

# Component 1 - Player Movement

This is a simple component which allows the player to move left and right, sprint, and jump.

## How it works

Within the update function three different functions run constantly. The movement function changes the players position at a specific speed in a direction which is defined by the keys that are tagged as horizontal (a and d or left and right). The sprint function first asks if the player's direction (the input from the keys) is not zero, and if this is the case and the left shift key is held then the player is moved in a direction at the same speed as walking, but this is timesed by the sprint multiplier. The jump function asks if the space key is being pressed and the player is grounded. If this is the case the linear velocity of the player on x is kept the same, and the jump force is added to their y coordinate. When the player collides with something they become grounded, and when they leave this collision they become not grounded.

## How to modify

- The base speed of the player can be changed to any float both within the script and in the unity inspector.
- The sprint multiplier can also be changed to any float within the script or the unity inspector.
- The jump force can be changed to any float within the script or the unity inspector.
- Sprint can be assigned to any chosen key rather than left shift.
- Jump can be assigned to any chosen key rather than space.

## How I implemented into my game

The player movement script created in this component was also attached to the player in the component which I duplicated to become the base of my prototype, so this script was already implemented into the prototype game.