**The Robot Actuator**

From the previous lesson about this topic, try to complete the program of the Robot Actuator.

**Start Activity:**

﻿using System.Collections;

using System.Collections.Generic;

using UnityEngine;

public class Robot\_actuator : MonoBehaviour

{

float p0 = 0;

float p1 = 0;

public void enableActuator()

{

transform.localPosition = new Vector3(0, p1, 0);

}

public void disableActuator()

{

if (picked\_box != null)

{

picked\_box.unpick();

picked\_box.transform.SetParent(boxesContainer.transform);

robot.addBox(picked\_box);

}

transform.localPosition = new Vector3(0, p0, 0);

picked\_box = null;

}

void OnTriggerEnter(Collider collider)

{

Warehouse\_box r = collider.gameObject.GetComponent<Warehouse\_box>();

if (r != null)

{

if (!r.picked)

{

if (picked\_box == null)

{

picked\_box = r;

r.act = suctionTransform;

r.picked = true;

}

}

}

}

}

**Solution:**

public class Robot\_actuator : MonoBehaviour

{

float p0 = -0.85f;

float p1 = -1.15f;

public GameObject boxesContainer;

public Transform suctionTransform;

public Robot robot;

Warehouse\_box picked\_box = null;

**The Robot Wheels**

From the previous lesson about this topic, try to complete the program of the Robot Wheels.

**Start Activity:**

﻿using System.Collections;

using System.Collections.Generic;

using UnityEngine;

public class Robot\_wheels : MonoBehaviour

{

public Transform wheel1;

public Transform wheel2;

public Transform wheel3;

public Transform wheel4;

public Robot robot;

public float speed1 = 20;

public float speed2 = 20;

public float speed3 = 20;

public float speed4 = 20;

public bool stop = false;

public bool forward\_rotate = false; // true for forward, false for rotate

void Start()

{

}

public void rotate(float speed)

{

speed1 = 0;

speed2 = 0;

speed3 = 0;

speed4 = 0;

forward\_rotate = true;

stop = true;

}

void Update()

{

if (robot.RobotState != Robot.RobotStates.PickingUp && !stop && ((!robot.rightSensorCollision && forward\_rotate) | !forward\_rotate))

{

wheel1.Rotate(new Vector3(0, 0, speed1 \* Time.deltaTime));

wheel2.Rotate(new Vector3(0, 0, speed2 \* Time.deltaTime));

wheel3.Rotate(new Vector3(0, 0, speed3 \* Time.deltaTime));

wheel4.Rotate(new Vector3(0, 0, speed4 \* Time.deltaTime));

}

}

}

**Solution:**

public void goForward(float speed)

{

speed1 = -20 \* speed;

speed2 = -20 \* speed;

speed3 = -20 \* speed;

speed4 = -20 \* speed;

forward\_rotate = true;

stop = false;

}

public void rotate(float speed)

{

speed1 = -3 \* speed;

speed2 = -3 \* speed;

speed3 = 3 \* speed;

speed4 = 3 \* speed;

forward\_rotate = false;

stop = false;

}

**The Robot Right Sensor**

﻿

From the previous lesson about this topic, try to complete the program of the Robot Right Sensor.

**Start Activity:**

using System.Collections;

using System.Collections.Generic;

using UnityEngine;

public class Robot\_rightSensor : MonoBehaviour

{

public Robot robot;

void Start()

{

}

void Update()

{

}

void OnTriggerEnter(Collider collider)

{

if (r != null)

{

robot.rightSensorCollision = false;

}

}

void OnTriggerExit(Collider collider)

{

Robot r = collider.gameObject.GetComponent<Robot>();

if (r != null)

{

robot.rightSensorCollision = false;

}

}

}

**Solution:**

void OnTriggerEnter(Collider collider)

{

Robot r = collider.gameObject.GetComponent<Robot>();

if (r != null)

{

robot.rightSensorCollision = true;

}

}