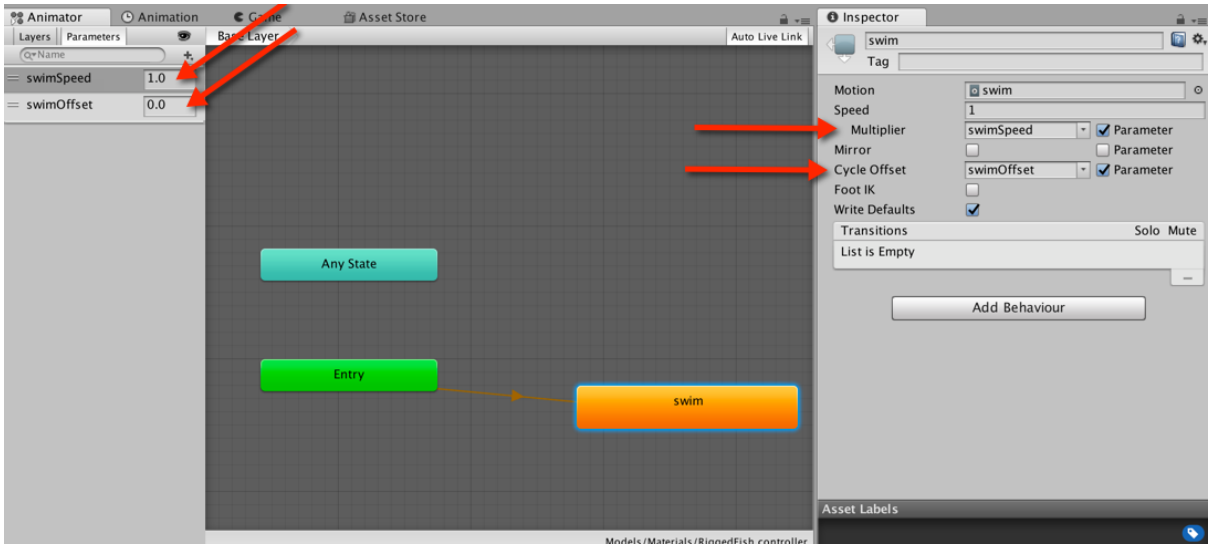
Challenge

Create animation parameters for the fish flocking project to set their swimming speed relative to their movement speed and add an offset for the tail animation so they don't all swim in sync.

Answer

Open the Animator attached to one of the fish prefabs and create two float parameters *swimSpeed* and *swimOffset.* Set the Speed multiplier to swimSpeed and the Cycle Offset to swimOffset.



Modify the flocking code thus:

```
public class Flock : MonoBehaviour {

	public FlockManager myManager;
	public float speed;
	bool turning = false;
	Animator anim;

	// Use this for initialization
	void Start () {
		speed = Random.Range(myManager.minSpeed,
                                                myManager.maxSpeed);
		anim = this.GetComponent<Animator>();
		anim.SetFloat("swimOffset",Random.Range(0.0f,1.0f));
		anim.SetFloat("swimSpeed",speed);
	}

	// Update is called once per frame
	void Update () {

		…

		if(turning)
		{
			//turn towards the centre of the manager cube

			transform.rotation = Quaternion.Slerp(transform.rotation,
```

```
                                    Quaternion.LookRotation(direction),

                                    myManager.rotationSpeed * Time.deltaTime);
        }
        else
        {

                if(Random.Range(0,100) < 10)
                        speed = Random.Range(myManager.minSpeed,
                                                myManager.maxSpeed);
                if(Random.Range(0,100) < 20)
                        ApplyRules();

                anim.SetFloat("swimSpeed",speed);
        }

        transform.Translate(0, 0, Time.deltaTime * speed);
}
```