

Group ID: 23

Members:

Adrián Jaime Pastor (adrian.jaime@enti.cat)



Exercise 1

1. Implemented in MovingBall.cs, a bool named goal dictates if the ball goes through the tentacles or not.
2. MovingTarget.cs Update()
3. IKScorpion.cs Update()
4. MovingBall.cs ShootBall()
5. IKScorpion.cs Update()
- 6.

```
dirVec = target.transform.position - transform.position;  
dirVec.Normalize();
```

```
gameObject.transform.Translate(dirVec * shootSpeed * Time.deltaTime);
```

Exercise 2

1. IKScorpion.cs Update()
2. MovingBall.cs ShootBall() shown on the canvas the actualRotation
3. Not done
4. Not done
5. $\text{actualRotation} += \text{effect} * \text{shootSpeed} * \text{rotationSpeed} * \text{Time.deltaTime};$
6. $\text{acceleration} = \text{force}/\text{mass};$
 $\text{magnus force} = \text{ballRotationSpeed} * \text{force}$

Exercise 3

1. IK_Scorpion.cs EnvironmentReacting()
2. Done on scene octopus_landscape_with_ball_v2.unity
3. IK_Scorpion.cs EnvironmentReacting()
4. $\text{Body.GetChild}(1).transform.up = \text{Vector3.Cross}(\text{futureLegBases}[1].transform.position - \text{futureLegBases}[4].transform.position, \text{futureLegBases}[0].transform.position - \text{futureLegBases}[5].transform.position}).normalized;$
5. IK_Scorpion.cs EnvironmentReacting()
6. IK_Scorpion.cs EnvironmentReacting()

Exercise 4

There are 2 triggers Goal and Stop. Starting with the first shoot it will be a goal and make the robots do the goal animation, and the other shoots will trigger the stop animation.