Game Programming

Sci-Fi Demo: Lecture III
Coin Pickup

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Coin Setup

- Collect coins in order to purchase weapon later on

- Find coin under Level/Market

- How to collect coin?
  - Use collisions (not physical collision: onTrigger)

- Select the coin
  - Add a new component: SphereCollider
  - Edit collider and enlarge the size
  - Use the action key later to pickup the coin and add it to the inventory
  - Select isTrigger true
  - Add a new component: RigidBody and set Use Gravity false

Coin Behavior

- Create a new C# script: Coin_sc
  - Add the new script to the Coin as a component

- Check for collision
  - If it is the Player who collides
  - Check if the action key is pressed (E)
  - Give player the coin
  - Play the coin sound
  - Destroy coin

- OnTriggerEnter doesn't work in this case because it is called only once and we need to check if the user press the action key later on
  - Use onTriggerStay – continously called on successive frames

Coin Behavior

- Tag the Player as Player

- Define a pickup sound in the Coin script and serialize it. Set it as Pickup from Inspector

```
[SerializeField]
1 reference
private AudioClip _coinPickup;

0 references
void OnTriggerStay(Collider other)
{
    if (other.tag == "Player")
    {
        if (Input.GetKeyDown(KeyCode.E))
        {
            Player_sc player_sc = other.GetComponent<Player_sc>();
            if (player_sc == null)
            {
                Debug.LogError("Player is NULL");
            }
            else
            {
                player_sc.hasCoin = true;
                AudioSource.PlayClipAtPoint(_coinPickup, transform.position, 1f);
                Destroy(this.gameObject);
            }
        }
    }
}
```

Coin FX

- Show that the coin is importat and pickable by some particle effect
  - Under Effects folder, find Coin Particle

- Select the Coin Particle and drag and drop it under Coin as a child object
  - The coin start glowing now

Inventory System

- Inside the Canvas, right click UI and select Image
  - Rename it as Inventory_BG
  - Set source image as InventorySlotBG from Sprites folder
  - Set width & height: 50
  - Set it to left bottom corner above the ammo count and anchor it to the left bottom corner
- Add a new Image under Inventory_BG as a child object
  - Set name as Coin
  - Set source image as coin from Sprites folder
  - Set width & height: 75
- Enable/disable coin when the coin is collected/spent
  - Start it at the off position (disable initially)

Inventory System

- Update UI Manager script
  - Define coin game object, serialize it and set it through the Inspector window
  - Define a public function to enable coin

```
[SerializeField]
1 reference
private GameObject _coin;
```

```
public void CollectedCoin()
{
    _coin.SetActive(true);
}
```

Inventory System

- Update Coin script
  - Find UI Manager script component and call the CollectedCoin function when the Player presses the action key

```
player_sc.hasCoin = true;
AudioSource.PlayClipAtPoint(_coinPickup, transform.position, 1f);
UIManager_sc uiManager_sc = GameObject.Find("Canvas").GetComponent<UIManager_sc>();
if (uiManager_sc == null)
{
    Debug.LogError("UI Manager is NULL");
}
else
{
    uiManager_sc.CollectedCoin();
}
```