to Android and iOS

Activities

- Introduction: Workshop Overview and Learning Action Plan
- Activity 1: Setting up a Project and Scene
- Activity 2: Creating Animations and Players
- Activity 3: Creating Game Mechanics
- Activity 4: Finalizing the Game
- Activity 5: Unity Services for Mobile Games
- Conclusion: Learning Action Plan and Further Learning

What to Bring

- Each participant will need to bring a laptop (Windows or OSX), power supply (including any necessary international adapters), and mouse.
- Install Unity 2018.2 prior to the workshop.