WiFi - Unite2014, pw - unity2014

PLEASE TAKE A USB STICK,FIND A SEAT, COPY THE TRAINING DAY PROJECT FOLDER TO YOUR COMPUTER, INSTALL UNITY 4.6 FROM THE INSTALLER. NOW!

Unzip 'All Unite Training Day Projects'

Open Unity, File > Open Project

Open 'Unite 2014 Training Day'

Welcome to

UNITE 2014
TRAINING DAY

WHAT'S A TRAINING DAY?!

Introduction & Installation

01 - SETTING UP THE ENVIRONMENT

02 - ADDING THE PLAYER CHARACTER

03 - SETTING UP THE CAMERA

04 - ADDING THE FIRST ENEMY

Lunch eta 13:00

05 - NEW UI TOOLS & HEALTH HUD

06 - PLAYER HEALTH

07 - HARMING ENEMIES

08 - SCORING POINTS

09 - MORE ENEMIES

10 - GAME OVER, MAN

WHAT YOU NEED TO KNOW

- Isometric shooter game ‘Nightmares’
- Catch up zip files - each Phase has it’s own dedicated project zip to avoid falling behind
- Dedicated Helpers - just raise your hand!
- Q & A limited to end of day

WHAT YOU WILL BUILD

OK. LET'S
DO THIS.

ENVIRONMENT

PHASE 1 / 10

1. Setup Editor Layout **2 by 3**
2. Drag **Project** tab below the **Hierarchy**
3. Set view slider to minimum on **Project** panel
4. **File > New Scene**
5. **File > Save Scene As**, name it **Level 01** in **Scenes** folder

ENVIRONMENT

1. Locate **Environment** prefab in the **Project** panel **Prefabs** folder
2. Drag into **Scene** or **Hierarchy**
3. Ensure it is at **Position** (0, 0, 0) in **Transform**
4. Repeat 1-3 for the **Lights** prefab
5. **Save** your Scene (CMD-S / CTRL-S)

ENVIRONMENT

PHASE 1 / 10

1. **GameObject** menu > **3D Object** > **Quad**
2. Rename to **Floor** (Return / F2)
3. Ensure it is at **Position** (0, 0, 0) in **Transform**
4. Set **Rotation** (90, 0, 0) in **Transform**
5. Set **Scale to** (100, 100, 1) in **Transform**

1. Remove **Mesh Renderer** Component from the **Floor** game object
2. Set the **Floor** game object to use the **Floor** layer at the top of the **Inspector** panel
3. Save your Scene (CMD-S / CTRL/S)

1. **GameObject > Create Empty**
2. Rename GameObject to **BackgroundMusic**
3. **Add Component > Audio > Audio Source**
4. **Audio Clip > Circle Select > Background Music**
5. Check **Loop** and set **Volume** to **0.1**
6. **Save** your Scene (CMD-S / CTRL/S)

Achievement Unlocked!

END OF
PHASE ONE

PLAYER CHARACTER

1. Locate the **Player** model in **Models > Characters** folder of the **Project** panel
2. Drag it into the **Scene** or **Hierarchy** panels
3. Set the **Position** to (0, 0, 0) in **Transform**
4. Set the **Tag** to **Player** in the drop-down in **Inspector**

PLAYER CHARACTER

1. Select the **Animation** folder and click **Create** on the **Project** panel, choose **Animator Controller**
2. Name this new asset **PlayerAC**
3. Drag and drop it onto the **Player** in the **Hierarchy**
4. Double-click **PlayerAC** asset in **Project > Animation**
5. **Dock** the **Animator** window by the **Scene view**

PLAYER CHARACTER

PHASE 2 / 10

1. Expand the **Player** model in **Models > Characters**
2. Drag the **Idle**, **Move** and **Death** animations to empty space in the **Animator** window to create states
3. Right-click **Idle** state and choose **Set as Default**
4. Create a **bool** parameter named **IsWalking**
5. Create a **Trigger** parameter named **Die**

PLAYER CHARACTER

1. Right-click **Idle** and **Make Transition** to **Move**
2. Select the **Transition** arrow you made
3. Set the **Condition** for this to **IsWalking = true**
4. Right-click **Move** and **Make Transition** to **Idle**
5. Set the **Condition** for this to **IsWalking = false**
6. Right-click ‘**Any State**’ and **Make Transition** to **Death**

PLAYER CHARACTER

1. Set the **Condition** for this to **Die** (trigger)
2. Select **Player** game object, **Add Component > Physics > Rigidbody**
3. Set **Drag & Angular Drag** to **Infinity**
4. Expand the **Constraints,** Freeze the **Y Position,** and Freeze the **X** and **Z Rotations**

PLAYER CHARACTER

PHASE 2 / 10

1. Select **Player** game object, **Add Component > Physics > Capsule Collider**
2. Set **Center** to (0.2, 0.6, 0)
3. Set **Height** to **1.2**

PLAYER CHARACTER

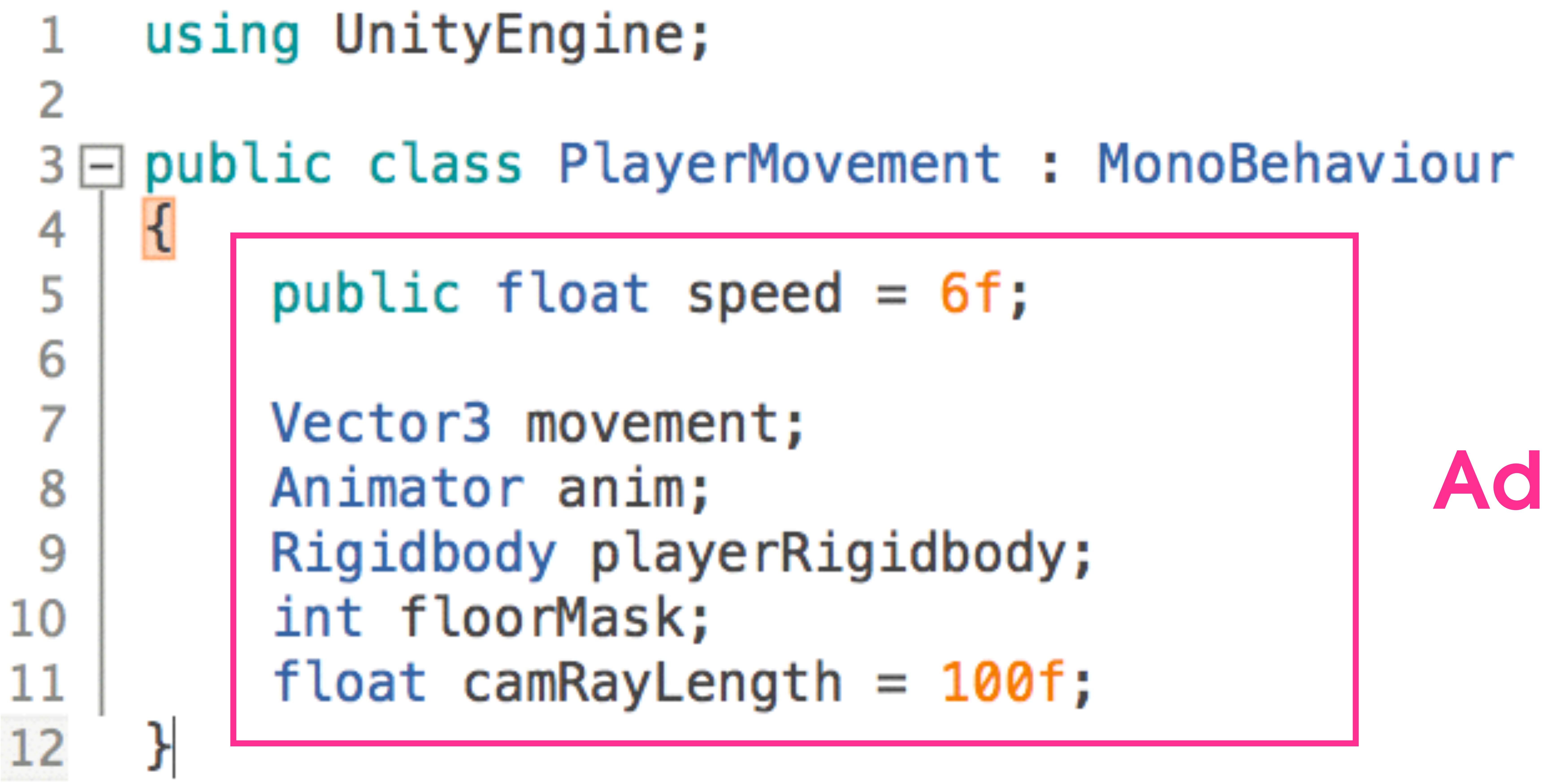
PHASE 2 / 10

1. **Add Component** > **Audio** > **Audio Source**
2. **Audio Clip >** Circle Select **Player Hurt**
3. Uncheck **Play On Awake**
4. Locate **PlayerMovement** script in **Scripts** > **Player**
5. Drag & Drop this to **Player** game object in **Hierarchy**
6. **Save** your Scene (CMD-S / CTRL/S)

PLAYER CHARACTER

1. Double-click the icon of the **PlayerMovement** script to open it in the Script editor

PLAYER CHARACTER

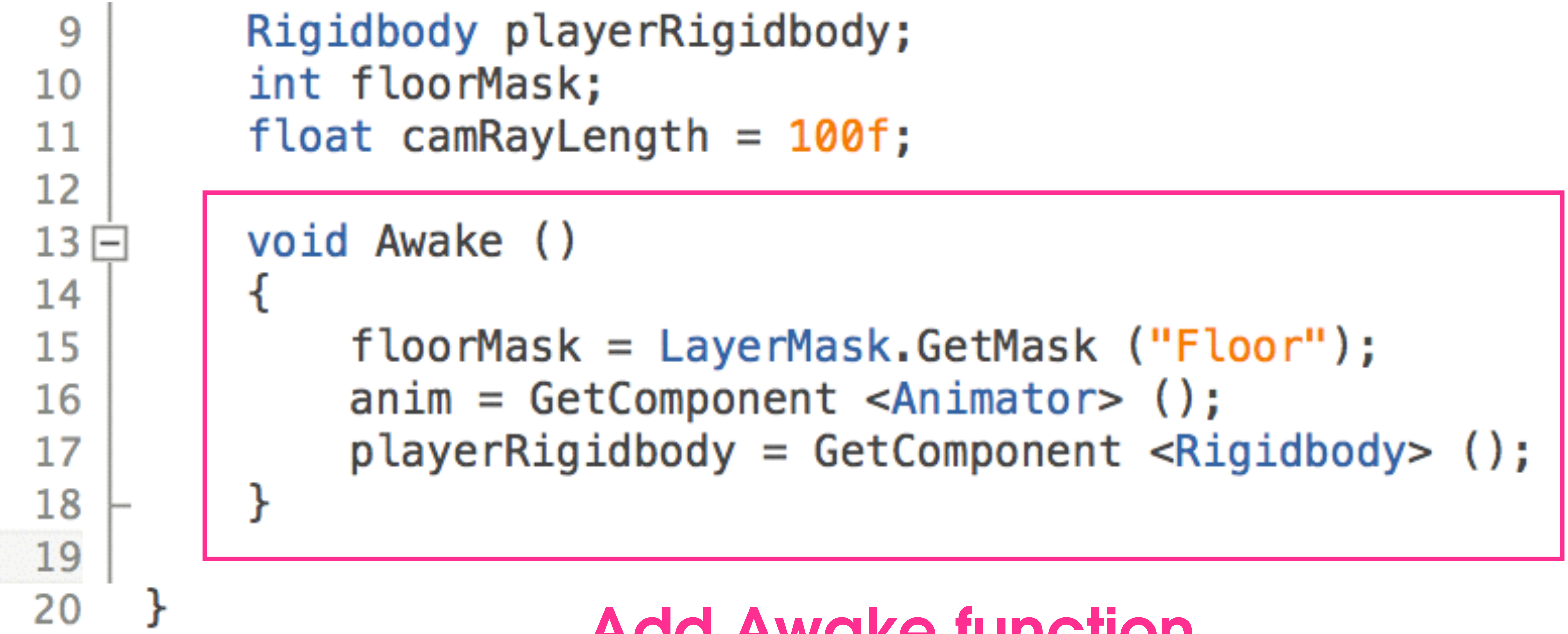


```
using UnityEngine;

public class PlayerMovement : MonoBehaviour
{
    public float speed = 6f;

    Vector3 movement;
    Animator anim;
    Rigidbody playerRigidbody;
    int floorMask;
    float camRayLength = 100f;
}
```

Add Variables

PLAYER CHARACTER

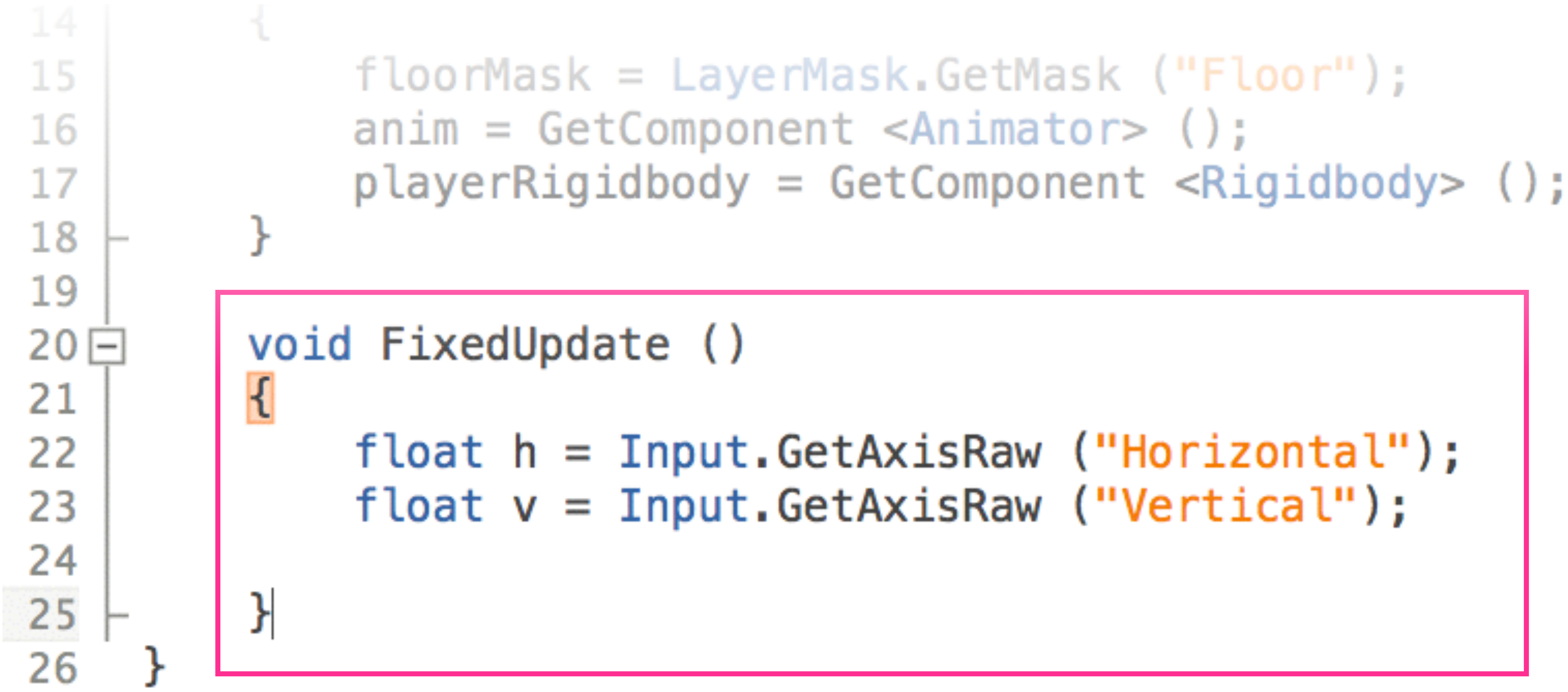
PHASE 2 / 10



```
    Rigidbody playerRigidbody;
    int floorMask;
    float camRayLength = 100f;

    void Awake ()
    {
        floorMask = LayerMask.GetMask ("Floor");
        anim = GetComponent <Animator> ();
        playerRigidbody = GetComponent <Rigidbody> ();
    }
}
```

Add Awake function

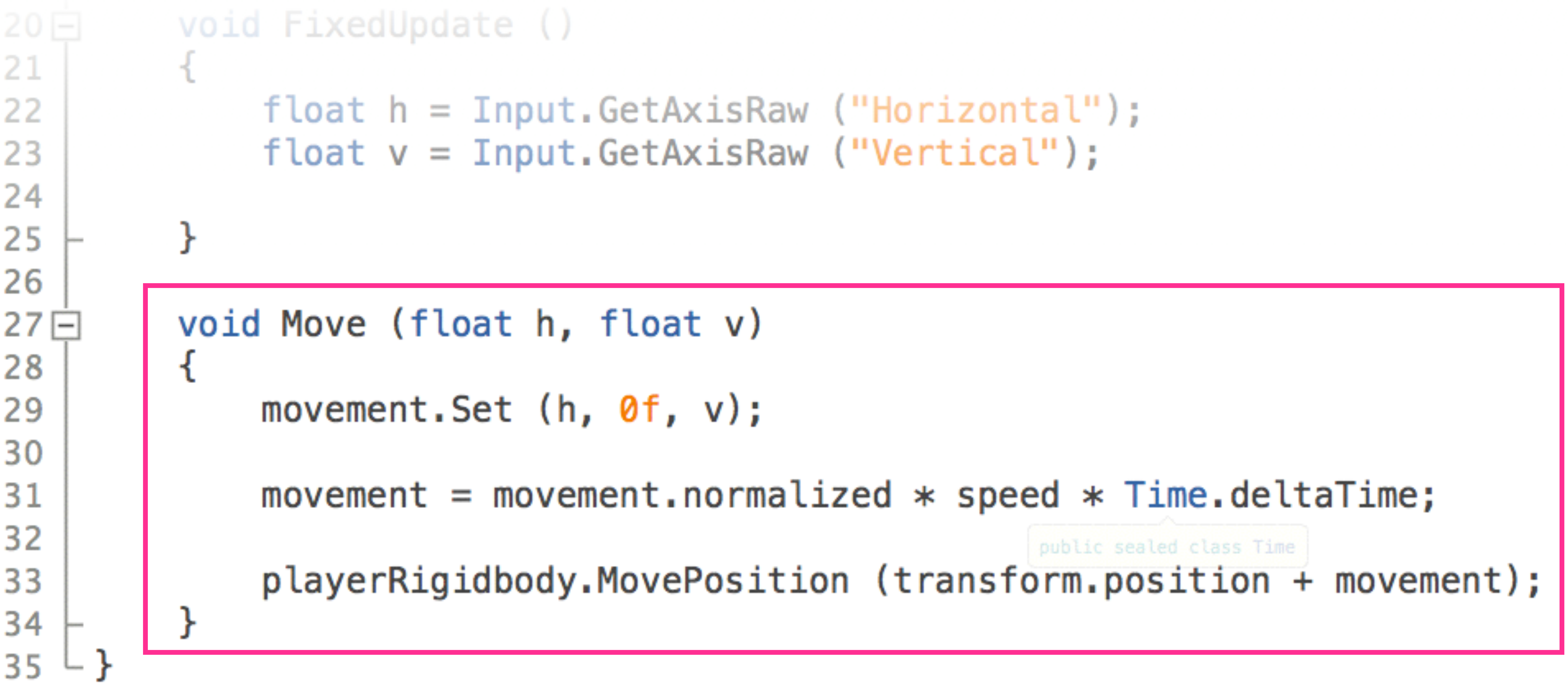
PLAYER CHARACTER



```
    {
        floorMask = LayerMask.GetMask ("Floor");
        anim = GetComponent <Animator> ();
        playerRigidbody = GetComponent <Rigidbody> ();
    }

    void FixedUpdate ()
    {
        float h = Input.GetAxisRaw ("Horizontal");
        float v = Input.GetAxisRaw ("Vertical");

    }
}
```

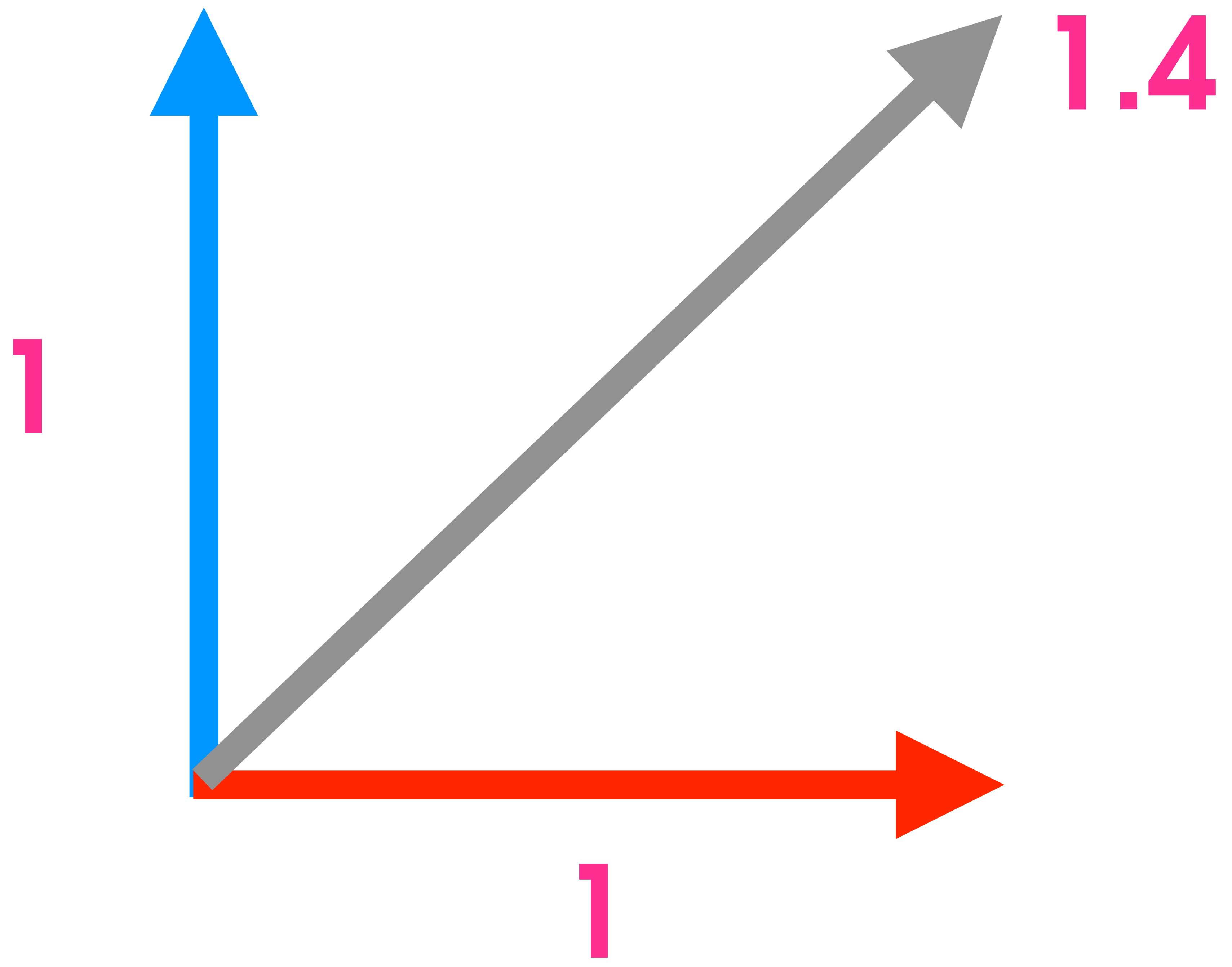
Add FixedUpdate function

PLAYER CHARACTER



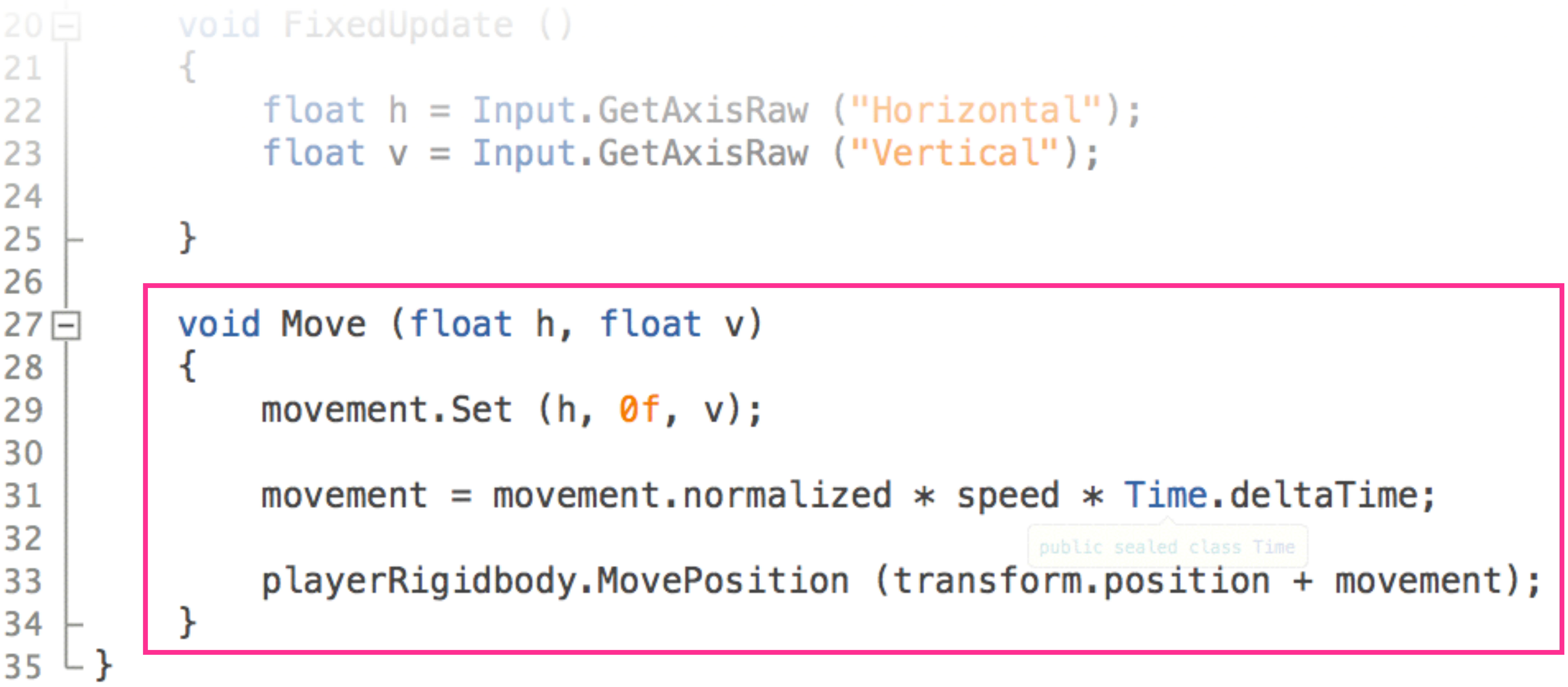
```
    void FixedUpdate ()
    {
        float h = Input.GetAxisRaw ("Horizontal");
        float v = Input.GetAxisRaw ("Vertical");

    }

    void Move (float h, float v)
    {
        movement.Set (h, 0f, v);

        movement = movement.normalized * speed * Time.deltaTime;

        playerRigidbody.MovePosition (transform.position + movement);
    }
}
```

Add Move function



Normalization

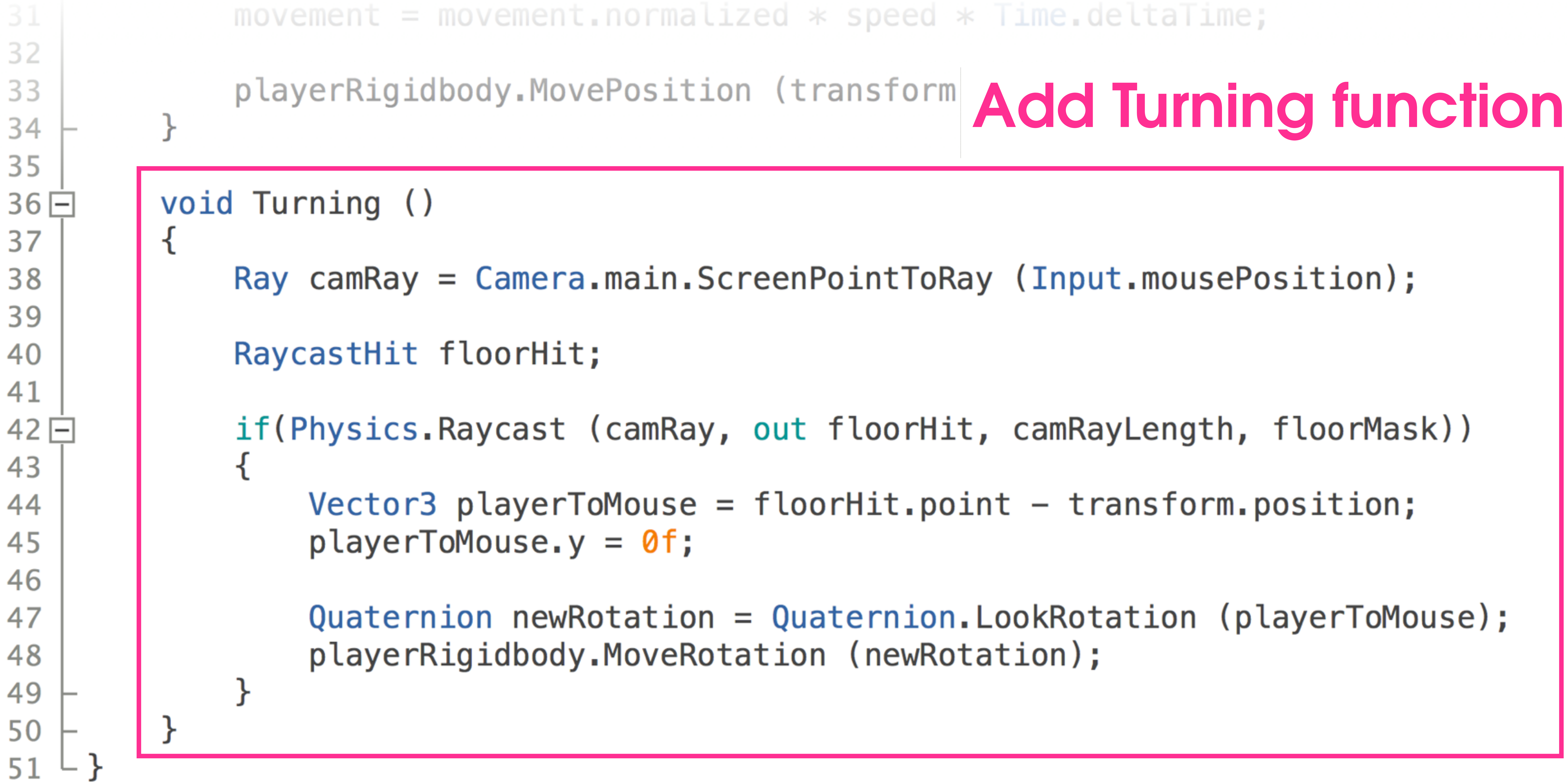
PLAYER CHARACTER



```
    void FixedUpdate ()
    {
        float h = Input.GetAxisRaw ("Horizontal");
        float v = Input.GetAxisRaw ("Vertical");

    }

    void Move (float h, float v)
    {
        movement.Set (h, 0f, v);

        movement = movement.normalized * speed * Time.deltaTime;

        playerRigidbody.MovePosition (transform.position + movement);
    }
}
```

Add Move function

PLAYER CHARACTER

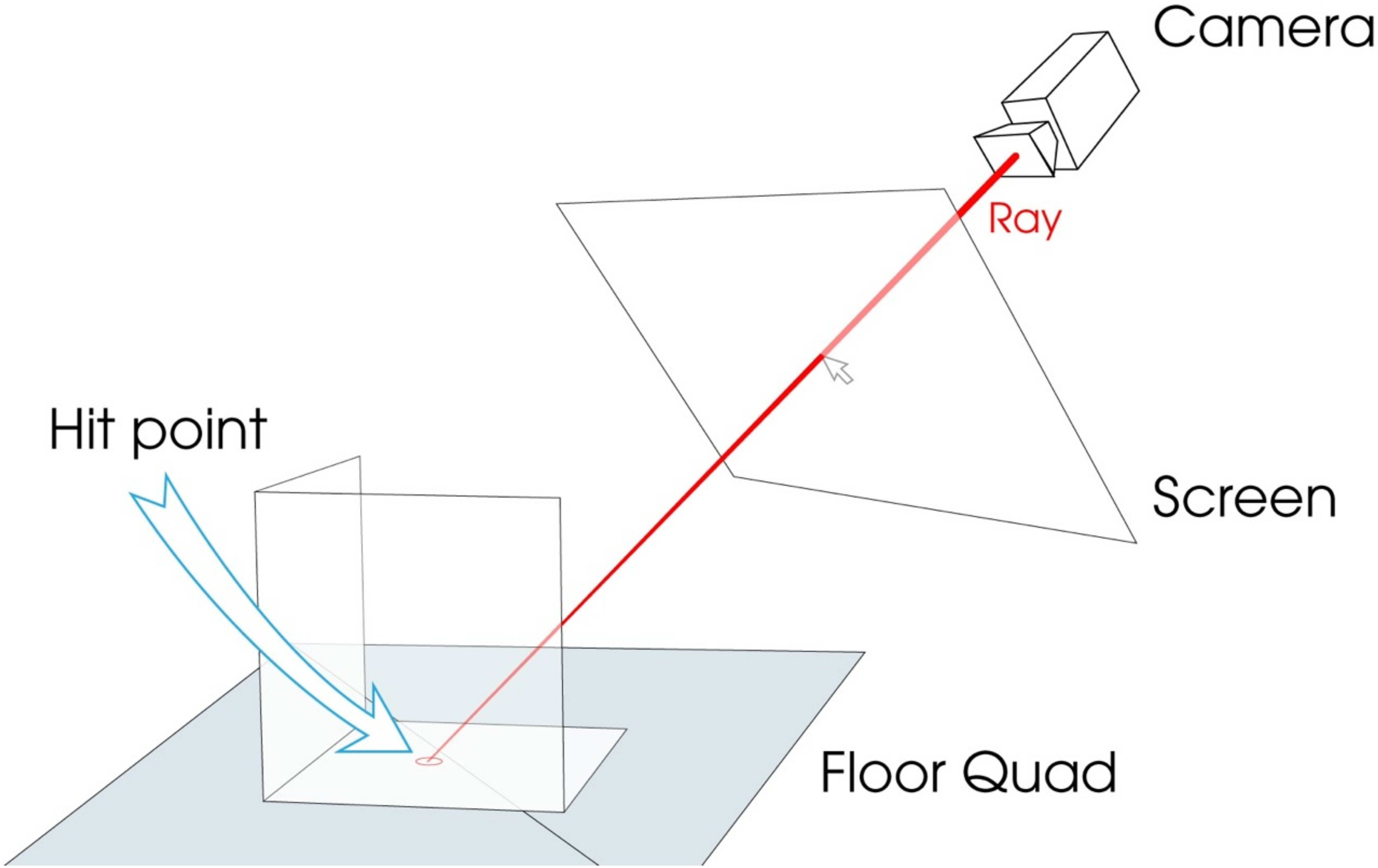


Add Turning function

```
        movement = movement.normalized * speed * Time.deltaTime;

        playerRigidbody.MovePosition (transform
    }

    void Turning ()
    {
        Ray camRay = Camera.main.ScreenPointToRay (Input.mousePosition);

        RaycastHit floorHit;

        if(Physics.Raycast (camRay, out floorHit, camRayLength, floorMask))
        {
            Vector3 playerToMouse = floorHit.point - transform.position;
            playerToMouse.y = 0f;

            Quaternion newRotation = Quaternion.LookRotation (playerToMouse);
            playerRigidbody.MoveRotation (newRotation);
        }
    }
}
```

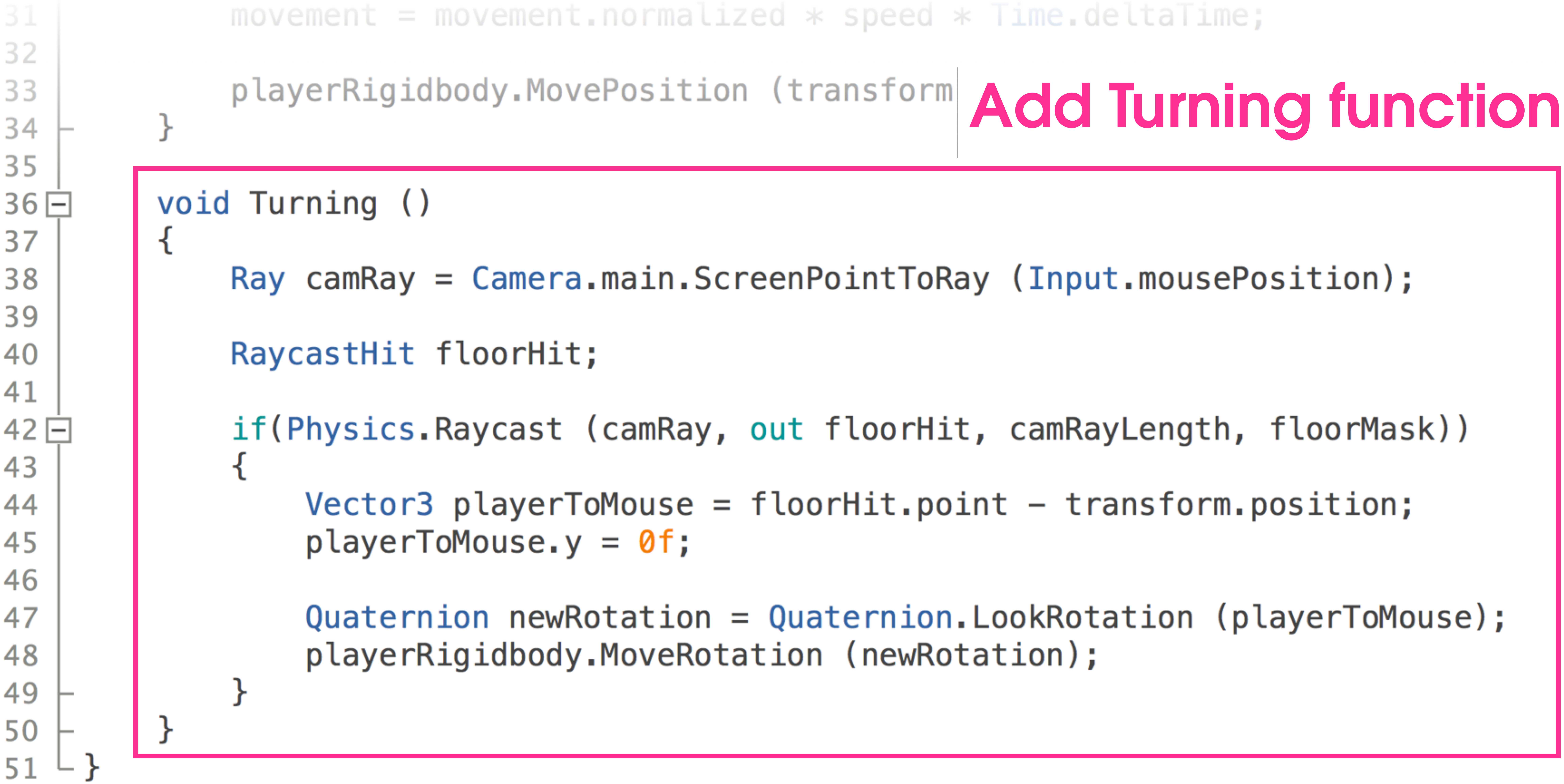
PLAYER CHARACTER

PHASE 2 / 10



PLAYER CHARACTER

PHASE 2 / 10



Add Turning function

```
        movement = movement.normalized * speed * Time.deltaTime;

        playerRigidbody.MovePosition (transform
    }

    void Turning ()
    {
        Ray camRay = Camera.main.ScreenPointToRay (Input.mousePosition);

        RaycastHit floorHit;

        if(Physics.Raycast (camRay, out floorHit, camRayLength, floorMask))
        {
            Vector3 playerToMouse = floorHit.point - transform.position;
            playerToMouse.y = 0f;

            Quaternion newRotation = Quaternion.LookRotation (playerToMouse);
            playerRigidbody.MoveRotation (newRotation);
        }
    }
}
```

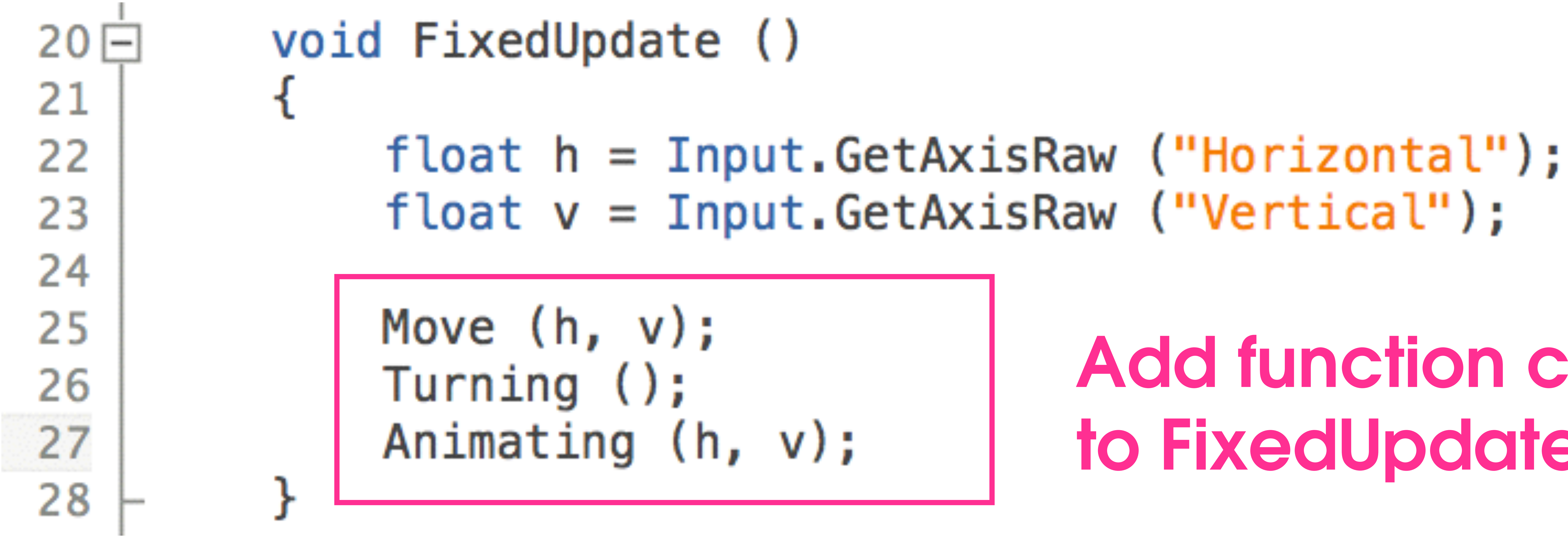
PLAYER CHARACTER

PHASE 2 / 10

```
      Vector3 playerToMouse = floorHit.point - transform.position;
      playerToMouse.y = 0f;

      Quaternion newRotation = Quaternion.LookRotation (playerToMouse);
      playerRigidbody.MoveRotation (newRotation);
    }
  }

  void Animating (float h, float v)
  {
    bool walking = h != 0f || v != 0f;
    anim.SetBool ("IsWalking", walking);
  }
}
```

Add Animating function

PLAYER CHARACTER



```
    void FixedUpdate ()
    {
        float h = Input.GetAxisRaw ("Horizontal");
        float v = Input.GetAxisRaw ("Vertical");

        Move (h, v);
        Turning ();
        Animating (h, v);
    }
```

Add function calls to FixedUpdate

PLAYER CHARACTER

1. **File** > **Save** your script and return to the Unity editor
2. Press **Play** at the top of the interface to try out your game
3. **Stop Play!** (do not use Pause)

Pwnd!

END OF
PHASE TWO

CAMERA SETUP

1. Select the **Main Camera** in **Hierarchy**
2. Set the **Transform Position** to (1, 15, -22)
3. Set the **Transform Rotation** to (30, 0, 0)
4. In the **Camera** component set the **Projection** to **Orthographic** mode
5. Set the Size value to **4.5**

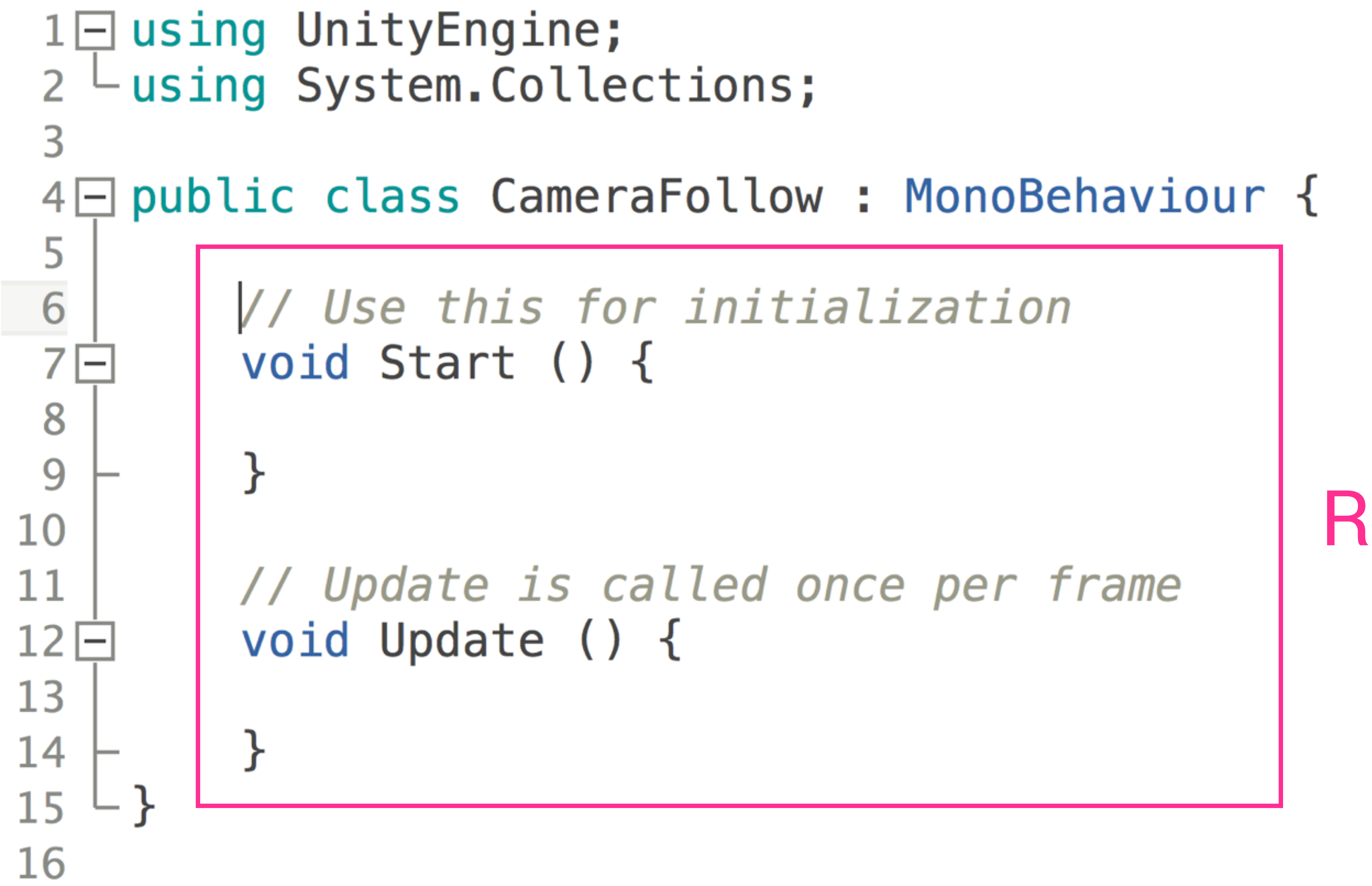
CAMERA SETUP

1. Set **Background Color** to **Black**
2. **Save** your Scene (CMD-S / CTRL/S)
3. Select the **Camera** folder in the **Scripts** folder of the **Project** panel
4. Click **Create > C# Script** on Project panel
5. Name the script **CameraFollow**

CAMERA SETUP

1. Drag and drop the **CameraFollow** script onto the **Main Camera** in **Hierarchy**
2. **Save** your scene now!
3. Click **Open** at the top of the **Inspector** or double-click the script’s icon to open it for editing

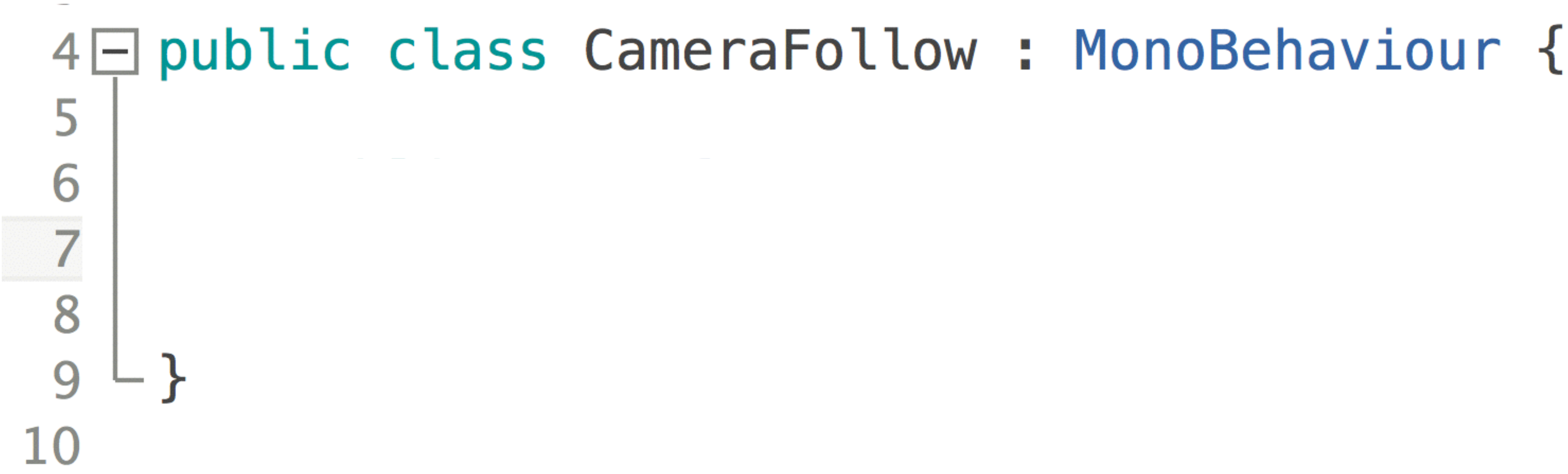
CAMERA SETUP



```
using UnityEngine;
using System.Collections;

public class CameraFollow : MonoBehaviour {

	// Use this for initialization
	void Start () {
	
	}
	
	// Update is called once per frame
	void Update () {
	
	}
}

```

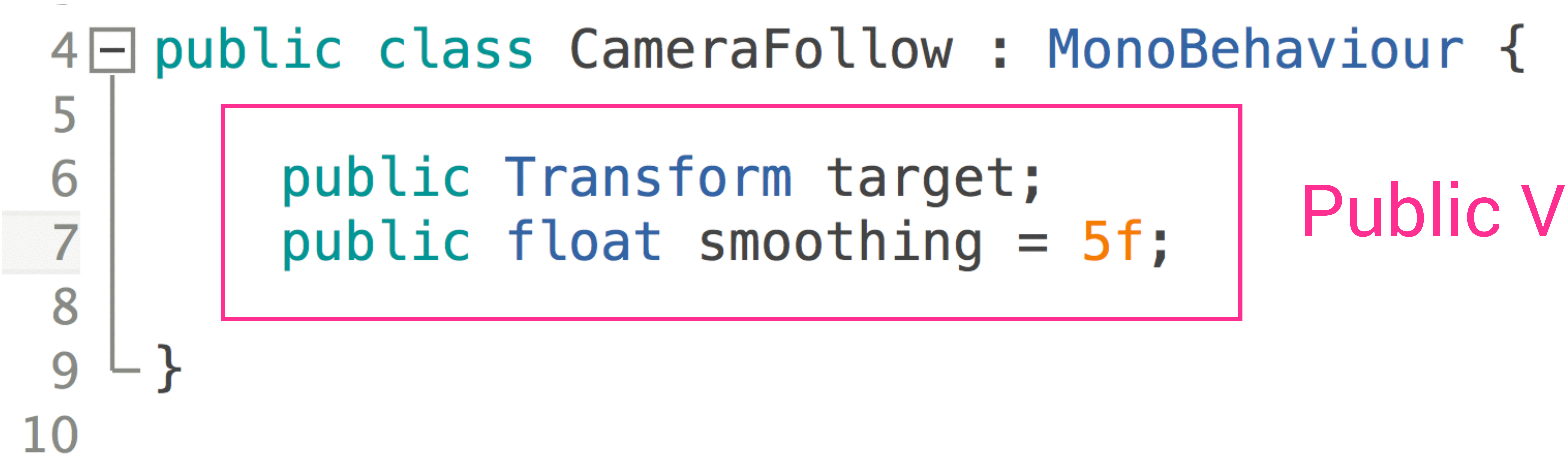
Remove!

CAMERA SETUP



```
public class CameraFollow : MonoBehaviour {




}

```

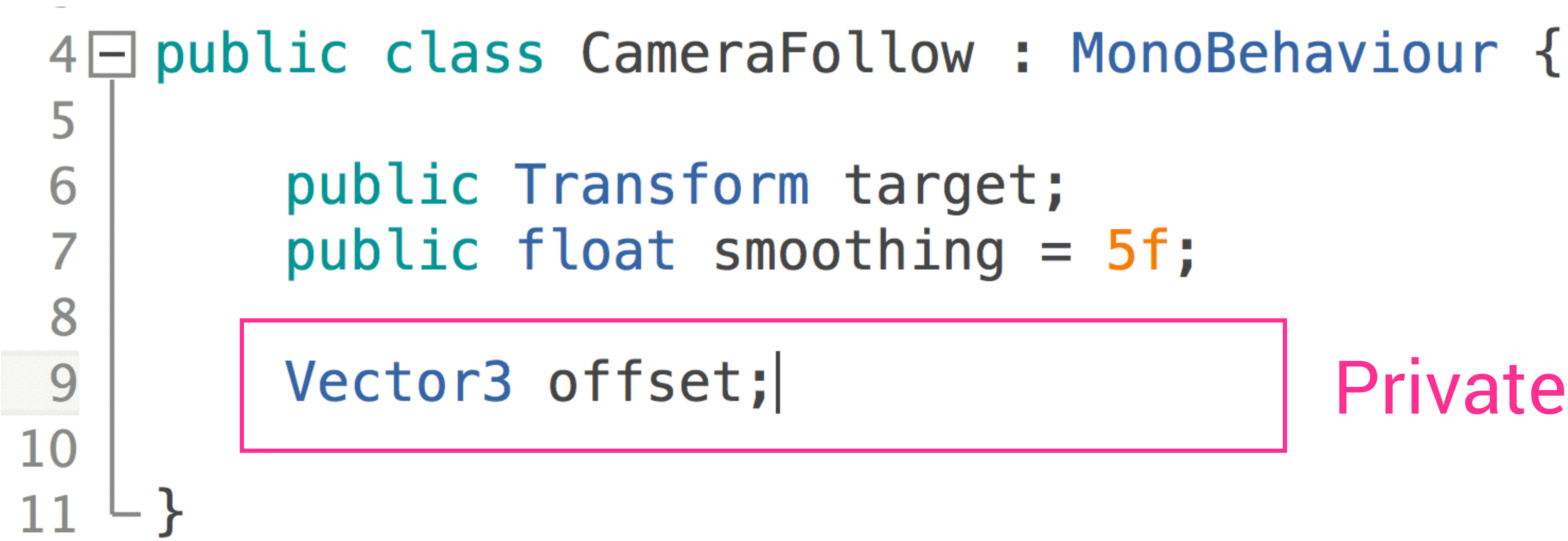
CAMERA SETUP



```
public class CameraFollow : MonoBehaviour {

    public Transform target;
    public float smoothing = 5f;

}

```

Public Variables

CAMERA SETUP

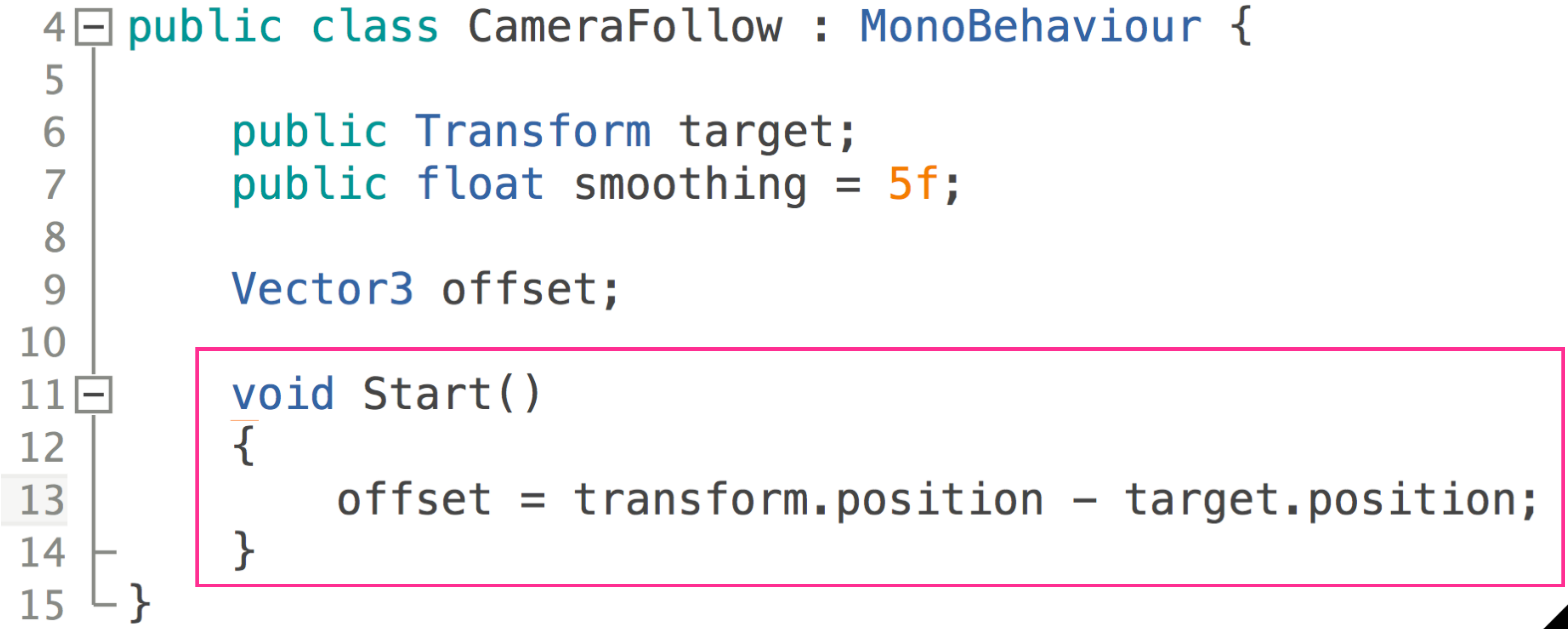


```
public class CameraFollow : MonoBehaviour {

    public Transform target;
    public float smoothing = 5f;

    Vector3 offset;

}
```

Private Variable

CAMERA SETUP

PHASE 3 / 10



```
public class CameraFollow : MonoBehaviour {

    public Transform target;
    public float smoothing = 5f;

    Vector3 offset;

    void Start()
    {
        offset = transform.position - target.position;
    }
}
```

CAMERA SETUP

```
    void Start()
    {
        offset = transform.position - target.position;
    }

    void FixedUpdate()
    {
        Vector3 targetCamPos = target.position + offset;
        transform.position = Vector3.Lerp (transform.position,
                                           targetCamPos, smoothing * Time.deltaTime);
    }
}
```

CAMERA SETUP

1. **Save** your Script, and return to **Unity**
2. Select the **MainCamera** and assign **Player** from the **Hierarchy** to the **Target** variable on **CameraFollow**
3. Save your **Player** as a **Prefab** by dragging the **Player** game object from **Hierarchy** to the **Prefabs** folder in the **Project**. **Save**, and press **Play** to test!

OMG it's the

END OF
PHASE THREE

ENEMY NUMBER ONE

1. Locate the **Zombunny** model in the **Models > Characters** folder in the **Project**
2. Drag and Drop the model into the **Scene**
3. Find **HitParticles** in the **Prefabs** folder, drag and drop this onto the **Zombunny** in the **Hierarchy**
4. Choose the **Shootable** layer for this game object

ENEMY NUMBER ONE

1. **Add Component > Physics > Rigidbody**
2. Set **Drag** & **Angular Drag** to **Infinity**
3. In **Constraints Freeze Position Y** and **Freeze Rotation X** and **Z**
4. **Add Component > Physics > Capsule Collider**
5. Set **Center Y** to **0.8** and **Height** to **1.5**

ENEMY NUMBER ONE

1. **Add Component > Physics > Sphere Collider**
2. Check the **Is Trigger** box
3. Set **Center Y** and **Radius** both to **0.8**
4. **Add Component > Audio > Audio Source**
5. **Circle select** the **Zombunny Hurt** audio clip
6. Uncheck the **Play On Awake** box

ENEMY NUMBER ONE

1. **Add Component > Navigation > Nav Mesh Agent**
2. Set **Radius** to **0.3**
3. Set **Speed** to **3**
4. Set **Stopping Distance** to **1.3**
5. Set **Height** to **1.1**

ENEMY NUMBER ONE

1. Go to **Window > Navigation** and dock it
2. Choose the **Bake** tab at the top
3. Set **Radius** to **0.75**
4. Set **Height** to **1.2** and **Step Height** to **0.1**
5. In **Advanced** area, set **Width Inaccuracy %** to **1**
6. Click **Bake** at the bottom to bake the **Nav Mesh**

ENEMY NUMBER ONE

1. Select the **Animation** folder in **Project** panel
2. Right-click it and **Create > Animator Controller**
3. Name the asset **EnemyAC** (for Animator Controller)
4. Drag and Drop this asset onto the **Zombunny** parent object in the **Hierarchy**
5. Double-click **EnemyAC** to open in **Animator** window

ENEMY NUMBER ONE

1. Locate and expand the **Zombunny** model in the **Models > Characters** folder in **Project** panel
2. There are 3 animations - **Idle**, **Move** and **Death** set up
3. Drag each clip to Animator, starting with **Move**
4. Position **Idle** and **Move** states near one another, and place **Death** near to the **Any State**

ENEMY NUMBER ONE

1. Ensure that **Move** state is default (orange highlight)
2. If not, right-click and choose **Set as Default**
3. In the **Animator** window’s **Parameters,** click **+** and make a **Trigger** parameter named **PlayerDead**
4. Make another **Trigger** parameter named **Dead**

ENEMY NUMBER ONE

1. Right-click the **Move** state and create a transition to the **Idle** state
2. Right click the **Any State** and create a transition to the **Death** state
3. Set the **Condition** for **Move -> Idle** to **PlayerDead**
4. Set the **Condition** for **Any State -> Death** to **Dead**

ENEMY NUMBER ONE

1. In **Scripts > Enemy** folder in the **Project**, locate **EnemyMovement** script, drag-drop onto **Zombunny**
2. **Save** your Scene
3. Double-click the script **icon** to open for editing
4. Press **Play** to test the game

Wowzers.

END OF
PHASE FOUR

TAKE A BREAK
IT'S LUNCH TIME

USER INTERFACE AND HEALTH HUD

PHASE 5 / 10

1. Click the **2D** mode button on the **Scene** view
2. Choose **GameObject** > **UI** > **Canvas** from menu
3. Rename your **Canvas** to **HUDCanvas**
4. **Add Component > Miscellaneous > Canvas Group**
5. Un-check **Interactable** and **Blocks Raycasts** checkboxes

USER INTERFACE AND HEALTH HUD

1. Right-click **HUDCanvas > Create Empty** to add child
2. Rename GameObject to **HealthUI**
3. In the **Rect Transform**, click the **Anchor Presets** button, and set **HealthUI**'s **Anchor**, **Position** and **Pivot** to bottom left using **Alt-Shift-click** on anchor preset
4. In **Rect Transform**, set **Width** to **75** and **Height** to **60**

USER INTERFACE AND HEALTH HUD

PHASE 5 / 10

1. Right-click **HealthUI > UI > Image** to add child
2. Rename Image to **Heart**
3. In **Rect Transform** set **Position X** and **Y** to **0**
4. Set **Width** and **Height** to **30**
5. In the **Image** component, for **Source Image,** circle select the **Heart** sprite from **Assets**

USER INTERFACE AND HEALTH HUD

PHASE 5 / 10

1. Right-click **HealthUI > UI > Slider**
2. Rename **Slider** to **HealthSlider**
3. In **Rect Transform,** set **Position X** to **95, Y** to **0**
4. Expand the **HealthSlider** to show children, select the **Handle Slide Area** child of the **HealthSlider** and delete it from the **Hierarchy** (Command-Backspace, Delete)

USER INTERFACE AND HEALTH HUD

PHASE 5 / 10

1. In the **Slider** component of **HealthSlider**, set the **Transition** mode to **None**
2. Set the **Max Value** property to **100**
3. Also set the actual **Value** to **100** for full health

USER INTERFACE AND HEALTH HUD

PHASE 5 / 10

1. Right-click **HUDCanvas** and create a **UI > Image**
2. Rename to **DamageImage** and set **Rect Transform** Anchor preset to **Stretch** in both dimensions by **Alt + click**ing the lower right preset
3. In the **Image** component, click the **Colour** block and set the **Alpha** (A) value to **0**

Sweet.

END OF
PHASE FIVE

PLAYER HEALTH

1. In the **Scripts > Player** folder, locate **PlayerHealth**
2. Drag & drop this onto the **Player** in the **Hierarchy**
3. Open the **PlayerHealth** script to examine it!
4. Now let’s return to the Unity Editor..

PLAYER HEALTH

1. In the **PlayerHealth (Script)** component, assign **HealthSlider** from the **Hierarchy** to the **Health Slider** public variable slot using drag and drop
2. On the same component, assign **DamageImage** from the **Hierarchy** to the **Damage Image** public variable slot via drag & drop

PLAYER HEALTH

1. On the **PlayerHealth (Script)** component, assign the **Player Death** audio clip to the **Death Clip** using circle select
2. Locate **EnemyAttack** in the **Scripts > Enemy** folder of the Project, and drag & drop this onto the **Zombunny** in the **Hierarchy**

PLAYER HEALTH

1. Open the **EnemyAttack** script for editing by double-clicking the script icon in the **Project**
2. When done, return to the **Unity Editor**
3. **Save** your scene

You're Awesome.

END OF PHASE SIX

HARMING ENEMIES

1. In the **Scripts > Enemy** folder, locate **EnemyHealth**
2. Drag & drop this onto the **Zombunny** in the **Hierarchy**
3. In the **Enemy Health (Script)** component, assign **Zombunny death** clip to the **Death Clip** variable
4. Open the **EnemyHealth** script for viewing
5. Save your script and return to the **Unity Editor**

HARMING ENEMIES

PHASE 7 / 10

1. Re-open the **EnemyAttack** script by double-clicking the **icon** of the script component in the Inspector
2. Un-comment lines **13** and **22** by removing the preceding **//** symbols in front of each line
3. Un-comment part of line **49** that is also commented out, **Save** your script & return

HARMING ENEMIES

1. In the **Project > Prefabs** folder, select **GunParticles**
2. Click the **Cog** icon to the right of **Particle System** and choose **Copy Component** from the context-menu
3. Expand the **Player** game object in the **Hierarchy** and select the child object **GunBarrelEnd**
4. Click any **Cog** and choose **Paste Component as New**

HARMING ENEMIES

1. Collapse the new **Particle System** component
2. With **GunBarrelEnd** still selected, **Add Component > Effects > Line Renderer**
3. Expand **Materials** area and use circle select to pick the element, choose **LineRenderMaterial**

HARMING ENEMIES

PHASE 7 / 10

1. Expand Parameters section of **Line Renderer**, set the **Line Renderer**'s **Start Width** and **End Width** to **0.05**
2. **Disable Line Renderer** component via the checkbox

HARMING ENEMIES

1. **Add Component > Rendering > Light**
2. Choose a **Yellow** colour from the **Color block / Picker**
3. **Disable** the **Light** component using the checkbox
4. **Add Component > Audio > Audio Source**
5. Set the **Audio clip** to **Player Gunshot** via circle select
6. Uncheck **Play On Awake** for this audio source

HARMING ENEMIES

1. In **Project > Scripts > Player** folder, assign **PlayerShooting** to **GunBarrelEnd** in **Hierarchy**
2. Open the **PlayerShooting** script for viewing
3. Close the script and return to the **Unity Editor**
4. Select **Player** in the **Hierarchy** and click **Apply** at the top of the Inspector to update our **Prefab**

HARMING ENEMIES

1. **Save** your Scene
2. Press **Play** to test your scene
3. Uh-oh! An Error! In the **Scripts > Enemy** folder of the Project, double-click **EnemyMovement** to open it
4. Remove all **//** symbols to un-comment the inactive lines of code in the script, **Save** your script!

HARMING ENEMIES

PHASE 7 / 10

1. In the **Scripts > Player** folder of the Project, double-click **PlayerHealth** to open it
2. Remove all **//** symbols to un-comment the inactive lines of code in the script, and **Save** the script
3. Return to the **Unity editor**
4. **Save** your Scene, and press **Play** to test

Nice work kid,

END OF
PHASE SEVEN

SCORING POINTS

1. Select the **HUDCanvas** in the **Hierarchy** and right-click to create **UI** > **Text** as a child game object
2. Rename this Text game object **ScoreText**
3. Set the **Anchor position** in the **Rect Transform** to the **Top Center** preset
4. Set **Position X** to **0** and **Position Y** to **-55**

SCORING POINTS

PHASE 8 / 10

1. Change **Width** to **300** and **Height** to **50**
2. In the **Text** component, set the **Text** to **“Score: 0”**
3. For the **Font**, circle-select the **Luckiest Guy** typeface
4. Set the **Font size** to **50**
5. Set **Alignments** to **Center** and **Middle**
6. Set the font **Color** to **White** by clicking the **color block**

SCORING POINTS

1. **Add Component** > type ‘Shadow’ to add the **Shadow** component, set the **Effect Distance** values to (2, -2)
2. In the **Scripts** > **Managers** folder, locate the **ScoreManager** script, drag and drop this onto the **ScoreText** game object
3. Open the script for review, then return to Unity

SCORING POINTS

1. Select the **Zombunny** in the **Hierarchy** and locate the **EnemyHealth** (script) component, double-click it's **icon** to open for editing
2. Remove the **//** symbols to un-comment **line 77** in the **StartSinking()** function
3. **Save** the script and return to the **Unity editor**

SCORING POINTS

1. Press **Play** to test your Scene
2. Drag the **Zombunny** game object to the **Prefabs** folder in the **Project** panel to save it as a prefab
3. Remove the **Zombunny** game object from the **Hierarchy** using **Delete** (PC) or **Cmd-Backspace** (Mac)
4. **Save** your Scene

Impressive.

END OF
PHASE EIGHT

MORE ENEMIES!

1. In the **Prefabs** folder of the **Project**, select the **Zombear** - he's just like our Zombunny
2. Expand **Zombear**'s **Animator** component
3. From the **Project**, drag and drop **EnemyAC** from the **Animation** folder onto the **Animator controller** property of **Zombear**'s **Animator** component

MORE ENEMIES!

1. In the **Prefabs** folder of the **Project**, select the **Hellephant**
2. Select the **Animation** folder in the Project, and then click **Create > Animator Override Controller**
3. Name this asset **HellephantAOC**
4. Assign **EnemyAC** to the **Controller** property

MORE ENEMIES!

1. In the **Models > Characters** folder of the **Project**, expand **Hellephant** model to see animation clips
2. Drag **Idle**, **Move** and **Death** onto the corresponding slots in the **HellephantAOC Override** table
3. Select **Hellephant** in the **Prefabs** folder and assign **HellephantAOC** to it's **Animator Controller**

MORE ENEMIES!

1. Go to **GameObject > Create Empty**, rename this from GameObject to **EnemyManager**
2. In the **Scripts > Managers** folder of the **Project**, locate the **EnemyManager** script, and drag it onto the **EnemyManager** game object
3. Open the **EnemyManager** script & switch back after

MORE ENEMIES!

1. Go to **GameObject > Create Empty**, rename this from GameObject to **ZombunnySpawnPoint**
2. At the top of the **Inspector**, set the **Gizmo** for the **ZombunnySpawnPoint** object to the colour blue
3. Set **Transform > Position** to (-20.5, 0, 12.5)
4. Set **Transform > Rotation** to (0, 130, 0)

MORE ENEMIES!

1. Go to **GameObject > Create Empty**, rename this from GameObject to **ZombearSpawnPoint**
2. At the top of the **Inspector**, set the **Gizmo** for the **ZombearSpawnPoint** object to the colour pink
3. Set **Transform > Position** to (22.5, 0, 15)
4. Set **Transform > Rotation** to (0, 240, 0)

MORE ENEMIES!

1. Go to **GameObject > Create Empty**, rename this from GameObject to **HellephantSpawnPoint**
2. At the top of the **Inspector**, set the **Gizmo** for the **HellephantSpawnPoint** object to the colour yellow
3. Set **Transform > Position** to (0, 0, 32)
4. Set **Transform > Rotation** to (0, 230, 0)

MORE ENEMIES!

1. Select **EnemyManager** in the Hierarchy, in the **EnemyManager** component, assign the **Player** game object to the **PlayerHealth** variable
2. From the **Prefabs** folder, drag **Zombunny** onto the **Enemy** property as the game object to spawn
3. Ensure that **Spawn Time** is set to 3 seconds

MORE ENEMIES!

1. Drag the **ZombunnySpawnPoint** from the Hierarchy onto the title of the **SpawnPoints** array variable
2. **Save** your scene
3. Press **Play** to test the game

MORE ENEMIES!

1. In the **Scripts > Managers** folder of the **Project**, locate the **EnemyManager** script, and drag it onto the **EnemyManager** game object 2 more times
2. Ensure there are now 3 **EnemyManager** spawner components on the **EnemyManager** game object

MORE ENEMIES!

PHASE 9 / 10

1. Assign the **Player** game object to the **PlayerHealth** variable on both new **EnemyManager** components
2. From the **Prefabs** folder, drag **Zombear** onto the **Enemy** property of the second **EnemyManager**
3. From the **Prefabs** folder, drag **Hellephant** onto the **Enemy** property of the third **EnemyManager**

MORE ENEMIES!

1. Drag the **ZombearSpawnPoint** from the Hierarchy onto the title of the **SpawnPoints** array variable in the second **EnemyManager**
2. Drag the **HellephantSpawnPoint** from the Hierarchy onto the title of the **SpawnPoints** array variable in the third **EnemyManager**

MORE ENEMIES!

1. In the third **EnemyManager** for the **Hellephant**, set the **Spawn Time** to **10**
2. **Save** your scene
3. Press **Play** to test your scene

Oh look.

END OF PHASE NINE

GAME OVER!

1. Right-click **HUDCanvas** and create a **UI > Image**
2. Rename this game object **ScreenFader**
3. In the **Rect Transform** component, click the **Anchor Presets** button and **Alt-Click** the **Stretch both** option
4. In the **Image** component, click the **Color block** and choose a shade of light blue

GAME OVER!

1. Right-click **HUDCanvas** and create a **UI > Text**
2. Rename this game object **GameOverText**
3. In the **Rect Transform** component, click the **Anchor Presets** button and **Alt-Click** the **Middle center** option
4. Set the **Width** to **300** and **Height** to **50**

GAME OVER!

1. In the **Text** component, set the **Text** property to read **‘Game Over!’**
2. Using circle select, set the **Font** to **Luckiest Guy**
3. Set **Font Size** to **50, Alignment** to **Middle** and **Center**
4. Set the **Color** to white using the **Color block picker**
5. **Add Component** > type in **Shadow** and confirm

GAME OVER!

1. Re-order the children of **HUDCanvas** using drag and drop in the **Hierarchy**, ensure the order is-

   - **HealthUI**

   - DamageImage

   - **ScreenFader**

   - **GameOverText**

   - **ScoreText**

GAME OVER!

1. Select **ScreenFader** in the **Hierarchy**
2. Set the **Color**’s **alpha** property in the **Image** component to **0**
3. Select **GameOverText** in the **Hierarchy**
4. Set the **Color**’s **alpha** property in the **Text** component to **0**

GAME OVER!

1. Reselect **HUDCanvas** in the **Hierarchy**
2. Go to **Window > Animation** and dock the panel
3. Click the **Add Curve** button
4. In the **Create Animation** dialog, choose the **Animation** folder as destination and name it **GameOverClip** (note that Unity creates an Animator Controller too)

GAME OVER!

1. Add Curve for **GameOverText > Text > Color**
2. Add Curve for **GameOverText > RectTransform > Scale**
3. Add Curve for **ScreenFader > Image > Color**
4. Add Curve for **ScoreText > RectTransform > Scale**
5. Select and move all end keyframes to **0:30**

GAME OVER!

PHASE 10 / 10

1. Move the playhead in the timeline to **0:20,** select the **GameOverText > RectTransform > Scale** curve & press **K** to add a keyframe / click the **Add Keyframe** button
2. Move to frame **0**, select **GameOverText > RectTransform > Scale**, set values to **0** in Inspector

GAME OVER!

1. Move the playhead to **0:20**, and set **GameOverText > RectTransform > Scale** values to **1.2** in **Inspector**
2. Move the playhead to **0:30** and set -

   - **GameOverText > Text > Color > Alpha** to **1**

   - **ScreenFader > Image > Color > Alpha** to **1**

   - **ScoreText > RectTransfrom > Scale** to **0.8**

GAME OVER!

1. Select all Keyframes, move them so that they begin at **1:30** (frame 90) in the timeline
2. Disable **Record** mode

GAME OVER!

1. In the **Project** panel **Animation** folder, select **GameOverClip**, in the Inspector, uncheck **Loop time**
2. In the **Project** panel **Animation** folder, select the **HUDCanvas** animator controller that was created
3. Double-click this asset to load it into the **Animator** window

GAME OVER!

1. In the **Animator** window, right-click empty space and choose **Create State > Empty**
2. Rename the state **Empty** at the top of the **Inspector**
3. Right-click the **Empty state** and **Create Transition** to the **GameOverClip** state by selecting it
4. Create a new **Animator Trigger** parameter **GameOver**

GAME OVER!

1. Right-click **Empty** state, **Set As Default**
2. Select the transition from **Empty to GameOverClip**
3. In the Inspector, set the **Condition** to **GameOver**
4. Select the **HUDCanvas** in Hierarchy, and in the **Scripts > Managers** folder of the **Project**, drag and drop **GameOverManager** to assign it to **HUDCanvas**

GAME OVER!

1. In the **Scripts > Managers** folder of the **Project**, open **GameOverManager** to view it
2. Close the script and return to the Unity editor
3. Drag the **Player** from the **Hierarchy** to the **Player Health** variable of the **Game Over Manager (Script)** component

GAME OVER!

PHASE 10 / 10

1. **File > Save Scene, File > Save Project**
2. Press **Play** to test your game
3. Shoot some Zombie Toys!

Nice shot.

END OF
PHASE TEN

FUNTIME SETTINGS!

1. Select **EnemyManager** in **Hierarchy**
2. Set **Zombunny** and **Zombear Spawn Time** values to **1**
3. Set **Hellephant Spawn Time** value to **3**
4. Select the **Zombunny** prefab in **Prefabs**, set the **Nav Mesh Agent** component's **Speed** to **4**
5. Repeat step 4 for the **Zombear** prefab

FUNTIME SETTINGS!

1. Select the **Hellephant** prefab in **Prefabs**, set the **Nav Mesh Agent** component’s **Speed** to **4**
2. Expand the **Player** in the **Hierarchy,** and select **GunBarrelEnd**
3. On the **Player Shoot (Script)** component, set **Damage Per Shot** to **15** and **Time Between Bullets** to **0.05**

LET'S TALK
QUESTIONS AND ANSWERS