

CSCI 205 - Introduction To Computer Systems - Semester Project (Competition Spring 2021)
1st Track - Line Follower Robot

#	Item	URL	Q
MicroController and Motor Driver			
1	Arduino Board – Arduino UNO Rev3 – China Clone	https://ram-e-shop.com/product/kit-arduino-uno/	1
2	USB Cable 1.5m (Shielded)	https://ram-e-shop.com/product/usb-cable/	1
3	Arduino Shield "dc-Motor/Stepper/Servo Shield"	https://ram-e-shop.com/product/arduino-sh-l293d/	1
Robot body			
4	2WD Robot Car Chassis Kit with Speed Encoder Wheels 2 Floor	https://ram-e-shop.com/product/ro-base-2wd-2-floor/	1
Batteries			
5	18650 Battery Holder 2 Cell	https://ram-e-shop.com/product/battery-holder-18650x2/	1
6	Lithium Rechargeable Battery 18650 / 3.7V	https://ram-e-shop.com/product/battery-18650-1100/	2
7	Digital Li-ion 18650 Battery Charger (100~240V)	https://ram-e-shop.com/product/charger-2x18650/	1
Jumpers			
8	PHcr- Arduino Male/Female (30Cm Wire With Headers One Side Male & One Female)	https://ram-e-shop.com/product/ph-male-female-30cm/	5
9	PHcr- Arduino Male/Male (30Cm Length Wire With Headers Male From Both Ends)	https://ram-e-shop.com/product/ph-arduino-1pin/	10
Line Follower Sensor			
10	Line Follower Sensor X3 – Digital	https://ram-e-shop.com/product/kit-line-track-x3/	1
11	Copper Spacer 25mm M/F	https://ram-e-shop.com/product/spacer-copper-25mf/	2
Options			
*	2.54mm (0.100") Pin Header Female 1x20 Straight	https://ram-e-shop.com/product/ph35-1x20-female/	1
*	https://ram-e-shop.com/product/spacer-copper-6mf/	https://ram-e-shop.com/product/spacer-copper-6mf/	10
*	PHcr- 20Cm Female to Male 40 Jumper Set Connecting Wire	https://ram-e-shop.com/product/ph60-mf-20cm/	0
*	https://ram-e-shop.com/product/bb-j65/	https://ram-e-shop.com/product/bb-j65/	0

CSCI 205 - Introduction To Computer Systems - Semester Project (Competition Spring 2021)
2nd Track - Fire Fighting Robot

#	Item	URL	Q
MicroController and Motor Driver			
1	Arduino Board – Arduino UNO Rev3 – China Clone	https://ram-e-shop.com/product/kit-arduino-uno/	1
2	USB Cable 1.5m (Shielded)	https://ram-e-shop.com/product/usb-cable/	1
3	Arduino Shield "dc-Motor/Stepper/Servo Shield"	https://ram-e-shop.com/product/arduino-sh-l293d/	1
Robot body			
4	2WD Robot Car Chassis Kit with Speed Encoder Wheels 2 Floor	https://ram-e-shop.com/product/ro-base-2wd-2-floor/	1
Batteries			
5	18650 Battery Holder 2 Cell	https://ram-e-shop.com/product/battery-holder-18650x2/	1
6	Lithium Rechargeable Battery 18650 / 3.7V	https://ram-e-shop.com/product/battery-18650-1100/	2
7	Digital Li-ion 18650 Battery Charger (100~240V)	https://ram-e-shop.com/product/charger-2x18650/	1
Jumpers			
8	PHcr- Arduino Male/Female (30Cm Wire With Headers One Side Male & One Female)	https://ram-e-shop.com/product/ph-male-female-30cm/	10
9	PHcr- Arduino Male/Male (30Cm Length Wire With Headers Male From Both Ends)	https://ram-e-shop.com/product/ph-arduino-1pin/	10
BlueTooth Module			
10	Bluetooth Module HC-05 , Serial TTL "Most Popular"	https://ram-e-shop.com/product/kit-bluetooth-hc05/	1
Flame Sensor			
11	Flame Sensor Module "Complete Module"	https://ram-e-shop.com/product/kit-flame-sensor/	1
DC Motor			
12	5V DC Fan Size 5x5 cm2	https://ram-e-shop.com/product/fan-5vdc-5010/	0
12	Small Toy DC Motor 3 to 6 Vdc	https://ram-e-shop.com/product/ro-toy-motor/	1
13	Electrolytic Capacitor 10uF 25v	https://ram-e-shop.com/product/c-10u25v/	3
Options			
*	2.54mm (0.100") Pin Header Female 1x20 Straight	https://ram-e-shop.com/product/ph35-1x20-female/	0
*	Copper Spacer 6mm M/F	https://ram-e-shop.com/product/spacer-copper-6mf/	0
*	DC Motor 140	https://free-electronic.com/product/dc-motor-140/	0
*	3-Blade Plastic Propeller Fan Blade for DIY Toys Mini Car 90MM	https://free-electronic.com/product/3-blade-plastic-propeller-fan-	0
*	PHcr- 20Cm Female to Male 40 Jumper Set Connecting Wire	https://ram-e-shop.com/product/ph60-mf-20cm/	0
*	Connecting Jumper Wires for Bread Board & Arduino (65 Wire) 22AW	https://ram-e-shop.com/product/bb-j65/	0

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3rd Track - Maze Runner

#	Item	URL	Q
MicroController and Motor Driver			
1	Arduino Board – Arduino UNO Rev3 – China Clone	https://ram-e-shop.com/product/kit-arduino-uno/	1
2	USB Cable 1.5m (Shielded)	https://ram-e-shop.com/product/usb-cable/	1
3	Arduino Shield "dc-Motor/Stepper/Servo Shield"	https://ram-e-shop.com/product/arduino-sh-l293d/	1
Robot body			
4	2WD Robot Car Chassis Kit with Speed Encoder Wheels 2 Floor	https://ram-e-shop.com/product/ro-base-2wd-2-floor/	1
Batteries			
5	18650 Battery Holder 2 Cell	https://ram-e-shop.com/product/battery-holder-18650x2/	1
6	Lithium Rechargeable Battery 18650 / 3.7V	https://ram-e-shop.com/product/battery-18650-1100/	2
7	Digital Li-ion 18650 Battery Charger (100~240V)	https://ram-e-shop.com/product/charger-2x18650/	1
Jumpers			
8	PHcr- Arduino Male/Female (30Cm Wire With Headers One Side Male & One Female)	https://ram-e-shop.com/product/ph-male-female-30cm/	10
9	PHcr- Arduino Male/Male (30Cm Length Wire With Headers Male From Both Ends)	https://ram-e-shop.com/product/ph-arduino-1pin/	10
AltraSonic			
10	Ultrasonic Sensor & Distance Measurement Module HC-SR04	https://ram-e-shop.com/product/kit-ultrasonic-txrx/	1
*	Ultrasonic Sensor Mounting Bracket Holder for HC-SR04 , Big	https://ram-e-shop.com/product/kit-stand-blue/	0
Infrared			
12	IR Infrared Obstacle Avoidance (Object Detection) Sensor	https://ram-e-shop.com/product/kit-flame-sensor/	2
Options			
*	2.54mm (0.100") Pin Header Female 1x20 Straight	https://ram-e-shop.com/product/ph35-1x20-female/	1
*	spacer-cupper-6mf	https://ram-e-shop.com/product/spacer-cupper-6mf/	10
*	PHcr- 20Cm Female to Male 40 Jumper Set Connecting Wire	https://ram-e-shop.com/product/ph60-mf-20cm/	0
*	https://ram-e-shop.com/product/bb-j65/	https://ram-e-shop.com/product/bb-j65/	0

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4th Track - Color sorting

#	Item	URL	Q
1	Arduino	https://ram-e-shop.com/product/kit-arduino-uno/	1
2	usb cable	https://ram-e-shop.com/product/usb-cable/	1
3	Bread board	https://ram-e-shop.com/product/bb801-bb/	1
4	microservo	https://ram-e-shop.com/product/servo-sg90/	2
5	color sensor	https://ram-e-shop.com/product/sen-color-tcs3200/	1
6	PHcr- Arduino Male/Female (30Cm Wire With Headers One Side Male & One Female)	https://ram-e-shop.com/product/ph-male-female-30cm/	20
7	PHcr- Arduino Male/Male (30Cm Length Wire With Headers Male From Both Ends)	https://ram-e-shop.com/product/ph-arduino-1pin/	20
8	كرتون ناصبيان مصرى ربيع فرخ		2
9	مسدس شمع		1
10	شمع		5
11	كاتر		2
12	أكواب بلاستيك		3
13	أدابتور 12 فولت		1
14	M&M		1