Character Abilities (Top-Down Plugin)

### **APS (Top-Down Plugin) Setup Guide**

This document outlines the steps to configure and use the APS (Aditya Parkour System) Top-Down Plugin in your Unreal Engine project. Follow these instructions to ensure proper functionality of the plugin, including setting up the CSGameMode, adjusting navigation parameters, and configuring the NavLink Proxies for climbing, vaulting and jumping.

#### **1. Change the GameMode to CSGameMode**

To integrate the APS plugin with your project, first ensure that the correct GameMode is set. Follow these steps:

1. Open your project in **Unreal Engine**.
2. In the **World Settings** panel, locate the **GameMode** section.
3. Set the **Default GameMode** to CSGameMode.
   1. This GameMode is specifically configured for the APS plugin to manage top-down gameplay and parkour mechanics.

#### **2. Adjust Agent Radius in Navigation Settings**

To fine-tune the navigation system for your character, adjust the **Agent Radius** as follows:

1. In the **Outliner** panel, select the **RecastNavMesh** (often named **RecastNavMesh-Default**) under **Navigation**.
2. Go to the **Details Panel** for the selected **RecastNavMesh**.
3. Locate the **Agent Radius** parameter.
4. Set the **Agent Radius** to **10**.
   1. This setting ensures proper navigation mesh generation, allowing the character to interact correctly with obstacles and platforms during traversal.

#### **3. Setup NavLink Proxies for Climbing and Jumping**

The APS plugin uses **NavLink Proxies** to facilitate character climbing and jumping in the environment. The following steps will help you configure these proxies:

* **NavLink Proxy for Climbing:**
  + Navigate to **Plugins** in your project folder.
  + Go to APS -> Content -> Blueprints -> BP\_NavLinkClimb.
  + Place the BP\_NavLinkClimb blueprint in your level at locations where you want the character to climb.
    - The proxy will automatically detect climbable surfaces and trigger climbing animations when the character approaches them.
* **NavLink Proxy for Jumping:**
  + Navigate to **Plugins** in your project folder.
  + Go to APS -> Content -> Blueprints -> BP\_JumpNavLink.
  + Place the BP\_JumpNavLink blueprint in your level at locations where you want the character to jump across gaps or between platforms.
    - The proxy will trigger the jump functionality as the character approaches designated jump areas.
* **NavLink Proxy for Vaulting:**
  + Navigate to **Plugins** in your project folder.
  + Go to APS -> Content -> Blueprints -> BP\_NavLinkVault.
  + Place the BP\_NavLinkVault blueprint in your level at locations where you want the character to vault across wall or between walls.
    - The proxy will trigger the vault functionality as the character approaches designated vault areas.

#### **4. Activate Smart Links for NavLink Proxies**

Smart Links enable dynamic traversal behaviors like climbing, vaulting, and jumping across different sections of the navigation mesh. Here's how to activate Smart Links:

1. After placing the **NavLink Proxies** (BP\_NavLinkClimb, BP\_JumpNavLink, BP\_NavLinkVault) in your level, select each **NavLink Proxy**.
2. In the **Details Panel**, you find the **Smart Link Is Relevant** checkbox.
3. Check the **Smart Link Is Relevant** option to enable Smart Links for each proxy.
   1. Enabling this feature allows the NavLink proxies to dynamically handle traversal between navigation mesh segments, ensuring smooth transitions during climbing, vaulting, and jumping actions.
4. Rebuild the **Navigation Mesh** after enabling Smart Links to ensure proper pathfinding and traversal.