

Action-RPG Starter Kit



Javascript or C#

This project contain both of Javascript and C# version
But we recommended to choose one to prevent the problem.

All of the **C#** version are in “**CsharpExample**” Folder

The other outside CsharpExample Folder are **JavaScript** Version

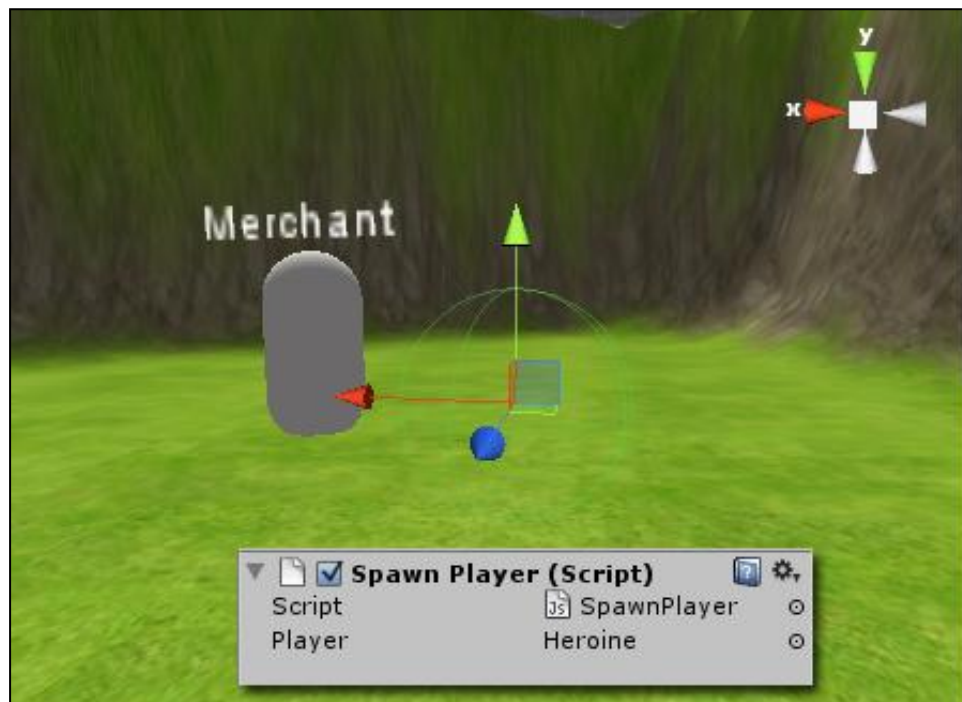
- If you choose **C#** you should use all Objects all Prefabs and All Example in “**CsharpExample**” Folder
- If you choose **JavaScript** version you should **ignore** the “**CsharpExample**” Folder and use all examples outside that folder



How to Spawn Player

We recommend you to use “SpawnPlayer” Script to spawn Player. First create Empty GameObject(Or any GameObject) and attach use “SpawnPlayer” Script from Script folder to it and assign Your Player’s prefab to the Player Variable.

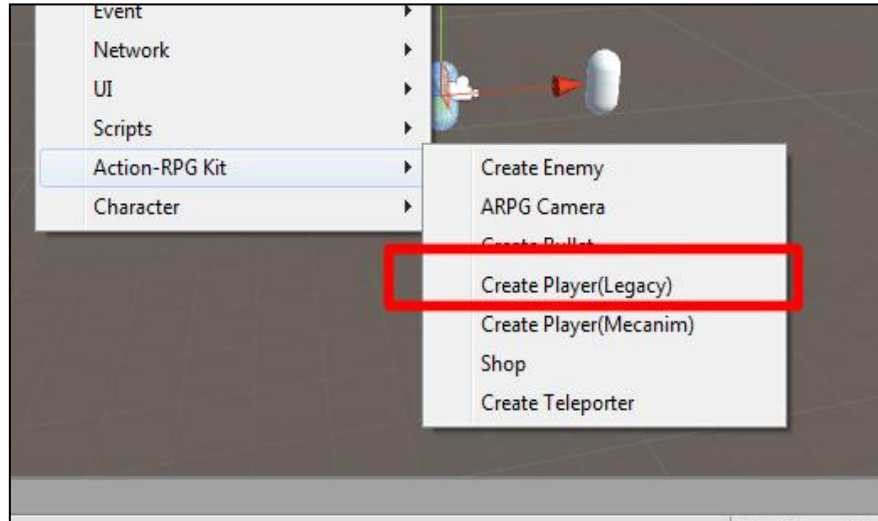
When you start the game Your Player will spawn at the Spawn Point. It can work well although your player come from the other scene.



How to Create Player

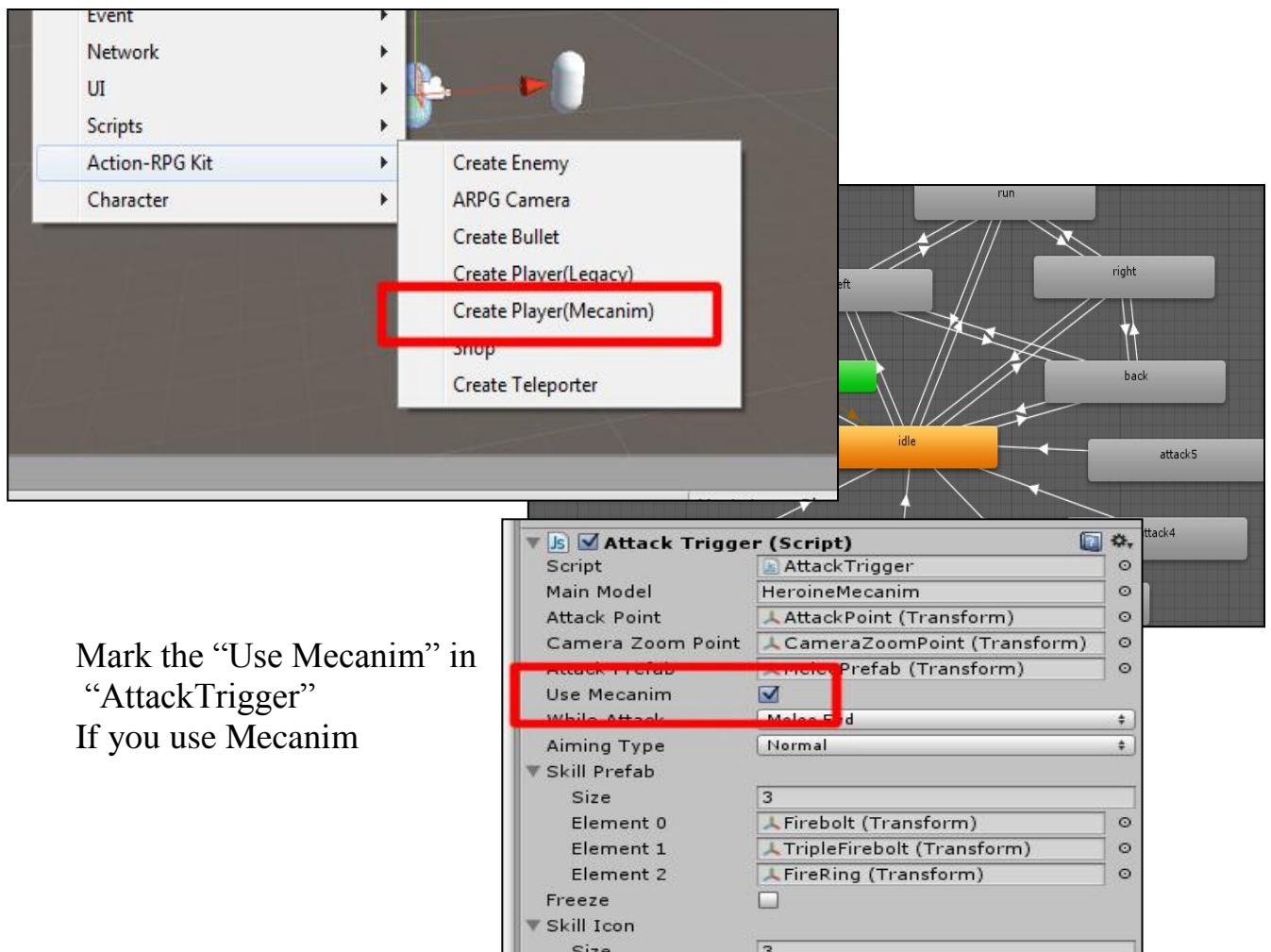
After import your character if you use Legacy animation.

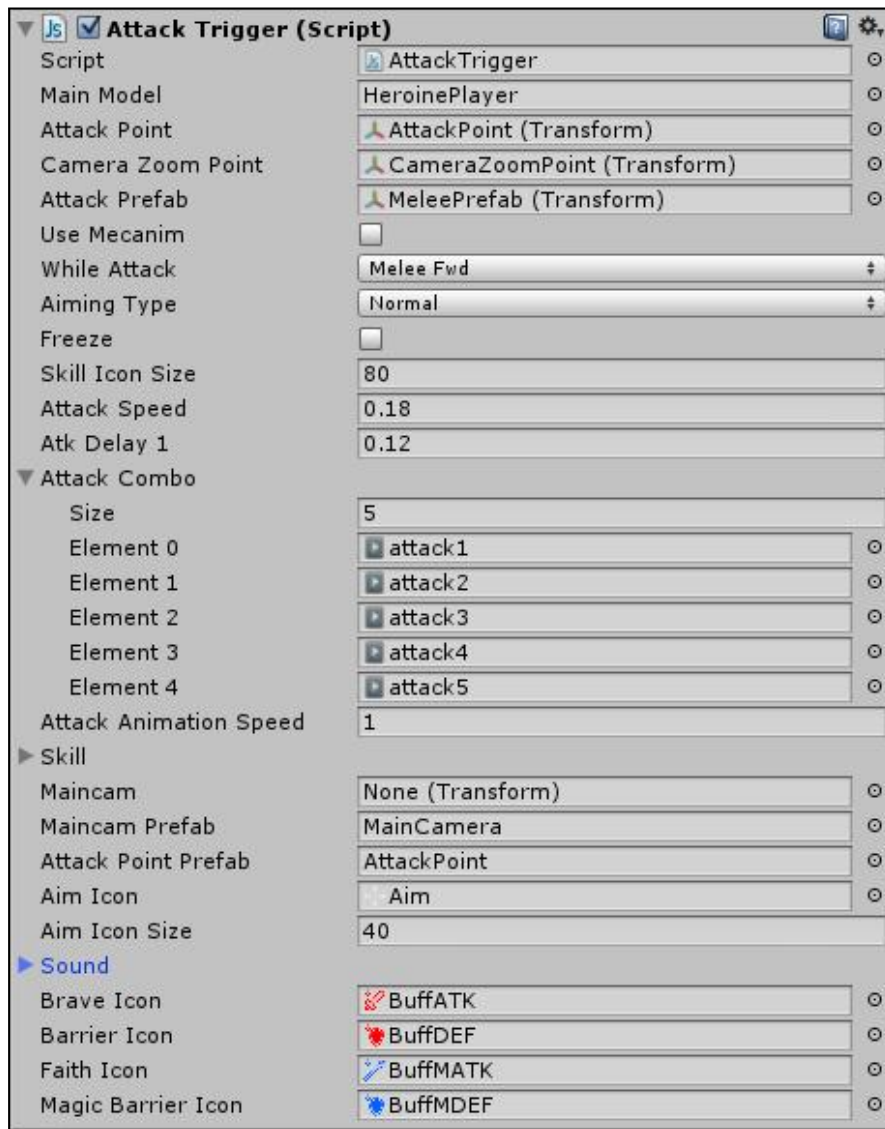
Go to “Component / Action-RPG Kit / Create Player(Legacy)”



If you use Mecanim Animation.

Go to “Component / Action-RPG Kit / Create Player(Mecanim)”





In “AttackTrigger” component there are some value to set.

- | | | |
|---------------|---|---|
| Main Model | - | Character’s Main Model use for animation |
| Attack Point | - | The attack prefab’s spawn point |
| Attack Prefab | - | Store the prefab from “normal attack”
in this example, we use MeleePrefab (It locate
in Prefab/Skill) which the in fight attack |
| While Attack | - | MeleeFwd = Move forward a little when attack |
| | - | Immobile = Can’t move while attacking |
| | - | WalkFree = Can walk freely while attacking |
| Freeze | - | If you mark on this, the character will freeze |
| Attack Speed | - | The normal attack’s speed |
| Attack Delay | - | The normal attack’s delay |
| Attack Combo | - | The normal attack animation name. Max
Combo depend on Size of Attack Animation |

- Maincam - Use as camera's reference. If you weren't set this, the system will find it from Tag MainCamera.
- Aim Icon - Target Icon
- Aim Icon Size - Target Icon's size

Brave Icon , Barrier Icon, Faith Icon, and Magic Barrier Icon are the icons for character's buffs

Now, You can setup your character's status in "Status" component

Status (Script)	
Script	Status
Character Name	Richea
Character Id	0
Level	1
Atk	5
Def	3
Matk	3
Mdef	2
Exp	0
Max Exp	100
Max Health	200
Health	200
Max Mana	100
Mana	100
Status Point	0
Skill Point	0
Immortal	<input type="checkbox"/>
Death Body	HeroineDeath (Transform)
Poison Effect	Poison
Silence Effect	Silence
Stun Effect	Stun
Webbed Up Effect	Webbed Up
Stun Animation	stun
Webbed Up Animation	struggle
▼ Element Effective	
Size	5
▼ Normal	
Element Name	Normal
Effective	100
▼ Fire	
Element Name	Fire
Effective	100
▼ Ice	
Element Name	Ice
Effective	100
▼ Earth	
Element Name	Earth
Effective	100
▼ Lightning	
Element Name	Lightning
Effective	100
▼ Status Resist	
Poison Resist	0
Silence Resist	0
Web Resist	0
Stun Resist	0
Send Msg When Dead	

These variable's names are self explanation.

Death body - When the character is dead, the system will spawn this prefab. So, you have to create the prefab that shows your character's death pose and put in the death body variable.

- Poison Effect , Silence Effect and Stun Effect is the prefab Use when character suffer by those status ailment.

- Elemental Effective use to make elemental defence more value more damage you take from that element

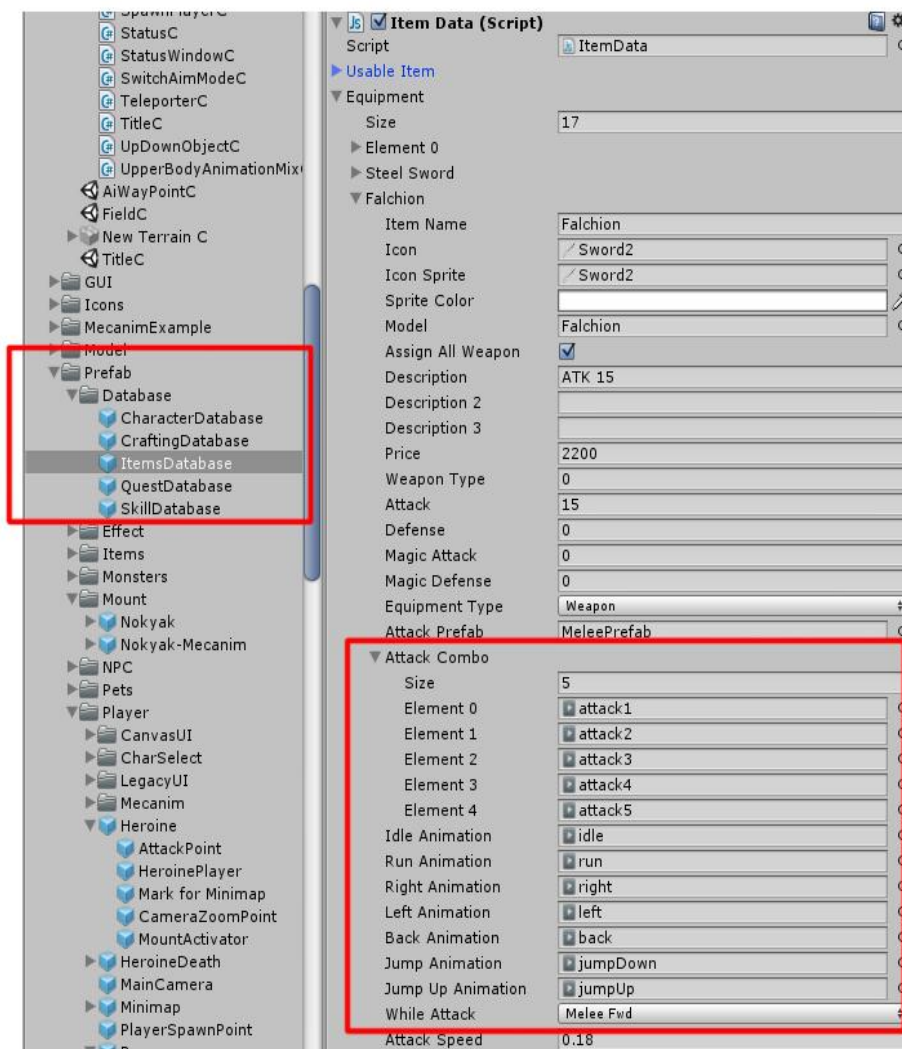
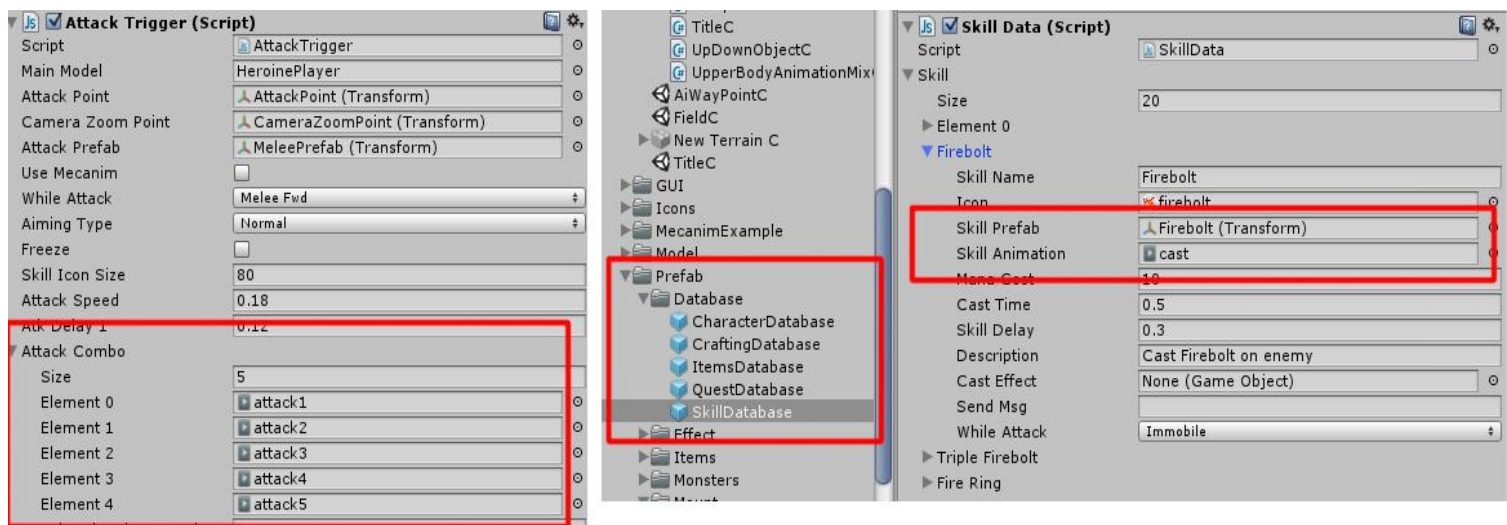
- Status Resist is the resistance of status ailment.

Send Msg When Dead - Will send the message to character to call some function when character is dead. However you can leave it null if you don't want to call any function when character dead.

Q&A

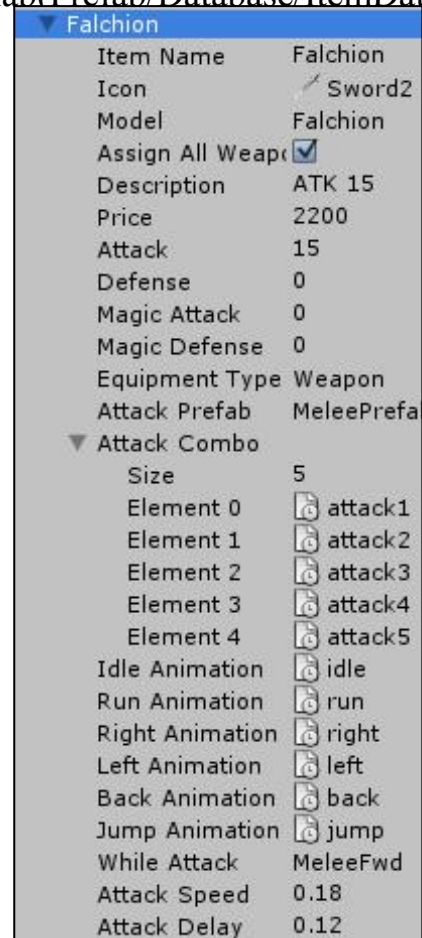
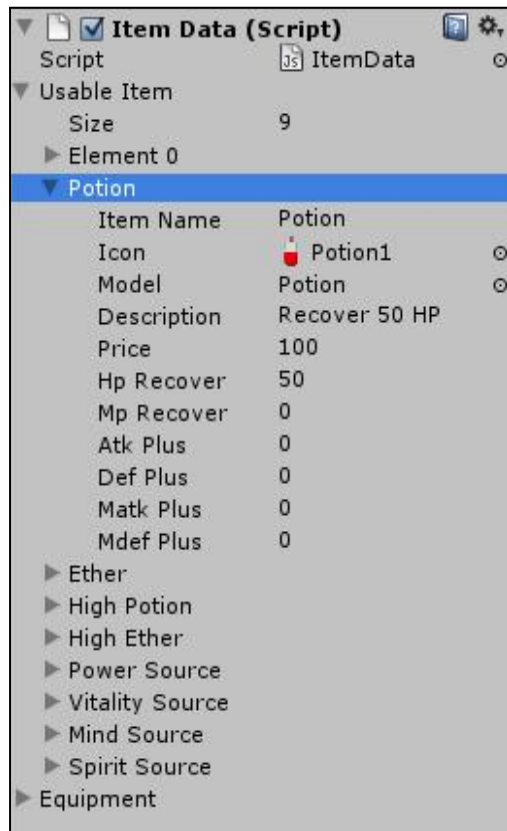
Q : I've got Null Reference GetRef error when my character attack or use skill what does it mean?

A: This error mean your character's model didn't have the animation clip to play when attack or use skill. You can easily fix it by assign your animation to "AttackTrigger" component on your character
Then in "SkillDatabase" and "ItemDatabase" (in Prefab/Database Folder)



Items and Inventory

You can use “ItemDatabase” prefab(Prefab/Database/ItemDatabase)
As a Database



You can add new item data by edit Size in “Usable Item” and
“Equipment”

The Element number is an ID of your item. It very important to use
with the Shop and Inventory

Equipment

Assign All Weapons – If your character carry more than 1 weapon
(ex. Dual sword). When you swap weapon
It will swap all weapon mesh.

Attack Combo - Change Player Attack Animation when equip
this weapon

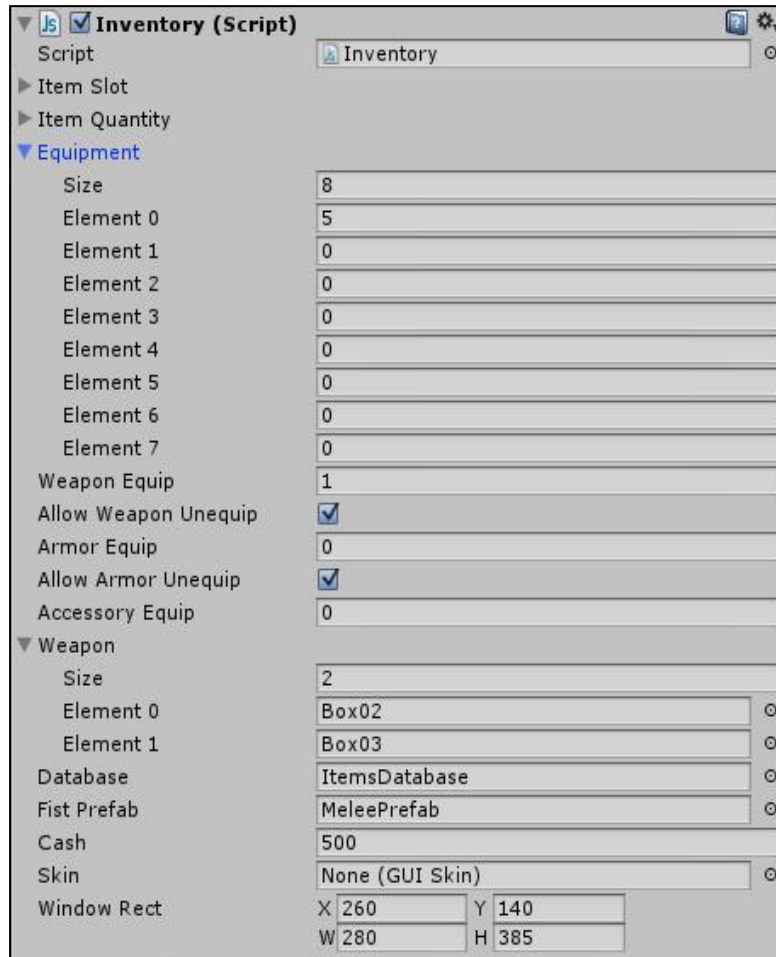
Idle , Run , Right , Left , Jump Animation - Change Player movement
animation when equip this weapon

While Attack

- MeleeFwd = Move forward a little when attack
- Immobile = Can't move while attacking
- WalkFree = Can walk freely while attacking

Inventory

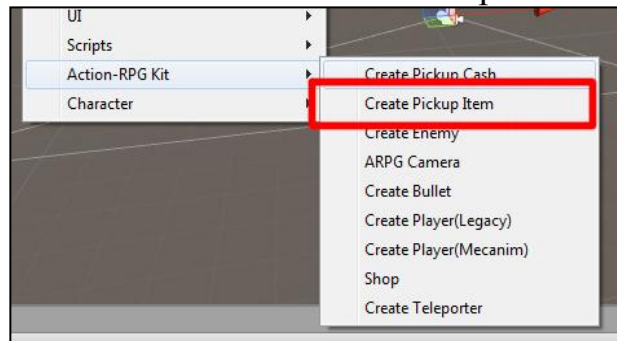
The Inventory script will attach to the player character. This script Contain variable of Item ID. The reference of the item ID is from ItemDatabase



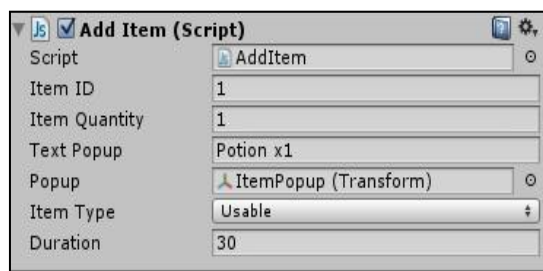
- | | | |
|----------------------|---|--|
| Item Slot | - | Store the Item ID |
| Item Quantity | - | Store quantity of the items |
| Equipment | - | Store the Equipment ID |
| Weapon Equip | - | ID of your equipped weapon |
| Allow Weapon Unequip | - | If uncheck this You cannot unequip your weapon |
| Armor Equip | - | ID of your equipped armor |
| Allow Armor Unequip | - | If uncheck this You cannot unequip your Armor |
| Database | - | Reference of ItemData
(Prefab/Database/ItemDatabase) is the default |

Pickup Items

You can add the item to your Inventory by create new game Object
Go to “Component / Action-RPG Kit / Create Pickup Item”



Then mark on the “Is Trigger” in Collider

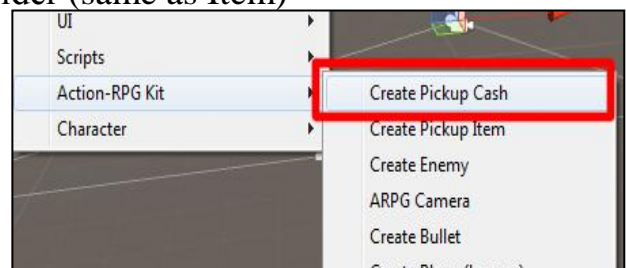
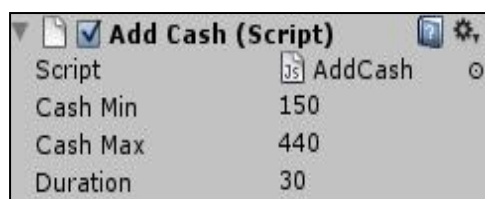


- | | | |
|---------------|---|---|
| Item ID | - | ID of item |
| Item Quantity | - | Quantity of the item |
| Item Type | - | Type of the item(Usable and Equipment) |
| Duration | - | Duration of this object to stay in the world
If = 0 the object will not destroy until player
Pick it up |

Add Cash

You can add the cash to your Inventory by create new game Object
Go to “Component / Action-RPG Kit / Create Pickup Cash”

Then mark on the “Is Trigger” in Collider (same as Item)



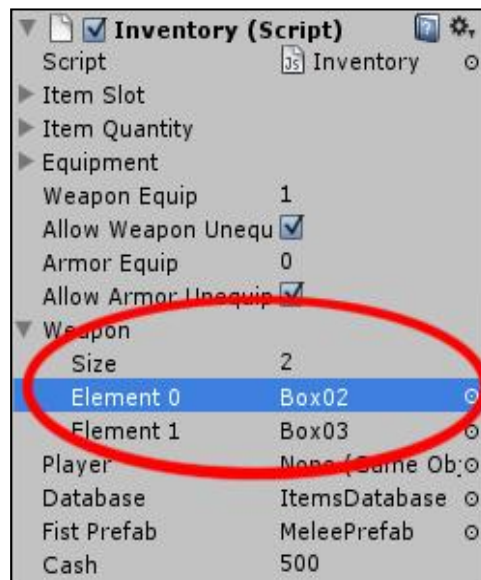
- | | | |
|----------|---|---|
| Cash Min | - | Minimum of cash to add |
| Cash Max | - | Maximum of cash to add |
| Duration | - | Duration of this object to stay in the world
If = 0 the object will not destroy until player
Pick it up |

This Script will calculate random range of “Cash Min” and “Cash Max”
To add

How to Swap Weapon's Model with this kit



First Assign the main weapon's model in the characters to Weapon Variable in Inventory Script (If your character have more than 1 weapon (Ex. Twin Swords) you should assign all of them too)



Then in the “ItemDatabase” of the weapon Assign weapon model
To the “Model” variable

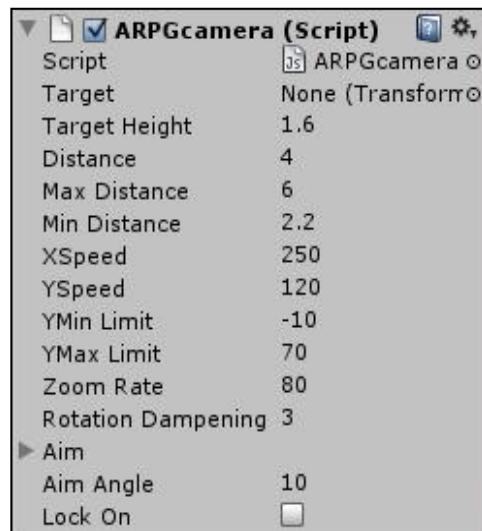


When you equip the weapon. If you do both step collectly.
The system will swap Weapon Model.



Main Camera

There is Main Camera for Action-RPG Starter Kit in “Prefab / Player / MainCamera” You can setting the value here.



Target	-	The camera's target. If it don't have any target, the system will find it from Tag Player.
Target Height	-	The camera's height from the target
Distance	-	The camera's length
Max Distance	-	The farthest camera's length
Min Distance	-	The shortage camera's length
Xspeed	-	The camera's speed in X axis
Yspeed	-	The camera's speed in X axis
Ymin Limit	-	The lowest camera's angle
Ymax Limit	-	The highest camera's angle
Zoom Rate	-	The Zoom's speed
Rotation Dampening	-	The camera's delay
Aim Angle	-	Set the aim to the target by reference from AttackTrigger
Lock On	-	If you mark on this, the character will always head toward the camera

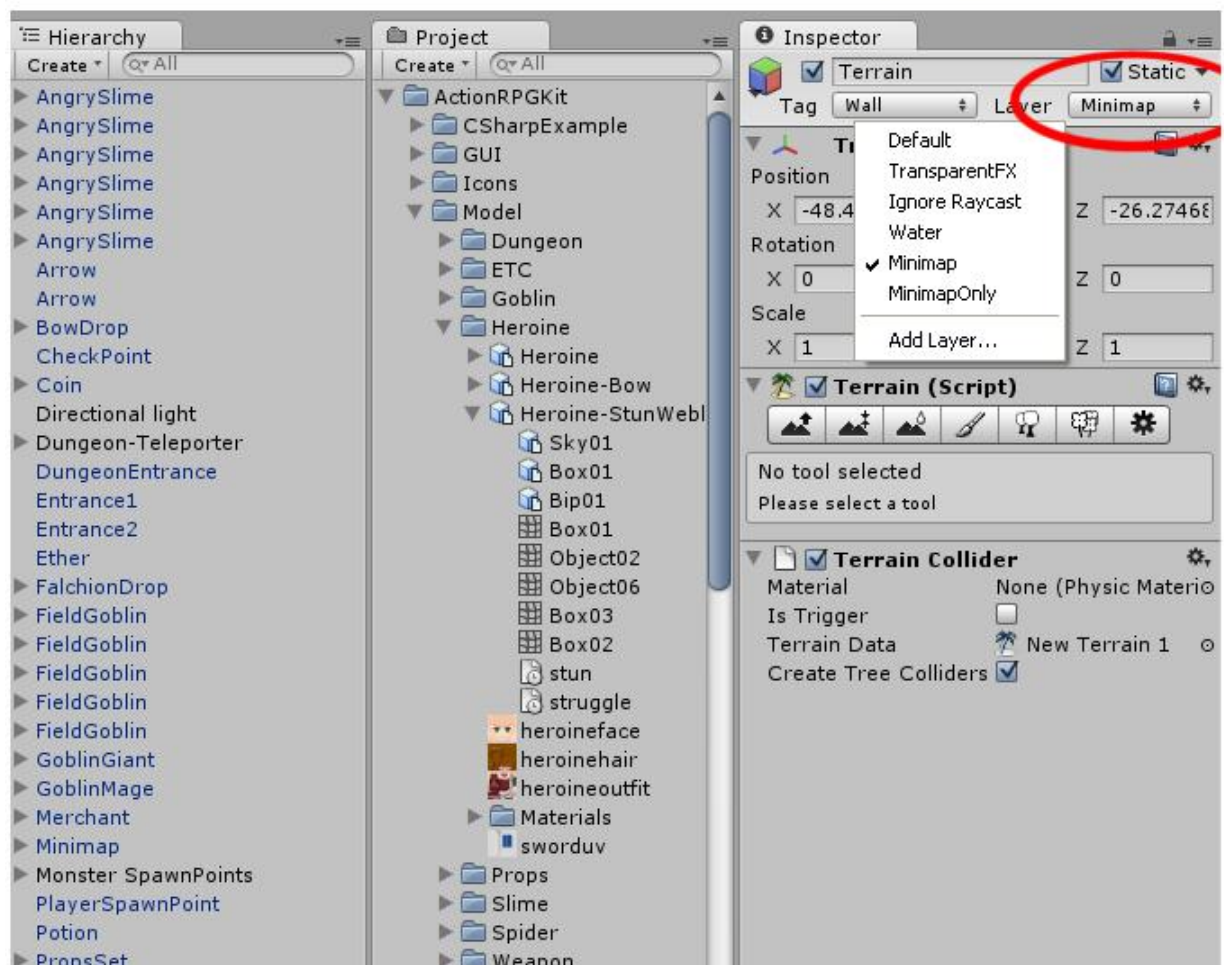
The Camera's Linecast will detect the object with “Wall” tag

Minimap

First you have to drag "Minimap" from "Prefab Folder" to the scene you want to show the minimap.

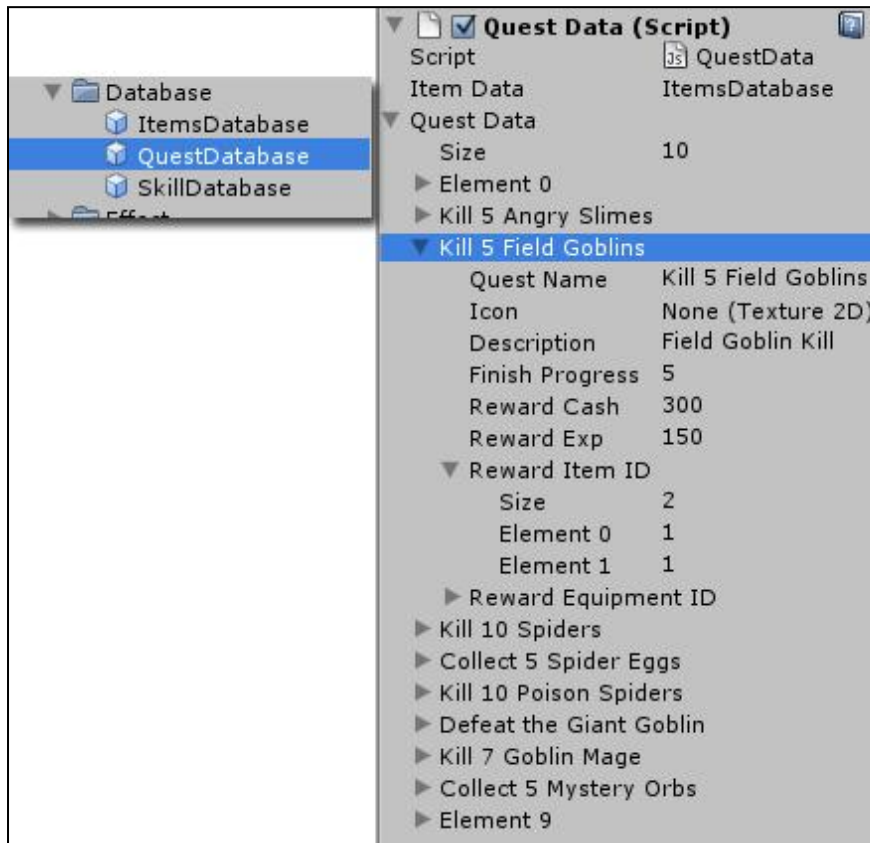
Then you can change the Layer of the object you want to show in Minimap

- "Minimap" Layer will make the object show in minimap.
- "MinimapOnly" Layer will make the object show in minimap only and not show in the scene



How to Create Quests

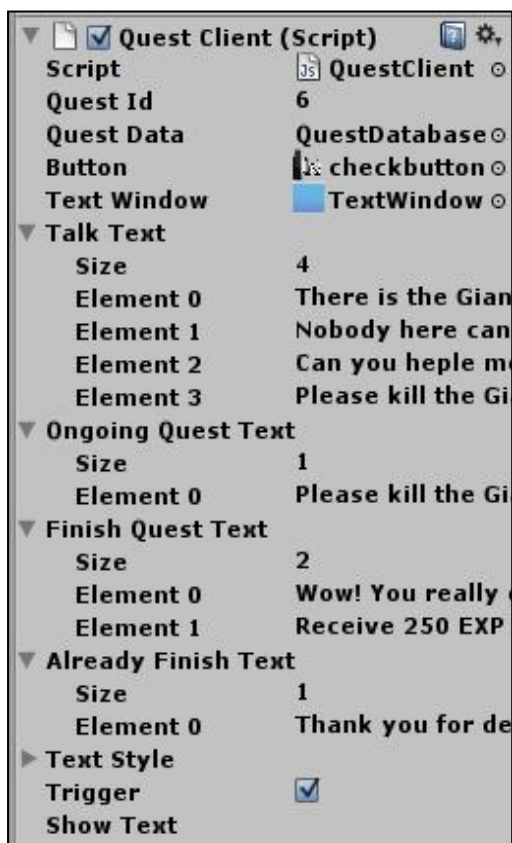
Quest Data



You can add new quest in Database folder (Prefab/Database /QuestDatabase)

-Finish Progress
ex. If your quest is kill 5 Goblins you should set Finish Progress to 5

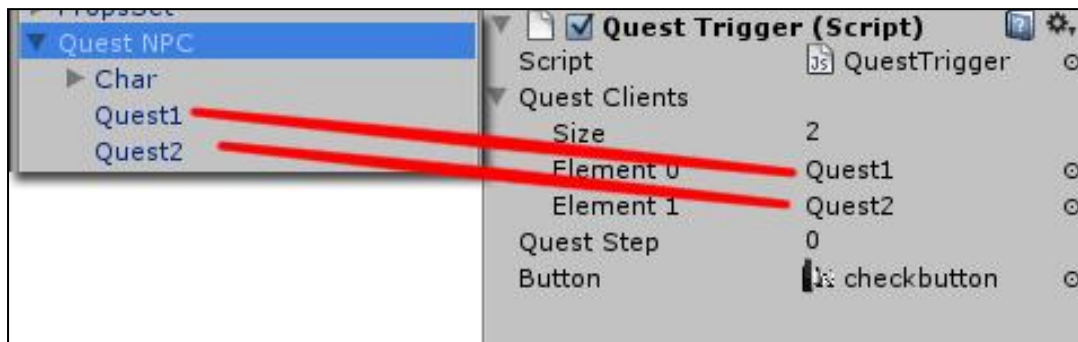
Quest Client



Quest Client script is for Quest NPC

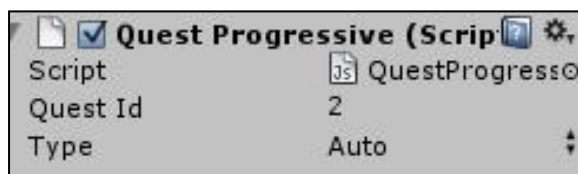
- Quest ID = ID of quest (match to the QuestData)
- Quest Data = Database of the quest

Quest Trigger



Quest Trigger Script is for NPC who have more than 1 quest.
For example it will start with quest in Element0. When you finish the quest it will activate new quest until all of quest you Assign to the “QuestClients” variable.

Quest will be the GameObject and must contain the “Quest Client” script

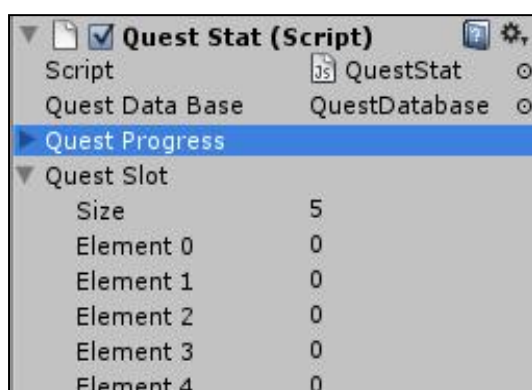


Quest Progressive

This script use for increase the progress of your quest status.
For example you can assign it to the Monster’s Death Prefab or Item

- Quest ID - ID of the quest you want to increase.
- Type - Auto = Automatic increase your quest stat
- Trigger = You must collide the object to increase quest stat

Quest Stat

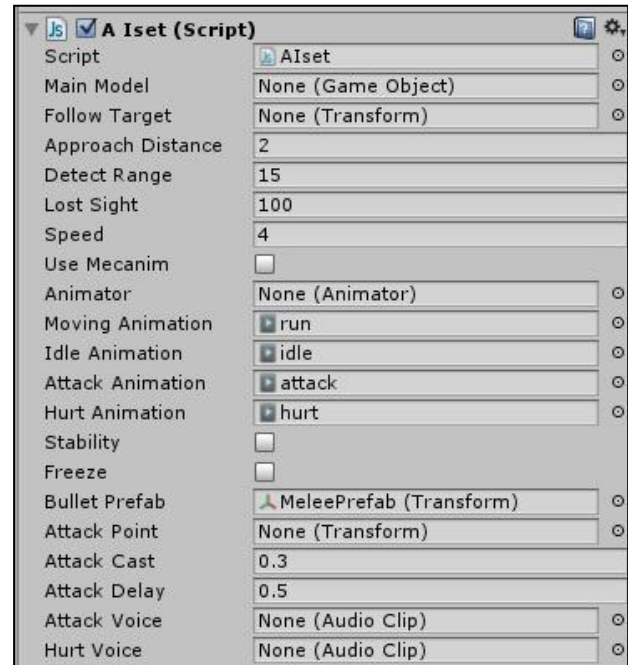
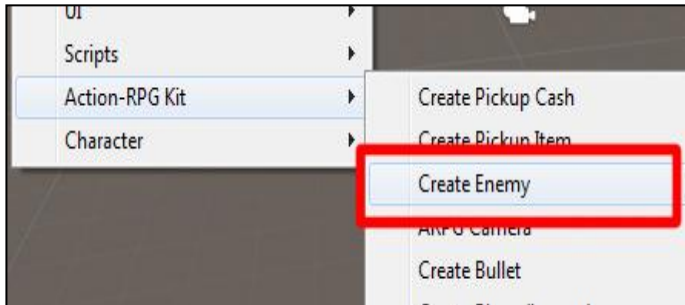


Attach to the player for save variable of The quests.

How to Create Monster

After we import the monster's model and split the animation.

Go to "Component / Action-RPG Kit / Create Enemy"

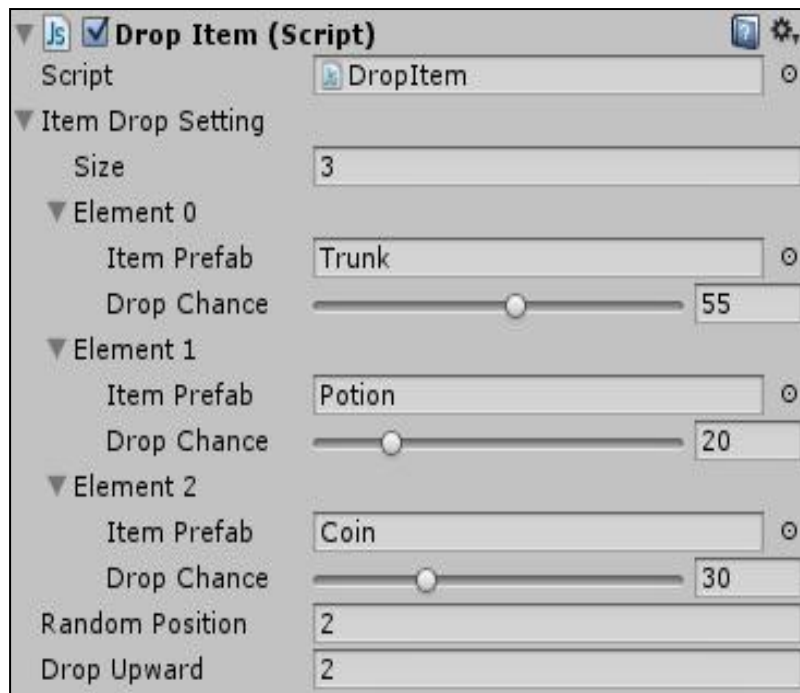


Main Model	-	Main Model for play animation
Follow Target	-	The enemy's target. If it doesn't have, the enemy will aim the Player Tag.
Approach Distance	-	The closest distance between enemy and target
Detect Range	-	The enemy's detect range
Lost Sight	-	The length that enemy will stop to follow the target
Speed	-	Enemy's speed movement
Use Mecanim	-	Use it if you use Mecanim Animation
Moving Animation	-	The Enemy walking animation's name
Idle Animation	-	The Enemy idle pose animation's name
Attack Animation	-	The Enemy attack animation's name
Stability	-	If you mark on this, The enemy will not flinch by the attack from character
Freeze	-	If you mark on this, the enemy will freeze
Bullet Prefab	-	Store the enemy bullet's variable
Attack Point	-	The enemy bullet's starting point
Attack Cast	-	The time before enemy attack
Attack Delay	-	The delay after enemy attack

Enemy Drop Items

When enemy dead. Status Script will spawn it's Death Body Prefab
In the Death Body Prefab you should attach the "GainEXP" Script to it.
The Player will gain EXP when monster's death prefab is spawn

Attach the "DropItem" Script to the monster's death prefab
when monster's death prefab is spawn. It will be random Drop the item
from the script



Enemy Respawn

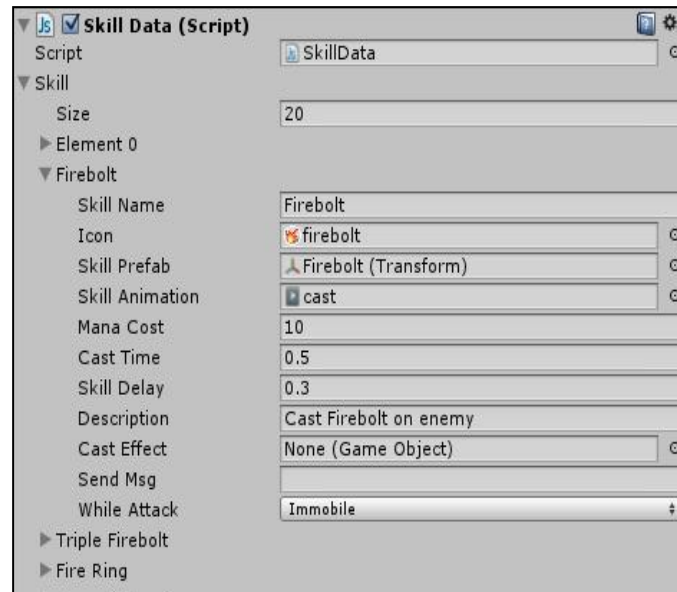


Attach to the enemy's death prefab like "DropItem" script

- Enemy - Prefab of the Enemy to respawn
- Point Name - Name of all respawn point the monster will random
Respawn at the position of object with the same name
As this variable
- Delay - Delay after enemy death until it respawn
- Random Point - Random variance of the respawn position a little

How to Create Skill(Database)

You can use “SkillDatabase”prefab(Prefab/Database/SkillDatabase)
As a Database

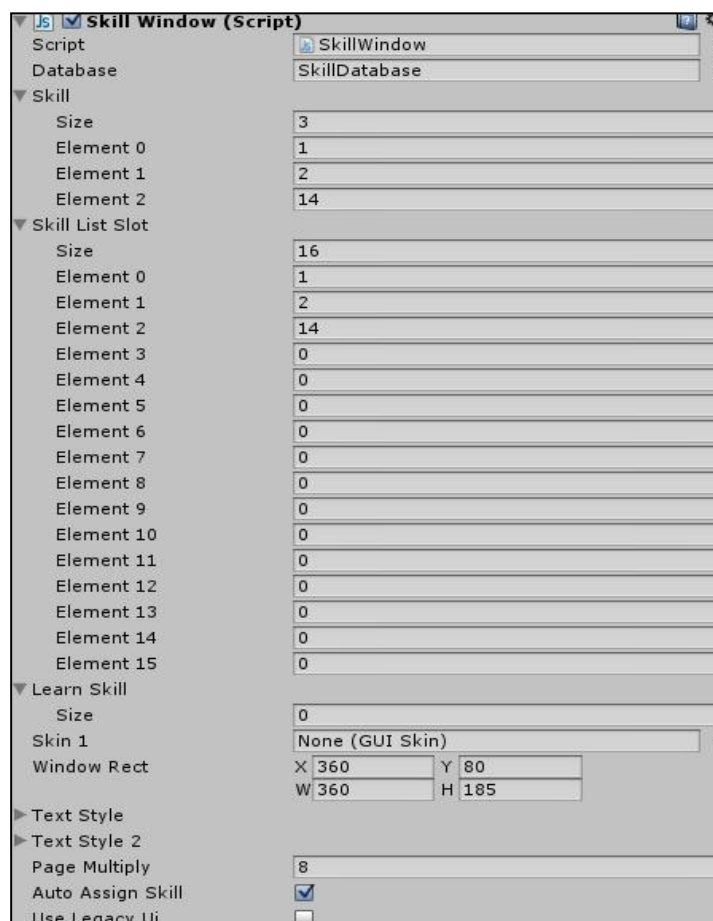


You can add new skill data by edit Size in “Skill” variable

The Element number is an ID of your skill. It very important to use with the Skill Window

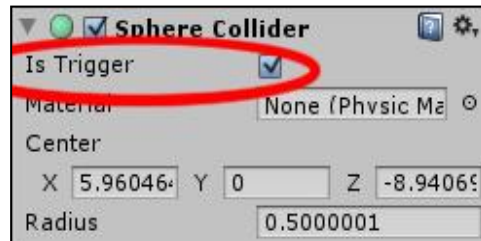
Skill Window

The Skill Window script will attach to the player character.
This script Contain variable of Skill ID. The reference of the skill ID is from SkillDatabase

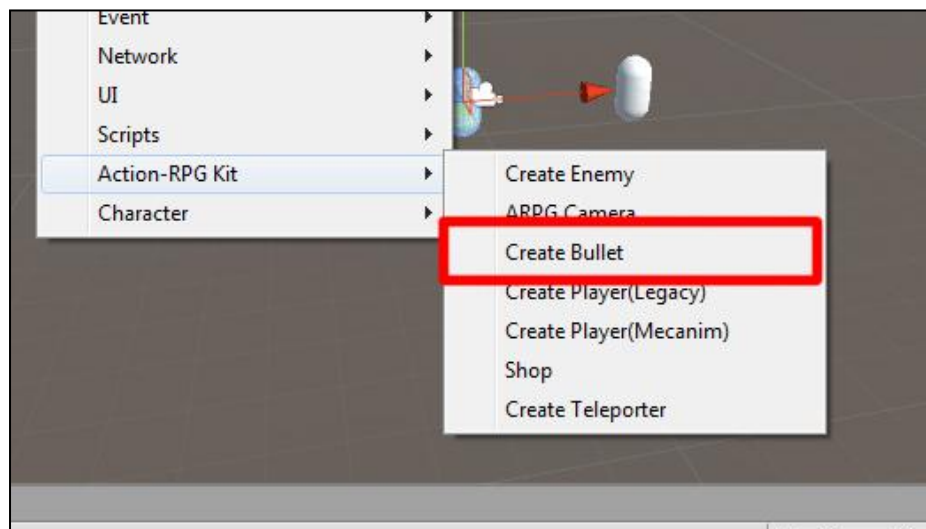


How to Create Skill(Bullet)

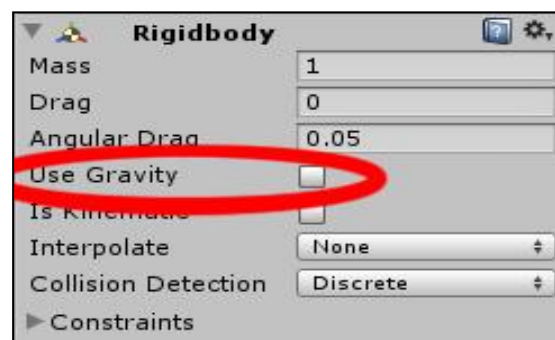
Now we can make both player and monster. Let's create the attack skill for them. In this example we will make a bullet. After you make a bullet model for use in this skill, mark on the Is Trigger

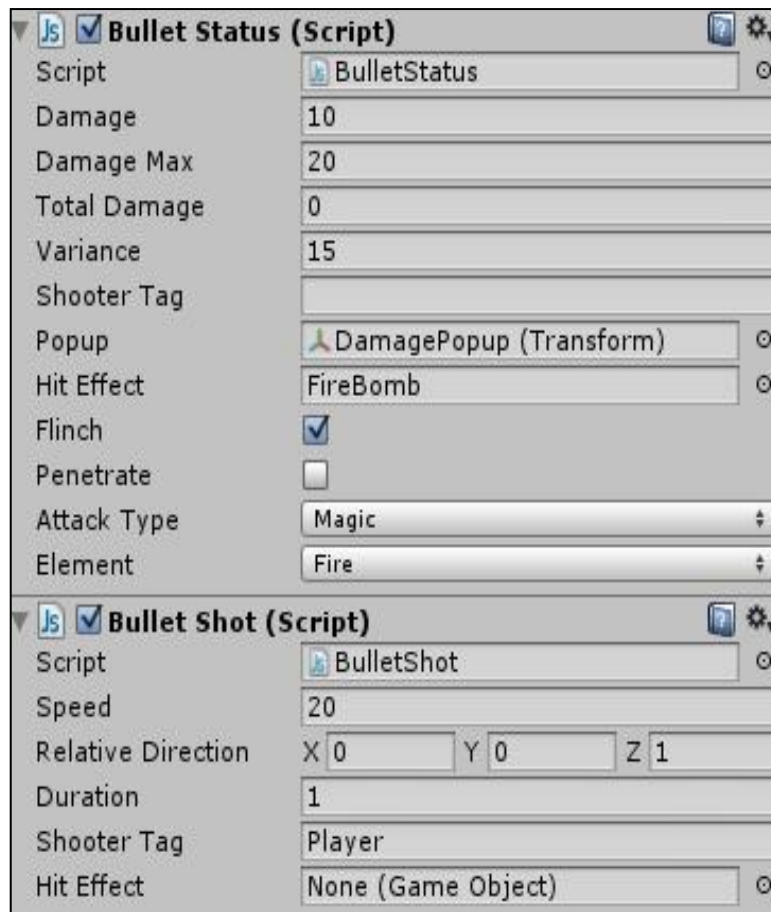


Then Go to “Component / Action-RPG Kit / Create Bullet”



After that, mark on Rigidbody at Component/Physics/Rigidbody and mark Use Gravity off for doesn't calculate the gravity.





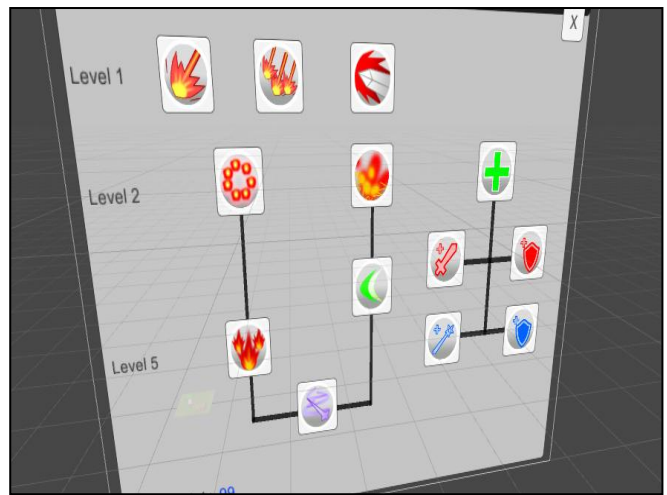
- Damage - The bullet's lowest Damage
- Damage Max - The bullet's highest Damage
- Variance - The damage variance
- Popup - Store Prefab for show the damage on screen. In this example, we use DamagePopup from Prefab folder
- Hit Effect - The Bullet hit effect
- Flinch - If you mark on this, when the target will flinch after impact with bullet
- Penetrate - Bullet will not destroyed when hit the enemy
- Attack Type -
 Physic = Physic Attack
 Magic = Magic Attack
- Element - Element of this bullet

In the BulletShot1 script, there are only 2 main variable. The speed and duration for setting the bullet speed and the bullet's remain time. When the bullet were shoot from Tag Player. The target will become Tag Enemy. In contrast, if the bullet were shoot from the enemy. The player will become the target. When the bullet hit the object with "Wall" tag, the bullet will disappear. The components that use for skill are below.

Skill Tree

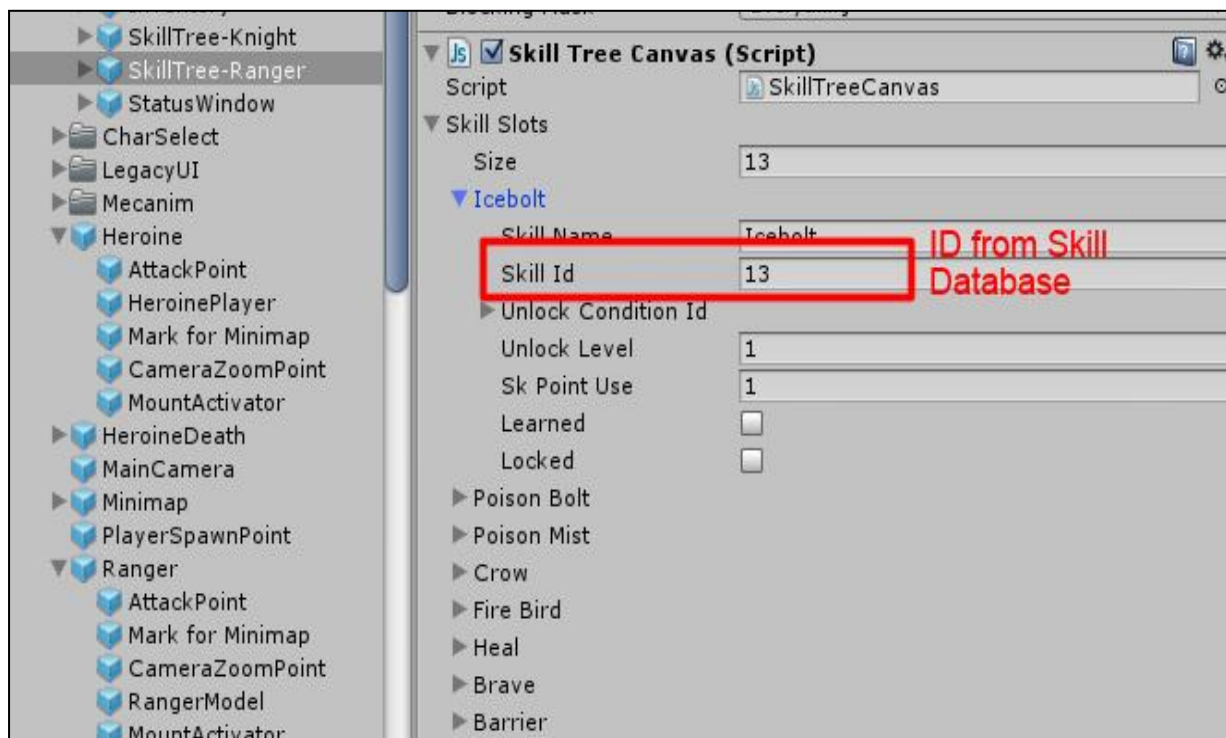
First you need to create
And setup player's skill
In "Skill Database"
(Prefab/Database/SkillDatabase)

Then go to Skill Tree Canvas in
(Prefab/Player /CanvasUI/SkillTree)
You can duplicate the Skill Tree to setup your own.



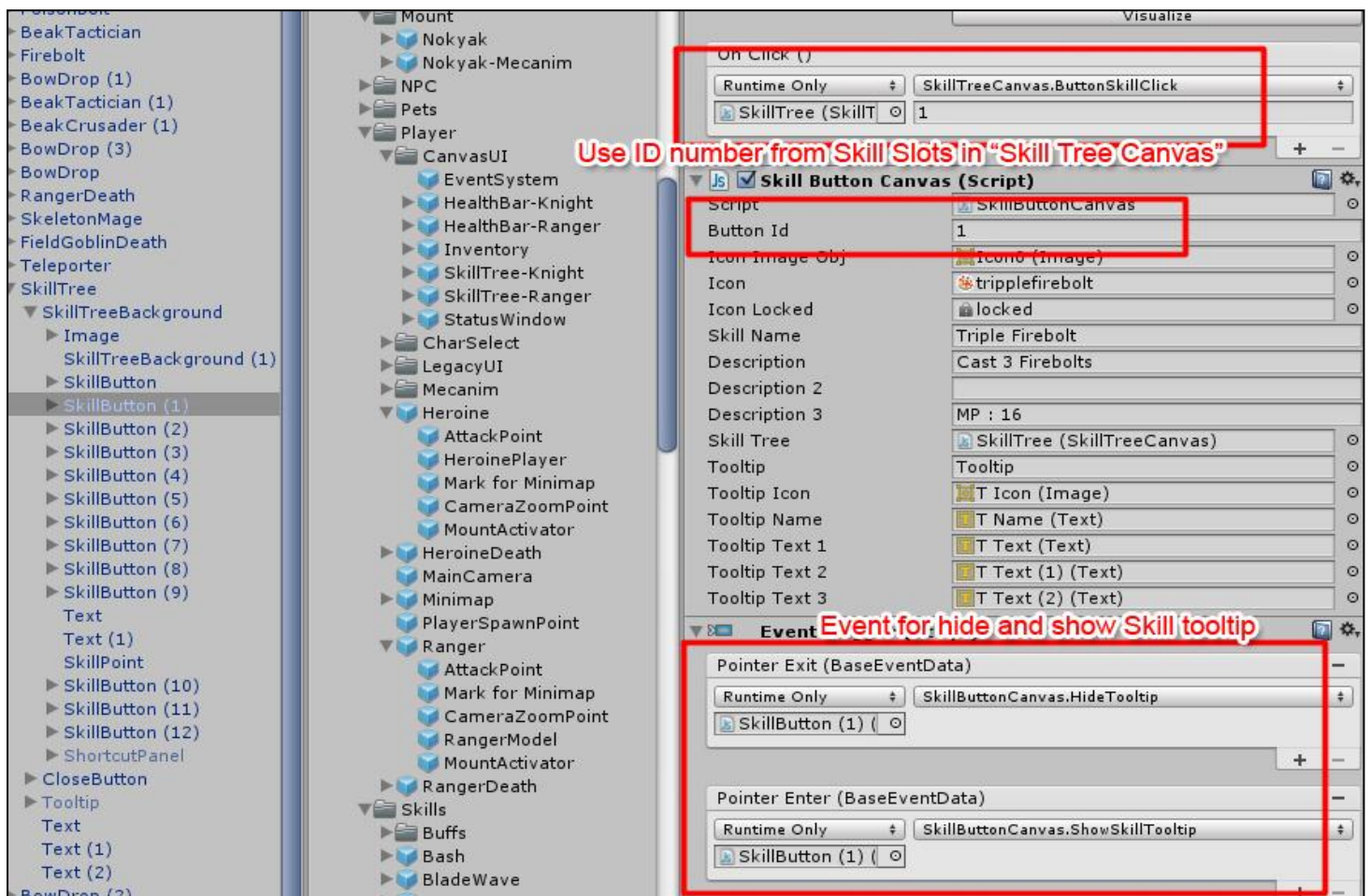
In "SkillTreeCanvas" component on Skill Canvas UI. Setup Skill Slot

- Skill ID(Use ID number from Skill Database)
- Unlock Condition ID(Use ID number from Skill Database
character must have those skill to unlock this skill slot)
- Unlock Level(Player must level higher or equal to unlock this skill)
- Sk Point Use(How many Skill Point use for learn this Skill)

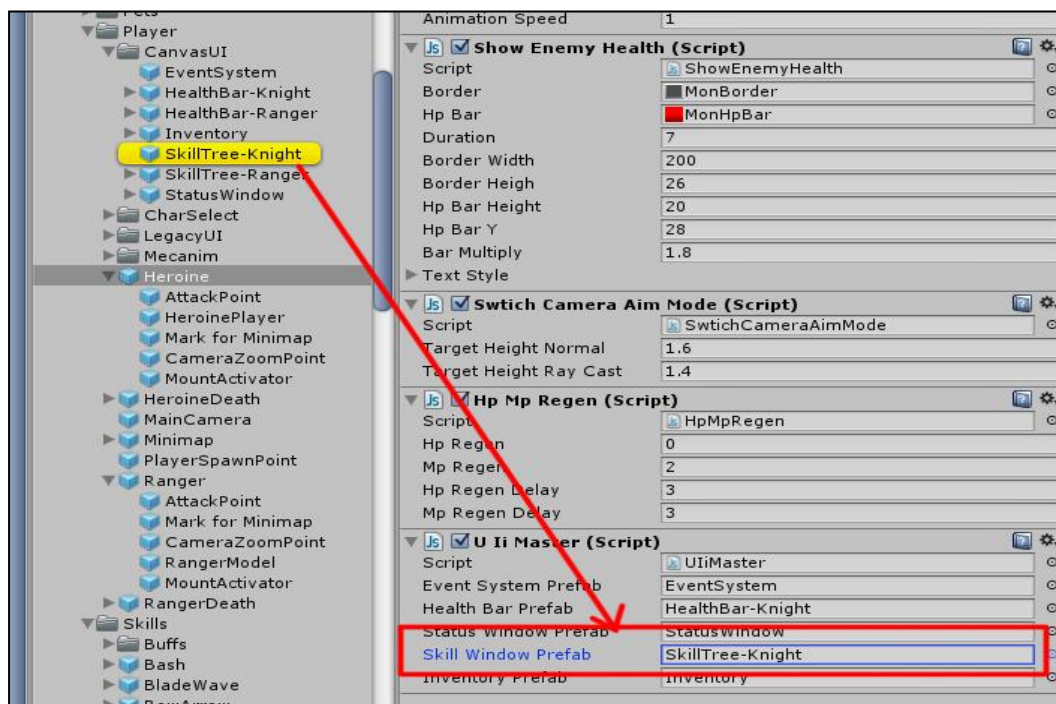


In Skill Button (Child of Skill Tree Canvas)

You can setup Button ID(Use ID from Skill Slots in Skill Tree Canvas)
Skill's Icon , and Description here.

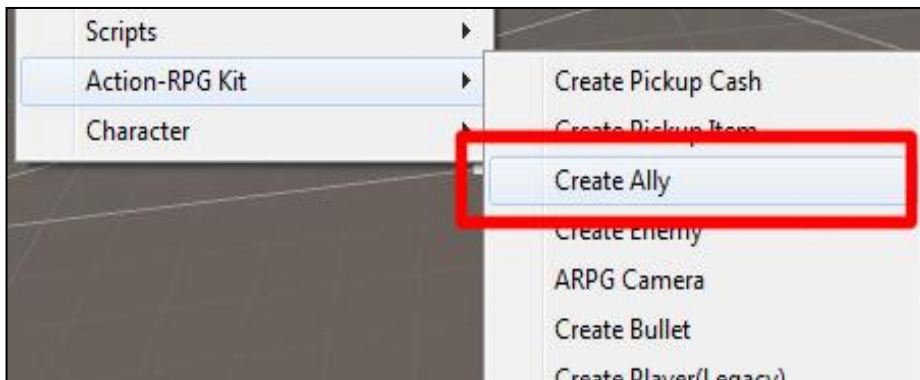


After you finish your job in Skill Tree Canvas. Create it's prefab then assign it to "Skill Window Prefab" in "UiMaster" component on Character.

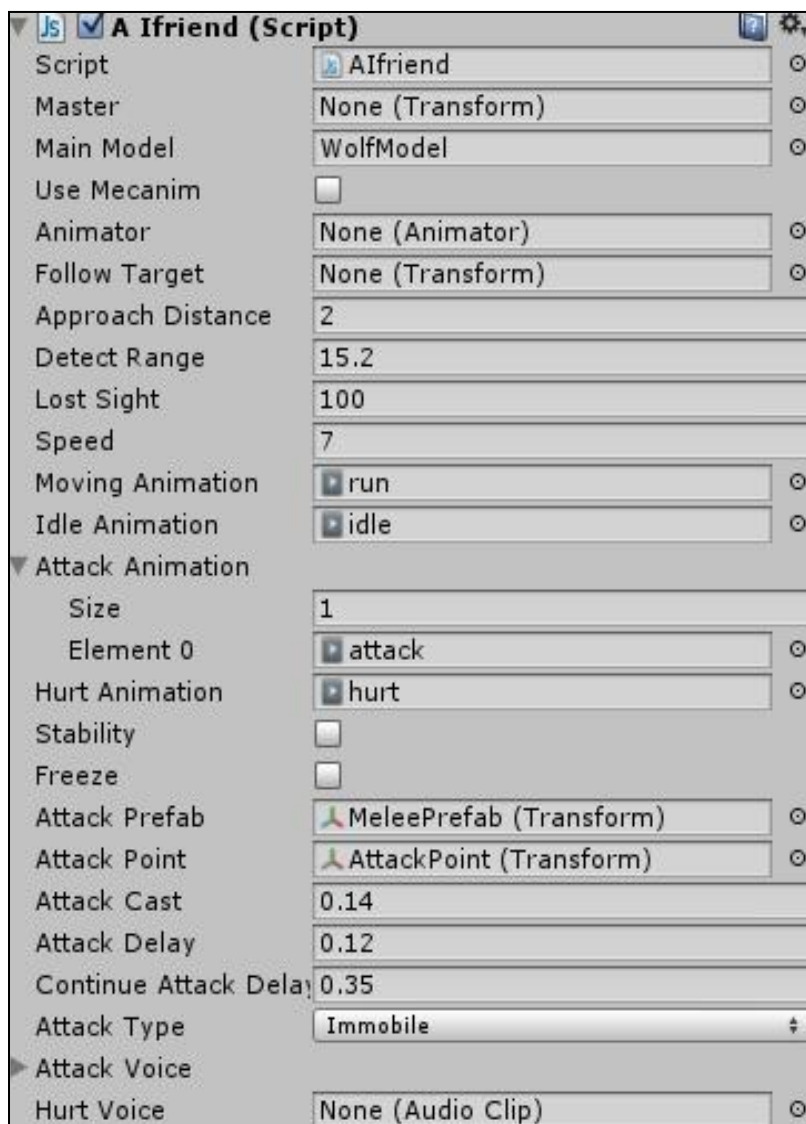


Summoning Skill

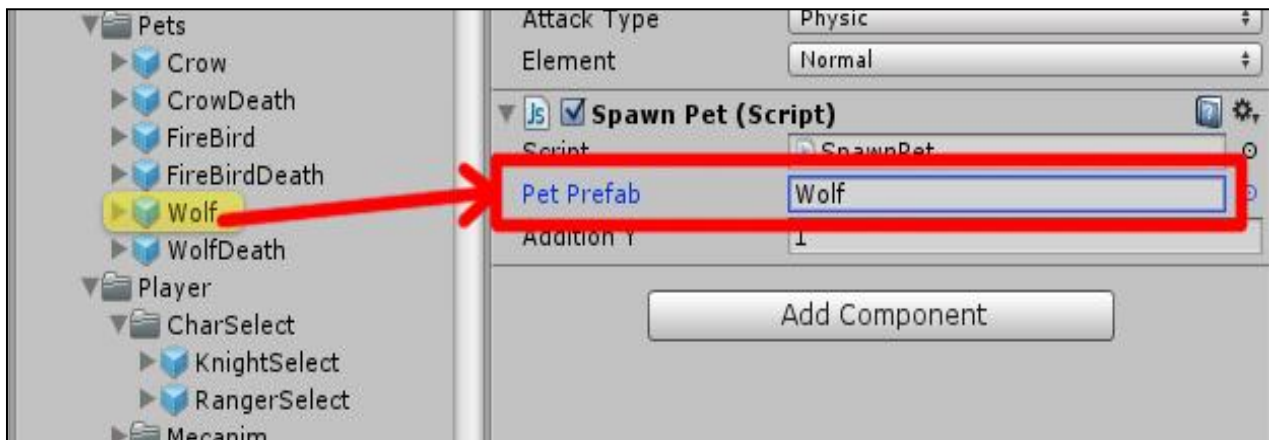
First create your ally AI. After import the model
Go to “Component / Action-RPG Kit / Create Ally”



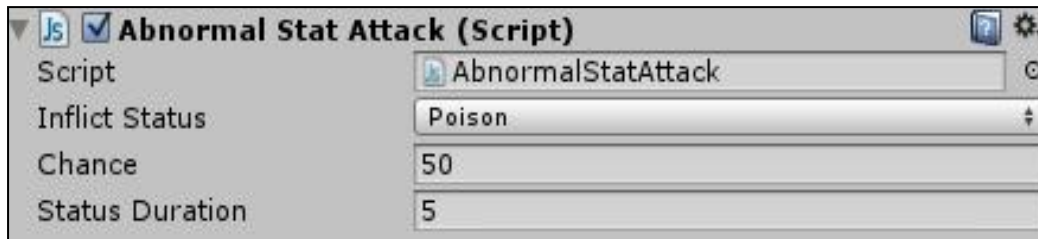
Then setting the value in “AIfriend” and assign it to the prefab



After the Ally prefab ready. Create new empty game object. Attach the “SpawnPet” script to it. Then assign the Ally prefab to “Pet Prefab” variable



Abnormal Status



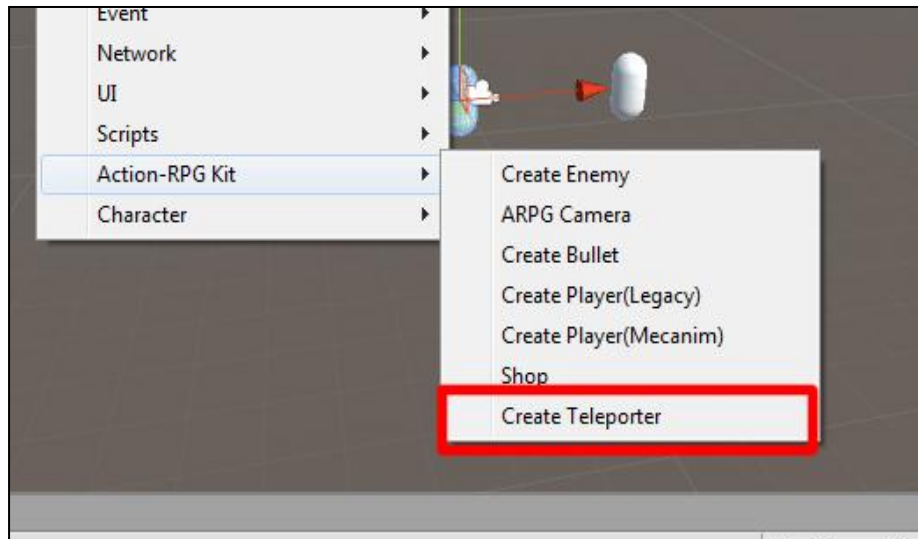
Attach to the Skill Prefab or Attack Prefab.

- Inflict Status - What kind of Status to inflict to target
- Chance - Chance of success rate
- Status Duration - Duration of abnormal status

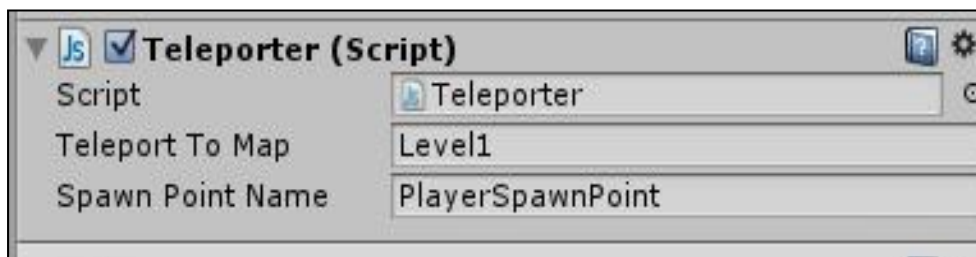
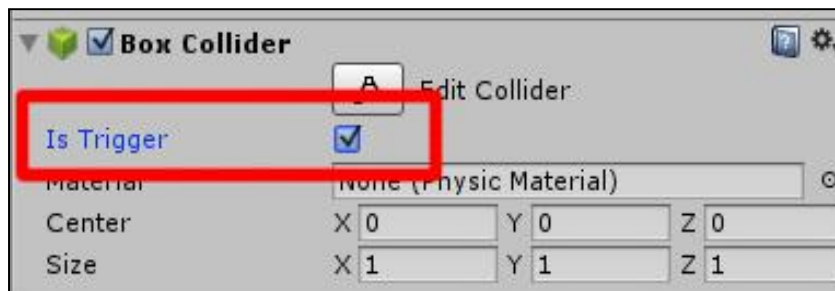


Teleporter

You can teleport your player to the other scene by create The box object and Go to “Component / Action-RPG Kit / Create Teleporter”



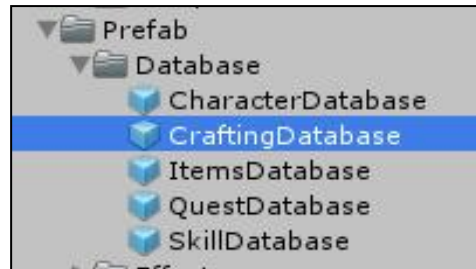
Mark on “Is Trigger” in collider



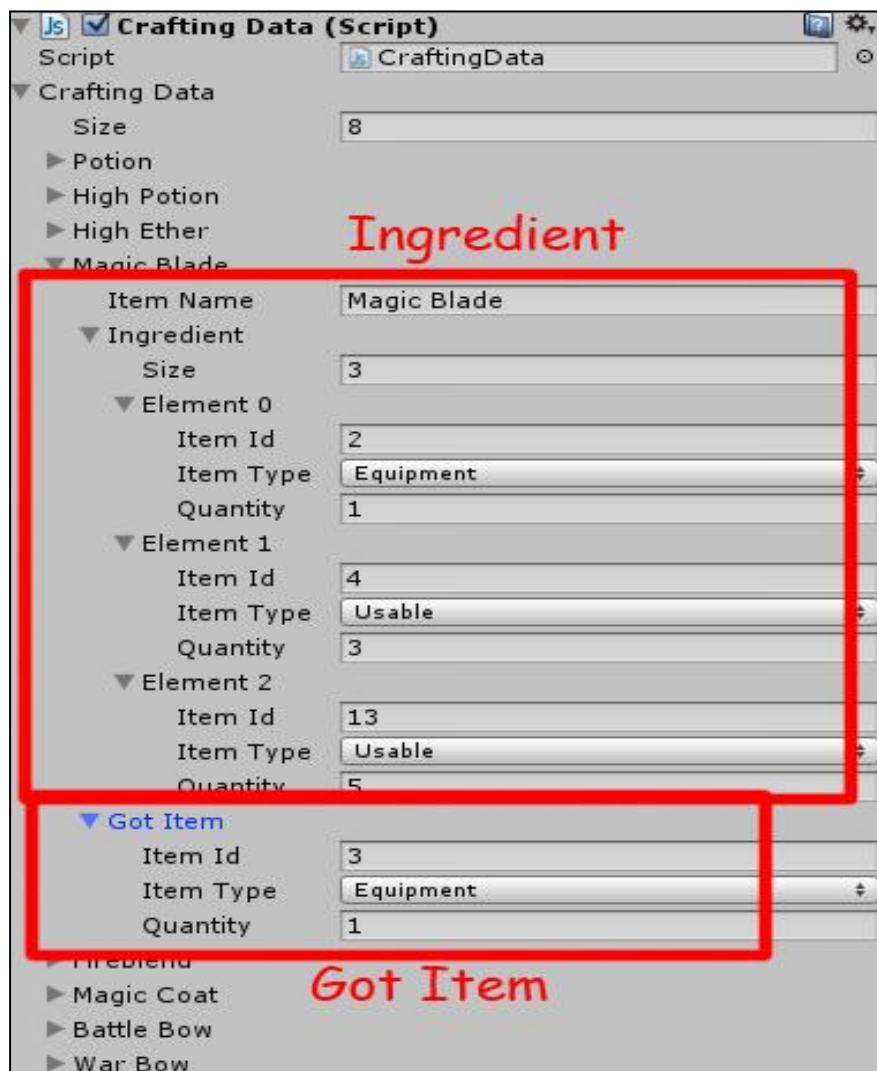
Teleport to Map - Go to Scene name
Spawn Point Name - Name of game object to move player to that object position.

Crafting System

You can setting the crafting Database in “Prefab / Database / CraftingDatabase”



Now you can setting value of “ingredient” item id and “got item” id (ID from element of ItemDatabase)

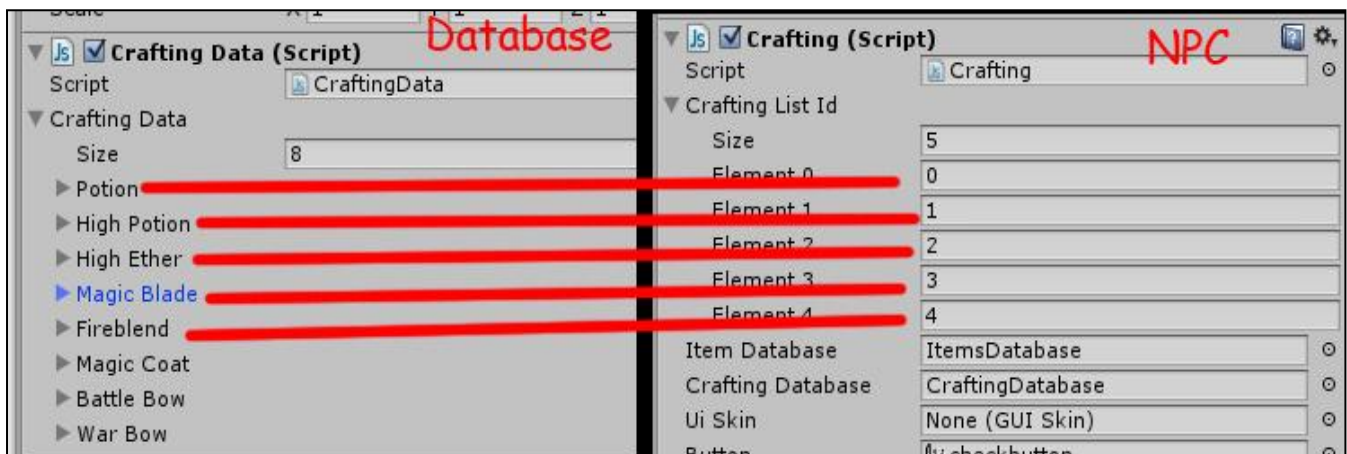


5 Spider Venom(ID : 13 , Usable)

1 Magic Blade(ID : 3 , Equipment)

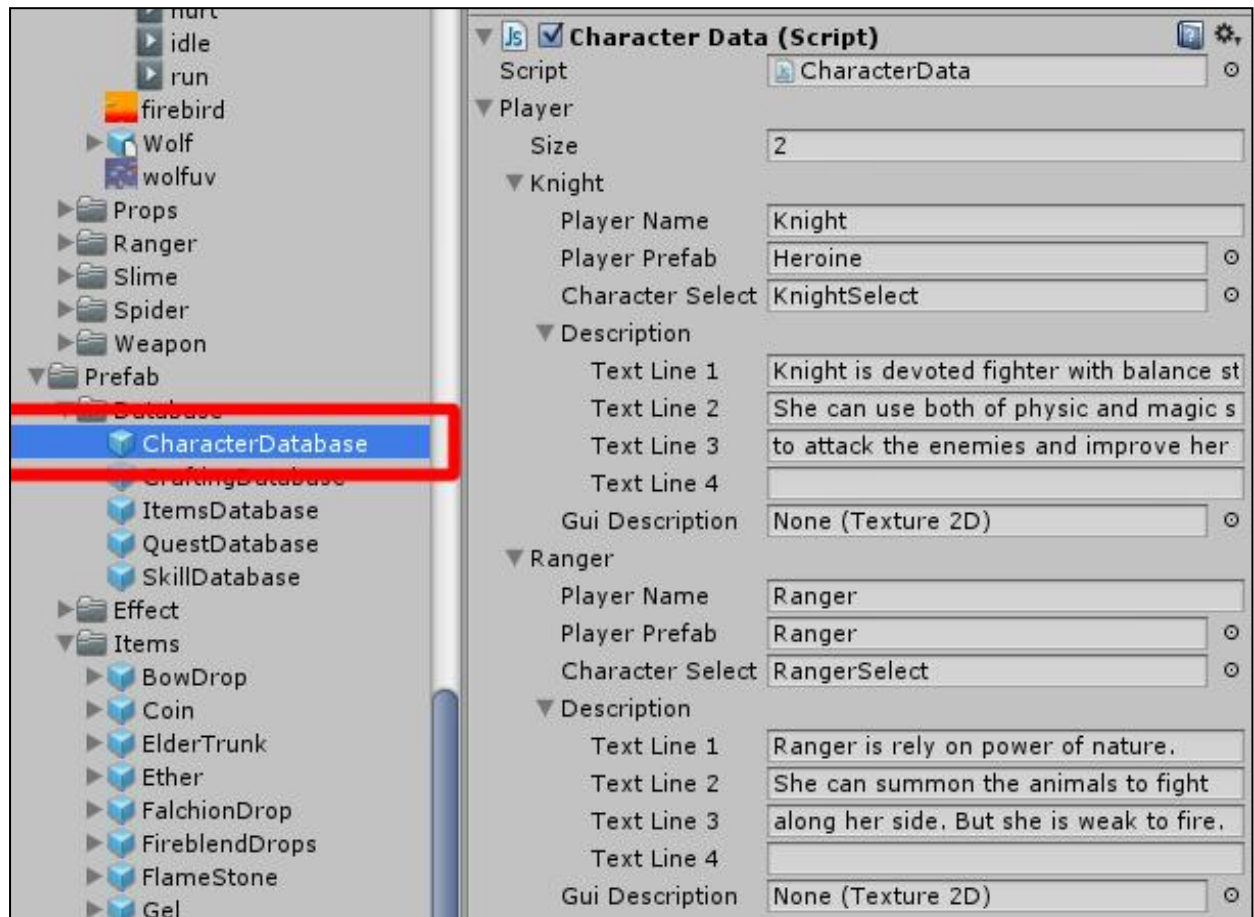
Crafting NPC

Crafting Database.



Character Selection

In the Title scene. There is “Title” script to make title window and Character Selection. You can add new player in Character Selection by go to “Prefab / Database / CharacterDatabase”



Assign Player prefab to “Player Prefab” Variable

“Character Select”Variable is store the model for show when selecting scene.

Advance Status

In status script, you can modify various functions such “How much the skill point and max HP will increase when the character level up”. Looking in the example below.

```
function LevelUp
```

```
statusPoint += 5;
```

You can set 5 to other number as you want, when your character is level up, it will get the skill point same as the setting variable.

```
maxExp = 1.25 * maxExp;
```

When Level up, character max EXP will extend by 25%

```
maxHealth += 20;
```

```
maxMana += 10;
```

Same as above, you can set them as you want.

```
function OnDamage and OnMagicDamage
```

When the damage occur, this function will be called. You can adjust the status calculate formula as much as you want