Easy Ledge Climb Character System / 3D Platformer Kit (C) 2015-2016 Grant Marrs



Easy Ledge Climb Folders and Files

Models:

- ExampleStage
 - Materials
 - logo.mat
 - mountains.mat
 - standard.mat
 - ExampleStage.FBX
 - .FBX model file of the example stage
 - logo.png
 - Texture file for the ELC (Easy Ledge Climb) logo
- LedgeClimbNinja
 - Materials
 - LedgeClimbNinja.mat

- LedgeClimbNinja.png
 - Texture file for the Ledge Climb Ninja
- LedgeClimbNinja.FBX
 - .FBX model file of the Ledge Climb Ninja (player)
- PlayerController.controller
 - Animator controller for the Ledge Climb Ninja (26 Mecanim animations)

ParticleEffects:

- Materials
 - DustCloud.mat
 - DustDoubleJump.mat
- AutoDestroyParticleSystem.cs
 - Automatically destroys script holder once ParticleSystem has completed
- DustCloud.prefab
 - Prefab for the DustCloud particle effect
- DustDoubleJump.prefab
 - Prefab for the DustDoubleJump particle effect
- DustParticle.png
 - Texture file for the particle of dust used in the particle effects

Scenes:

- DemoSceneCharacterController.unity
 - Demo scene that uses "ExampleStage" as the stage, "LedgeClimbNinja" as the player, and a Character Controller for the player
- DemoSceneRigidbody.unity

- Demo scene that uses "ExampleStage" as the stage, "LedgeClimbNinja" as the player, and a Rigidbody for the player

Scripts:

- Camera

CameraController.cs - modified from John McElmurray's and Julian Adams' "ThirdPersonCamera.cs" script

- Follow the player at a set speed, height, and distance
- Lock on behind the player

NOTE: *You should always set a layer for your player so that you can disable collisions with that layer (by unchecking it in the script's Collision Layers). If you do not, the camera will collide with the player himself!*

- Player
- *(Player must have a CharacterController or Rigidbody component in order for these to work!)*

LedgeClimbController.cs

- Grab on to, and climb up and over ledges (Climbing Detectors)
- Move from side to side on ledges (Moving Detectors)
- Jump from one ledge to another / switch ledges (Ledge Switching Detectors)
- Grab back on to or jump off of a ledge that you just walked off of (Walking Off Ledge Detectors)
- Enable or disable scripts when grabbing on to a ledge, as well as when letting go of a ledge (Scripts To Enable On Grab/Scripts To Disable On Grab)
- -> You should always disable any other scripts that affect the movement or rotation of the player. If you do not, this script will not work properly.

PlayerController.cs

- Move and rotate (Movement)
- Slide down slopes (Movement)
- Perform any amount of jumps with different heights and animations (Jumping)
- Perform a double jump (Jumping)
- Wall jump (Wall Jumping)

NOTE: *You should always set a layer for your player so that you can disable collisions with that layer (by unchecking it in the script's Collision Layers). If you do not, the raycasts and linecasts will collide with the player himself and keep the script from working properly!*

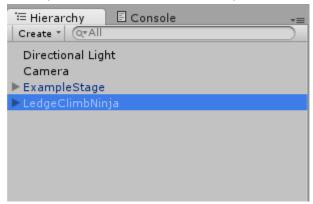
WebplayerDemo:

- Materials
 - logo.mat
 - mountains.mat
 - standard.mat
- WebplayerDemo.unity
 - Demo scene that uses "WebPlayerDemoStage" as the stage, "LedgeClimbNinja" as the player, and a Character Controller for the player
- WebPlayerDemoStage.FBX
 - .FBX model file of the webplayer demo stage

Setting Up the Easy Ledge Climb Character System with a New Character

Making the player scripts (PlayerController.cs and LedgeClimbController.cs) work with your character

1. Select your character in the "Hierarchy" tab.

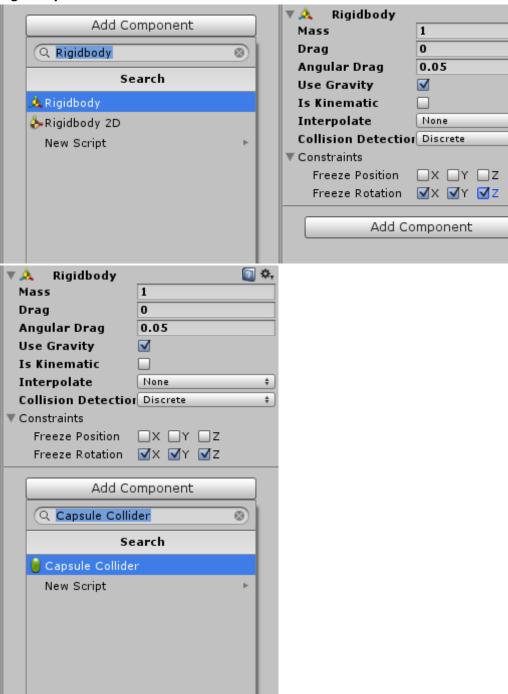


2. If your character does not already have one, add a CharacterController or Rigidbody component to your character from the "Inspector" tab (if you use a Rigidbody, you must freeze your player's rotation and add a collider component as well).

Character Controller:



Rigidbody:

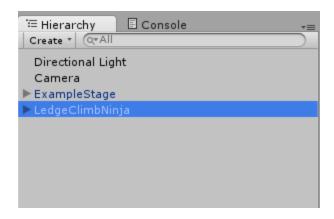


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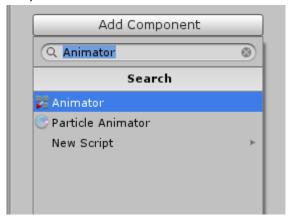
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Making the animations work with your character

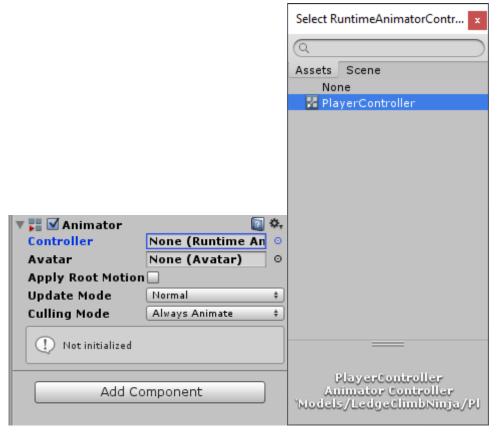
1. Select your character in the "Hierarchy" tab.



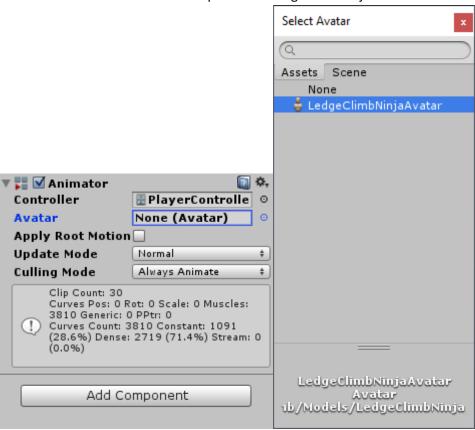
2. If your character does not already have one, add an Animator component to your character from the "Inspector" tab.



3. Set the Controller (Runtime Animator Controller) of the Animator Component to PlayerController.

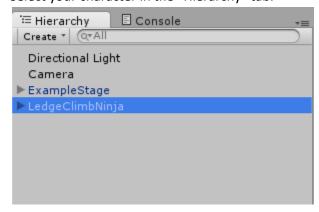


4. Set the Avatar of the Animator Component to LedgeClimbNinjaAvatar.



Setting up PlayerController.cs with your character

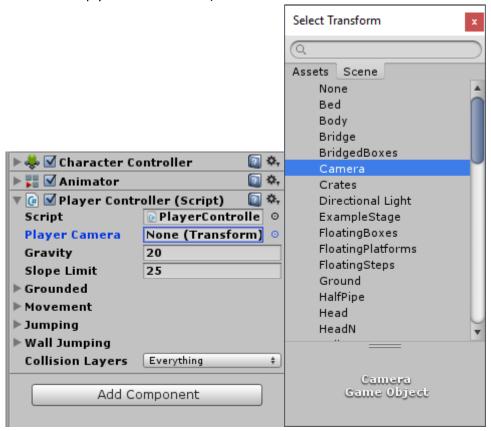
1. Select your character in the "Hierarchy" tab.



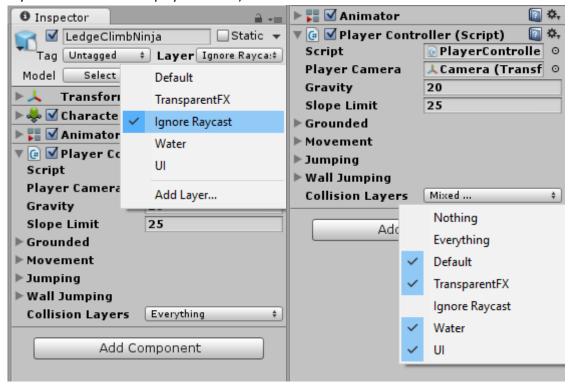
2. Add the PlayerController.cs script to your character (either by using "Add Component" in the "Inspector" tab or by dragging and dropping the script from the "Project" tab on to your player in the "Inspector" tab).



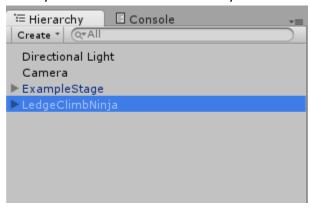
3. Set the Player Camera of the script to the main camera/camera you want to use for your player (in this case, the camera is simply named "Camera").



4. Set a layer for your player and uncheck it in the script's Collision Layers (to avoid having the script's linecasts and raycasts collide with the player himself).



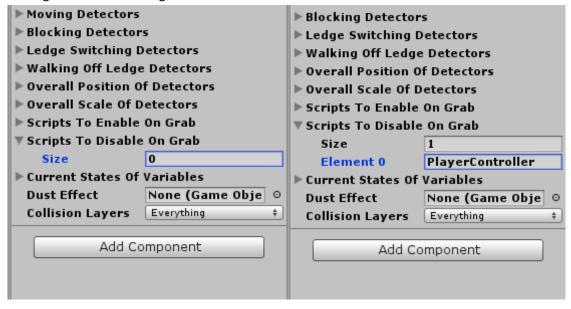
1. Select your character in the "Hierarchy" tab.



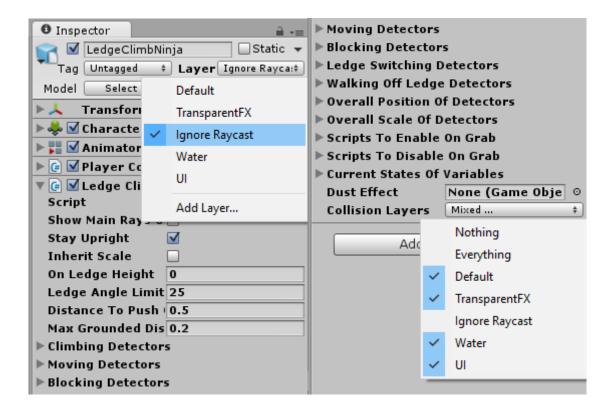
2. Add the LedgeClimbController.cs script to your character (either by using "Add Component" in the "Inspector" tab or by dragging and dropping the script from the "Project" tab on to your player in the "Inspector" tab).



3. If your character is using any other scripts that affect his movement or rotation, enter their names into the "Scripts To Disable On Grab" section so that they do not interfere with the movement and rotation of the player while grabbed on to a ledge.

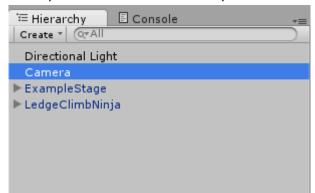


4. Set a layer for your player and uncheck it in the script's Collision Layers (to avoid having the script's linecasts and raycasts collide with the player himself).



Setting up CameraController.cs with a camera

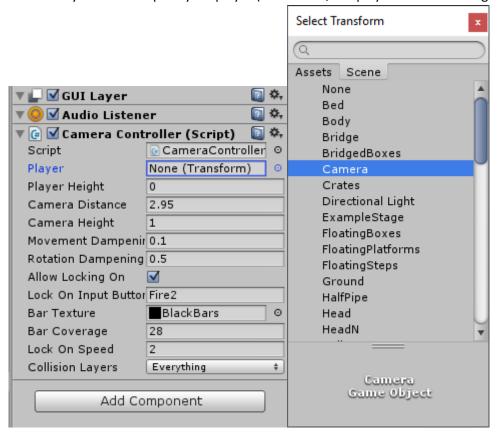
1. Select your camera in the "Hierarchy" tab.



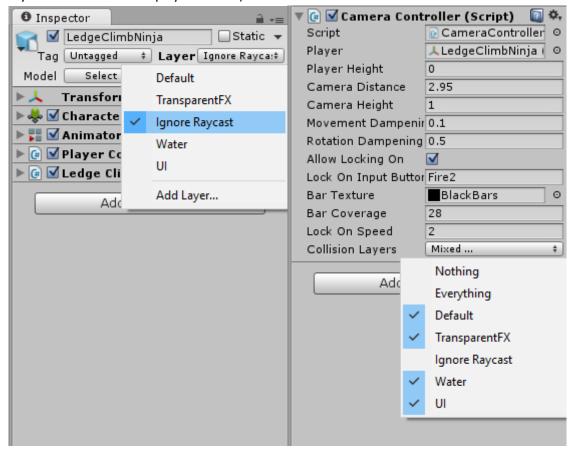
2. Add the CameraController.cs script to the camera (either by using "Add Component" in the "Inspector" tab or by dragging and dropping the script from the "Project" tab on to your camera in the "Inspector" tab).



3. Set the Player of the script to your player (in this case, the player is named "LedgeClimbNinja").



4. Set a layer for your player and uncheck it in the script's Collision Layers (to avoid having the script's linecasts and raycasts collide with the player himself).



Easy Ledge Climb Character System Variables and Features

PlayerController.cs

Player Camera	从Camera (Transf ⊙
Gravity	20
Slope Limit	25

Player Camera – the camera set to follow the player

<u>Gravity</u> – the amount of downward force, or "gravity," that is constantly being applied to the player <u>Slope Limit</u> – the maximum angle of a slope you can stand on without sliding down

▼ Grounded	
Show Ground Detection Rays	
Max Grounded Height	0.2
Max Grounded Radius	0.2
Max Grounded Distance	0.2
Currently Grounded	

<u>Grounded</u> – detectors that determine whether the player is grounded or not

<u>Show Ground Detectors</u> – shows the rays that detect whether the player is grounded or not <u>Max Grounded Height</u> – the maximum height of the ground the ground detectors can hit to be considered grounded

<u>Max Grounded Radius</u> – the maximum radius of the area ground detectors can hit to be considered grounded

 $\underline{\text{Max Grounded Distance}}$ – the maximum distance you can be from the ground to be considered grounded

Currently Grounded – determines if the player is currently grounded/on the ground

▼ Movement	
Forward Speed	6
Side Speed	4
Back Speed	5
Mid Air Movement Speed Multiple	1.1
Acceleration	50
Movement Friction	0
Rotation Speed	8
Mid Air Rotation Speed Multiple	1
Slope Slide Speed	1
Slide Friction	4

Movement – variables that affect the player's movement

Forward Speed – player's speed when running forward

Side Speed – player's speed when running sideways

Back Speed – player's speed when running backwards

<u>Mid Air Movement Speed Multiple</u> – player's movement speed in mid-air (multiplied by the player's current movement speed)

Acceleration – how fast the player will reach their maximum speed

Movement Friction – the amount of friction applied to the player's movement

Rotation Speed – player's rotation speed

<u>Mid Air Rotation Speed Multiple</u> – player's rotation speed in mid-air (multiplied by Rotation Speed) <u>Slope Slide Speed</u> – how quickly you slide down slopes

Slide Friction – the amount of friction applied to the player from sliding down a slope

▼ Jumping		
▶ Number And Height Of Jumps		
Time Limit Between Jumps	1	
Allow Jump When Sliding Facing Uphill		
Allow Jump When Sliding Facing Downhill		
Do Not Increase Jump Number When Sliding		
Jump Landing Effect	DustCloud	0
Allow Double Jump		
Double Jump Performable Out Of Wall Jump		
Double Jump Performable If In Mid Air In General		
Double Jump Height	6	
Double Jump Effect	DustDoubleJump	0
Max Falling Speed	90	

<u>Jumping</u> – variables that affect the player's jumps

<u>Number And Height Of Jumps</u> – the number of jumps the player can do and the height of the jumps (the elements)

<u>Time Limit Between Jumps</u> – the amount of time you have between each jump to continue the jump combo

<u>Allow Jump When Sliding Facing Uphill</u> – determines whether or not you are allowed to jump when you are facing uphill and sliding down a slope

<u>Allow Jump When Sliding Facing Downhill</u> – determines whether or not you are allowed to jump when you are facing downhill and sliding down a slope

<u>Do Not Increase Jump Number When Sliding</u> – only allows the player to perform their first jump when sliding down a slope

Jump Landing Effect – optional dust effect to appear after landing jump

Allow Double Jump – determines whether or not you are allowed to double jump

<u>Double Jump Performable Out Of Wall Jump</u> – (if "Allow Double Jump" is true) determines whether or not the player can perform their double jump if they are in mid-air as a result of wall jumping

<u>Double Jump Performable If In Mid Air In General</u> – (if "Allow Double Jump" is true) determines whether or not the player can perform their double jump simply because they are in mid-air (instead of having to be in mid-air as a result of jumping)

Double Jump Height – height of double jump

<u>Double Jump Effect</u> – optional effect to appear when performing a double jump

Max Falling Speed – the maximum speed you can fall

▼ Wall Jumping		
Allow Wall Jumping	lacksquare	
Minimum Wall Angle	80	
Wall Jump Distance	6	
Wall Jump Height	10	
Wall Jump Deceleration Rate	2	
Overall Movement Speed	2	
Forward Movement Speed Multiple	0.85	
Side Movement Speed Multiple	0.85	
Back Movement Speed Multiple	0.75	
Rotation Speed Multiple	0	
Distance To Keep From Wall When On Wall	1	
Use Wall Jump Time Limit		
Wall Jump Time Limit	2	
Slide Down Walls		
Slide Down Speed	8	
Rotation To Wall Speed	6	
Input Percentage Needed To Wall Jump	50	
Show Wall Jump Detectors		
Space On Wall Needed To Wall Jump Up Amount	0	
Space On Wall Needed To Wall Jump Height	0	
Space On Wall Needed To Wall Jump Length	0	
Space On Wall Needed To Wall Jump Width	0	
Space Below Needed To Wall Jump	0	

Wall Jumping – variables that affect the player's wall jumps

Allow Wall Jumping – determines whether or not the player is allowed to wall jump

Minimum Wall Angle – the minimum angle a wall can be to wall jump off of it

Wall Jump Distance - distance of wall jump

Wall Jump Height – height of wall jump

Wall Jump Deceleration Rate – how quickly the momentum from the wall jump stops

Overall Movement Speed – player's movement speed in mid-air

<u>Forward Movement Speed Multiple</u> – player's speed when moving forward in mid air (multiplied by Overall Movement Speed)

<u>Side Movement Speed Multiple</u> – player's speed when moving sideways in mid air (multiplied by Overall Movement Speed)

<u>Back Movement Speed Multiple</u> – player's speed when moving backwards in mid air (multiplied by Overall Movement Speed)

<u>Rotation Speed Multiple</u> – player's rotation speed in mid-air (multiplied by Rotation Speed)

<u>Distance To Keep From Wall When On Wall</u> – the distance the player keeps from the wall he is currently stuck to

Use Wall Jump Time Limit – allows the use of a time limit to wall jump when on walls

Wall Jump Time Limit – the amount of time you can stay on a wall before falling

Slide Down Walls – allows player to slide down if on a wall

Slide Down Speed – the speed at which the player slides down walls

Rotation To Wall Speed – how quickly the player rotates onto a wall for a wall jump

<u>Input Percentage Needed To Wall Jump</u> – the amount of input needed to be applied to the joystick or key in order to stick to a wall for a wall jump

<u>Show Wall Jump Detectors</u> – determines whether to show or hide the detectors that allow wall jumping <u>Space On Wall Needed To Wall Jump Up Amount</u> – moves the rays that detect the amount of open space on a wall up and down

<u>Space On Wall Needed To Wall Jump Height</u> – changes the height of the rays that detect the amount of open space on a wall

<u>Space On Wall Needed To Wall Jump Length</u> – changes the length of the rays that detect the amount of open space on a wall

<u>Space On Wall Needed To Wall Jump Width</u> – changes the width of the rays that detect the amount of open space on a wall

<u>Space Below Needed To Wall Jump</u> – changes the minimum distance from the ground you must be in order to wall jump

Collision Layers	Mixed	‡

Collision Layers – the layers that the detectors (raycasts/linecasts) will collide with

LedgeClimbController.cs

Show Main Rays Only	
Stay Upright	lacksquare
Inherit Scale	
On Ledge Height	0
Ledge Angle Limit	25
Distance To Push Off Of Ledge After Letting Go	0.5
Max Grounded Distance	0.2

Show Main Rays Only – show only the main detector rays

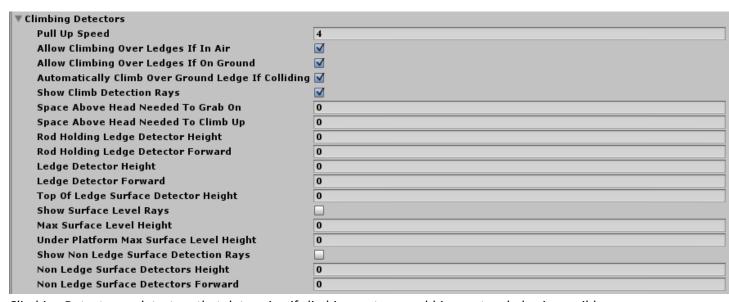
Stay Upright – only rotate to the left and right, not up and down

Inherit Scale – set the scale of the rays to the scale of the script holder

On Ledge Height – determines the player's up distance/height while grabbed on to a ledge

Ledge Angle Limit – the maximum angle of a ledge you can grab on to

<u>Distance To Push Off Of Ledge After Letting Go</u> – the distance the player pushes off of a ledge after letting go <u>Max Grounded Distance</u> – the maximum distance you can be from the ground to be considered grounded



<u>Climbing Detectors</u> – detectors that determine if climbing on to or grabbing on to a ledge is possible

Pull Up Speed – the speed the player pulls up and over ledges

<u>Allow Climbing Over Ledges If In Air</u> – allows player to climb over a ledge that he is currently grabbed on to in mid-air

Allow Climbing Over Ledges If On Ground – allows player to climb over a ledge if he is on the ground

<u>Automatically Climb Over Ground Ledge If Colliding</u> – (if "Allow Climbing Over Ledges If On Ground" is true) allows player to automatically climb over a ledge on the ground if he is colliding with and moving toward it (as opposed to having to stop and move again if colliding)

<u>Show Climb Detection Rays</u> – shows the rays that detect whether a ledge can be climbed or not <u>Space Above Head Needed To Grab On</u> – the amount of space above the player's head needed to grab on to a ledge

<u>Space Above Head Needed To Climb Up</u> – the amount of space above the player's head needed to climb up and over a ledge

Rod Holding Ledge Detector Height – the height of the rod that holds the ledge detector

<u>Rod Holding Ledge Detector Forward</u> – the forward distance of the rod that holds the ledge detector <u>Ledge Detector Height</u> – the height of the ledge detector (the ray that detects ledges)

<u>Ledge Detector Forward</u> – the forward distance of the ledge detector (the ray that detects ledges) <u>Top Of Ledge Surface Detector Height</u> – the height of the detector that determines where the top (surface) of a ledge is

<u>Show Surface Level Rays</u> – shows the rays that detect whether a ledge is low enough to be climbed or not

<u>Max Surface Level Height</u> – the maximum height (or level) of a surface that the player can grab on to <u>Under Platform Max Surface Level Height</u> – the maximum height (or level) of a surface that the player can grab on to when that surface is under a platform/another collider

<u>Show Non Ledge Surface Detection Rays</u> – shows the rays that detect whether a surface is actually a ledge or not (instead of something else such as a slope/hillside)

Non Ledge Surface Detectors Height – the height of the detectors that determine whether a surface is actually a ledge or not (instead of something else such as a slope/hillside)

Non Ledge Surface Detectors Forward – the forward distance of the detectors that determine whether a surface is actually a ledge or not (instead of something else such as a slope/hillside)

▼ Moving Detectors	
Move Speed	3
Rotation Speed	8
Move In Bursts	
Burst Length	1
Show Moving Rays	
Moving Detectors Height	0
First Front Wall Detectors Forward	0
First Front Wall Detectors Width	0
First Back Wall Detectors Forward	0
First Back Wall Detectors Width	0
Second Front Wall Detectors Forward	0
Second Front Wall Detectors Width	0
Second Back Wall Detectors Forward	0
Second Back Wall Detectors Width	0
Front Top Of Ledge Surface Detectors Forward	0
Back Top Of Ledge Surface Detectors Forward	0
Show Ground Rays	
Min Dist From Ground Height	0
Min Dist From Ground Width	0

Moving Detectors – detectors that determine where and how the player will move when on a ledge

Move Speed – the speed the player moves left and right (while grabbed on to a ledge)

<u>Rotation Speed</u> – the speed the player rotates (while grabbed on to a ledge)

Move In Bursts – move left and right in bursts (while grabbed on to a ledge)

Burst Length – the amount of time a movement burst lasts

<u>Show Moving Rays</u> – shows the rays that detect where and how the player will move when on a ledge <u>Moving Detectors Height</u> – the height of the rays that detect where and how the player will move when on a ledge

<u>First Front Wall Detectors Forward</u> – the forward distance of the first set of detectors that detect walls in front of the player

<u>First Front Wall Detectors Width</u> – the width of the first set of detectors that detect walls in front of the player

<u>First Back Wall Detectors Forward</u> – the forward distance of the first set of detectors that detect walls behind the player

<u>First Back Wall Detectors Width</u> – the width of the first set of detectors that detect walls behind the player

<u>Second Front Wall Detectors Forward</u> – the forward distance of the second set of detectors that detect walls in front of the player

<u>Second Front Wall Detectors Width</u> – the width of the second set of detectors that detect walls in front of the player

<u>Second Back Wall Detectors Forward</u> – the forward distance of the second set of detectors that detect walls behind the player

<u>Second Back Wall Detectors Width</u> – the width of the second set of detectors that detect walls behind the player

<u>Front Top Of Ledge Surface Detectors Forward</u> – the forward distance of the detectors that determine where the top (surface) of a ledge in front of the player is

<u>Back Top Of Ledge Surface Detectors Forward</u> – the forward distance of the detectors that determine where the top (surface) of a ledge behind the player is

<u>Show Ground Rays</u> – shows the rays that detect whether the player is too close to the ground to move or not

Min Dist From Ground Height –the minimum distance (or height) the player must be from the ground in order to grab on to or move on a ledge

Min Dist From Ground Width – the width of the rays that determine the minimum distance (or height) the player must be from the ground in order to grab on to or move on a ledge

▼ Blocking Detectors		
Show Rotation Blocking Rays		
Prevent Rotating To Side Wall Height	0	
Prevent Rotating To Side Wall Width	0	
First Allow Rotating If Ledge Hit Width	0	
Second Allow Rotating If Ledge Hit Width	0	
Show Movement Blocking Rays		
Mid Side Wall Detectors Forward	0	
Mid Side Wall Detectors Width	0	
Side Wall Detectors Width	0	
Front Side Blockage Detectors Height	0	
Front Side Blockage Detectors Width	0	
Front Side Blockage Detectors Forward	0	
Above Head Platform Detectors Height	0	
Above Head Platform Detectors Forward	0	
Show Angle Detection Rays		
Ledge Angle Detectors Height	0	
Ledge Angle Detectors Width	0	

Blocking Detectors – detectors that determine whether the player is blocked from moving on a ledge or not

<u>Show Rotation Blocking Rays</u> – shows the rays that detect whether the player is blocked from rotating on a ledge or not

<u>Prevent Rotating To Side Wall Height</u> – the height of the detectors that determine if something to the side of the player (such as a wall) cannot be rotated to

<u>Prevent Rotating To Side Wall Width</u> – the width of the detectors that determine if something to the side of the player (such as a wall) cannot be rotated to

<u>First Allow Rotating If Ledge Hit Width</u> – the width of the first set of detectors that determine if something to the side of the player (such as a ledge) can be rotated to

<u>Second Allow Rotating If Ledge Hit Width</u> – the width of the second set of detectors that determine if something to the side of the player (such as a ledge) can be rotated to

<u>Show Movement Blocking Rays</u> – shows the rays that detect whether the player is blocked from moving on a ledge or not

<u>Mid Side Wall Detectors Forward</u> – the forward distance of the detectors that determine whether a wall in front of and to the side of the player is blocking the player's movement

<u>Mid Side Wall Detectors Width</u> – the width of the detectors that determine whether a wall in front of and to the side of the player is blocking the player's movement

<u>Side Wall Detectors Width</u> – the width of the detectors that determine whether a wall to the side of the player is blocking the player's movement

<u>Front Side Blockage Detectors Height</u> – the height of the detectors that determine if there is something (a collider) in front of the player blocking his movement

<u>Front Side Blockage Detectors Width</u> – the width of the detectors that determine if there is something (a collider) in front of the player blocking his movement

<u>Front Side Blockage Detectors Forward</u> – the forward distance of the detectors that determine if there is something (a collider) in front of the player blocking his movement

Above Head Platform Detectors Height – the height of the detectors that determine if there is a platform/collider above (and slightly in front of) the player's head blocking his movement

Above Head Platform Detectors Forward – the forward distance of the detectors that determine if there is a platform/collider above (and slightly in front of) the player's head blocking his movement

Show Angle Detection Rays – shows the rays that detect whether a ledge's angle is too high to be climbed/moved on or not

<u>Ledge Angle Detectors Height</u> – the height of the detectors that determine the angle of a ledge <u>Ledge Angle Detectors Width</u> – the width of the detectors that determine the angle of a ledge

▼ Ledge Switching Detectors		
Allow Ledge Switching		
Switch Jump Height	5	
Switch Jump Speed	4	
Input Percentage Needed To Switch	95	
Show First Ledge Switching Rays		
First Surface Detector Width	0	
First No Surface Detector Length	0	
First No Surface Detector Width	0	
Show Second Ledge Switching Rays		
Second Surface Detector Width	0	
Second No Surface Detector Length	0	
Second No Surface Detector Width	0	
Show Third Ledge Switching Rays		
Third Surface Detector Width	0	
Third No Surface Detector Length	0	
Third No Surface Detector Width	0	
Surface Detector Forward Amount	0	
Surface Detector Height	0	
Surface Detector Length	0	
Surface Detector Width	0	
Switch Point Detector Width	0	
No Surface Detector Height	0	
No Surface Detector Width	0	
Wall In Front Detector Up Amount	0	
Wall In Front Detector Height	0	

<u>Ledge Switching Detectors</u> – detectors that determine whether switching from one ledge to another is possible or not

<u>Allow Ledge Switching</u> – allows the player to switch between ledges (jump from one ledge to another) <u>Switch Jump Height</u> – the height the player jumps when switching ledges

<u>Switch Jump Speed</u> – the speed the player jumps between ledges

<u>Input Percentage Needed To Switch</u> – the amount of input needed to be applied to the joystick or key in order to switch ledges

<u>Show First Ledge Switching Rays</u> – shows the first set of rays that detect whether switching from one ledge to another is possible or not

<u>First Surface Detector Width</u> – the width of the first set of detectors that determine how large of a surface a ledge must be in order for the player to switch to it

<u>First No Surface Detector Length</u> – the length of the first set of detectors that determine if there is no surface blocking the player from switching ledges

<u>First No Surface Detector Width</u> – the width of the first set of detectors that determine if there is no surface blocking the player from switching ledges

<u>Show Second Ledge Switching Rays</u> – shows the second set of rays that detect whether switching from one ledge to another is possible or not

<u>Second Surface Detector Width</u> – the width of the second set of detectors that determine how large of a surface a ledge must be in order for the player to switch to it

<u>Second No Surface Detector Length</u> – the length of the second set of detectors that determine if there is no surface blocking the player from switching ledges

<u>Second No Surface Detector Width</u> – the width of the second set of detectors that determine if there is no surface blocking the player from switching ledges

<u>Show Third Ledge Switching Rays</u> – shows the third set of rays that detect whether switching from one ledge to another is possible or not

<u>Third Surface Detector Width</u> – the width of the third set of detectors that determine how large of a surface a ledge must be in order for the player to switch to it

<u>Third No Surface Detector Length</u> – the length of the third set of detectors that determine if there is no surface blocking the player from switching ledges

<u>Third No Surface Detector Width</u> – the width of the third set of detectors that determine if there is no surface blocking the player from switching ledges

<u>Surface Detector Forward</u> – the forward distance of the detectors that determine how large of a surface a ledge must be in order for the player to switch to it

<u>Surface Detector Height</u> – the height of the detectors that determine how large of a surface a ledge must be in order for the player to switch to it

<u>Surface Detector Length</u> – the length of the detectors that determine how large of a surface a ledge must be in order for the player to switch to it

<u>Surface Detector Width</u> – the width of the detectors that determine how large of a surface a ledge must be in order for the player to switch to it

<u>Switch Point Detector Width</u> – the width of the detectors that determine where the player will switch to <u>No Surface Detector Height</u> – the height of the detectors that determine if there is no surface blocking the player from switching ledges

<u>No Surface Detector Width</u> – the width of the detectors that determine if there is no surface blocking the player from switching ledges

<u>Wall In Front Detector Up Amount</u> – the up distance of the detectors that determine if there is a wall in front of the player keeping him from switching ledges

<u>Wall In Front Detector Height</u> – the height of the detectors that determine if there is a wall in front of the player keeping him from switching ledges

I	▼ Walking Off Ledge Detectors	
I	Allow Grabbing Back On To Ledges	
I	Show Grab Back On To Ledges Rays	
I	Space In Front Needed To Grab Back On	0
I	Space Below Needed To Grab Back On Height	0
I	Space Below Needed To Grab Back On Forward	0
I	First Side Ledge Detectors Height	0
I	Second Side Ledge Detectors Height	0
I	Third Side Ledge Detectors Height	0
I	Side Ledge Detectors Width	0
I	Side Ledge Detectors Length	0
I	Grab Back On Location Height	0
I	Grab Back On Location Width	0
I	Grab Back On Location Forward	0
I	Allow Jumping Off Ledges	
I	Show Jump Off Ledges Rays	
I	Space Below Needed To Jump	0
I	Jump Height	7
I	Jump Distance	2
I	Jump Deceleration Rate	4
I	Use Gravity	
I	Gravity	20
I	Input Percentage Needed To Jump	95
	Disable Scripts While Jumping	
J	Jump Landing Effect	DustCloud

Allow Grabbing Back On To Ledges – allows the player to grab back on to a ledge that he is walking off of Show Grab Back On To Ledges Rays – shows the rays that detect if the player is walking off of a ledge Space In Front Needed To Grab Back On – the amount of space in front of the player needed to grab back on to a ledge

<u>Space Below Needed To Grab Back On Height</u> – the height of the detectors that determine the amount of space below the player needed to grab back on to a ledge

<u>Space Below Needed To Grab Back On Forward</u> – the forward distance of the detectors that determine the amount of space below the player needed to grab back on to a ledge

<u>First Side Ledge Detectors Height</u> – the height of the first set of detectors that determine if there are ledges to the side of the player keeping him from grabbing back on

<u>Second Side Ledge Detectors Height</u> – the height of the second set of detectors that determine if there are ledges to the side of the player keeping him from grabbing back on

<u>Third Side Ledge Detectors Height</u> – the height of the third set of detectors that determine if there are ledges to the side of the player keeping him from grabbing back on

<u>Side Ledge Detectors Width</u> – the width of the detectors that determine if there are ledges to the side of the player keeping him from grabbing back on

<u>Side Ledge Detectors Length</u> – the length of the detectors that determine if there are ledges to the side of the player keeping him from grabbing back on

<u>Grab Back On To Location Height</u> – the height of the detectors that determine where the player will grab back on to

<u>Grab Back On To Location Width</u> – the height of the detectors that determine where the player will grab back on to

<u>Grab Back On To Location Forward</u> – the forward distance of the detectors that determine where the player will grab back on to

<u>Allow Jumping Off Ledges</u> – allows the player to automatically jump off of a ledge that he is walking off of

<u>Show Jump Off Ledges Rays</u> – shows the rays that detect if the player can jump off of a ledge <u>Space Below Needed To Jump</u> – the amount of space below the player needed in order to jump off of a ledge

Jump Height – the height the player will jump off of a ledge

Jump Distance – the distance the player will jump off of a ledge

Jump Deceleration Rate – the rate at which the player's jump will decelerate

<u>Use Gravity</u> – determines whether or not to use "gravity" while jumping

<u>Gravity</u> – the amount of downward force, or "gravity," that is constantly applied to the player while jumping

<u>Input Percentage Needed To Jump</u> – the amount of input needed to be applied to the joystick or key in order to jump off of a ledge

<u>Disable Scripts While Jumping</u> – determines whether or not to disable the "Scripts To Disable On Grab" scripts (and enable the "Scripts To Enable On Grab" scripts) while jumping

Jump Landing Effect – optional dust effect to appear after landing jump

▼ Overall Position Of Detectors	
Up Distance	0
Forward Distance	0
Side Distance	0

<u>Up Distance</u> – the up distance (or height) of every detector <u>Forward Distance</u> – the forward distance of every detector <u>Side Distance</u> – the side distance of every detector

▼ Overall Scale Of Detectors	
Length	1
Width	1
Height	1

Overall Scale Of Detectors – the overall scale of every detector in this script

Length – the length of every detector

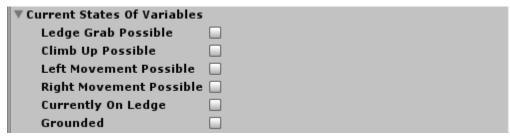
<u>Width</u> – the width of every detector

Height – the height of every detector

► Scripts To Enable On Grab ► Scripts To Disable On Grab

<u>Scripts To Enable On Grab</u> – scripts to enable when the player grabs on to a ledge (scripts disable when the player lets go of a ledge)

<u>Scripts To Disable On Grab</u> – scripts to disable when the player grabs on to a ledge (scripts enable when the player lets go of a ledge)



Current States Of Variables – the current states of the main variables

<u>Ledge Grab Possible</u> – determines if grabbing on to a ledge is currently possible

Climb Up Possible – determines if climbing up and over a ledge is currently possible

<u>Left Movement Possible</u> – determines if movement to the left (while grabbed on to a ledge) is currently possible

<u>Right Movement Possible</u> – determines if movement to the right (while grabbed on to a ledge) is currently possible

<u>Currently On Ledge</u> – determines if the player is currently grabbed on to a ledge or not <u>Grounded</u> – determines if the player is currently grounded/on the ground or not



<u>Dust Effect</u> – optional dust effect to appear when finished climbing up and on to a ledge <u>Collision Layers</u> – the layers that the detectors (raycasts/linecasts) will collide with

CameraController.cs

Player	∠LedgeClimbNinja (Transform) ○
Player Height	0
Camera Distance	2.95
Camera Height	1
Movement Dampening	0.1
Rotation Dampening	0.5

Player – the player or object set for the camera to follow

<u>Player Height</u> – the height of the player

<u>Camera Distance</u> – the distance between the camera and the player

Camera Height – the height of the camera

<u>Movement Dampening</u> – the amount of dampening applied to the movement of the camera <u>Rotation Dampening</u> – the amount of dampening applied to the rotation of the camera



Allow Locking On – determines whether or not to allow locking on

<u>Lock On Input Button</u> – the button or axis (found in "Edit > Project Settings > Input") pressed to lock on <u>Bar Texture</u> – the texture that appears on the top and bottom portion of the screen while locking on <u>Bar Coverage</u> – the percentage of the screen that the bar texture covers <u>Lock On Speed</u> – the speed at which the camera locks on behind the player



Collision Layers – the layers that the detectors (raycasts/linecasts) will collide with