

Game Design Assignment 2 - 2D Side Scroller for Mobile – due Friday October 13th at 11:59 PM

Outline: the 2D side scroller is a type of game where the player moves in the YZ-plane, running forward and back and jumping up and down while also hitting enemies. The player advances through the game world by moving towards the right side of the screen and jumping over various platforms, obstacles, and ledges. Enemies must be dodged or attacked, and bonuses, coins, and powerups can be collected.



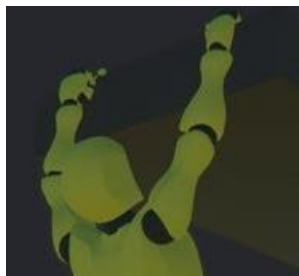
Above: the original super mario bros for Nintendo (left) and a more recent iteration for mobile (Right).

In this assignment, you must use the CLazyRunnerActionAnimPack (provided on moodle) to create a side-scrolling game with the following features:

1. **Animation (75%):** Run left/right, idle, jump and land: ClazyJump folder contains jump anims. Use them to implement a character that can jump over small obstacles, jump down from high, and jump up unto platforms. Implement also the ledge hang: the ClazyWallRun folder contains animations to hang from a ledge and jump up. Use this to jump over taller obstacles.
2. **Game design (25%):** Enemies and bonus objects (coins or boxes). The game should have some logical sequence and be challenging (but not impossible) for the player. Mobile controls (below).

The main purpose of the assignment is to get familiar with integrating [3D humanoid animation](#) with character controls. Create a small level with some obstacles to test your character. Start by getting run/idle working. You can simulate 2D by setting the camera to orthographic mode and restricting your character movement to Z and Y directions. [Character controller](#) component will probably be useful.

Mobile: adapt your character controller to work with touchscreen controls. The game should run in landscape mode, the player controls with their two thumbs, one on each bottom corner of the device. It will be easier to test/develop your game using the keyboard before adapting the controls to mobile.



left thumb
(movement)

right thumb
(jump/attack)

Example of ledge hang (left) and controls for mobile (right). The ledge hang hand positions can be fine-tuned using [inverse kinematics](#) or [animation rigging](#).