			Important Notes			
			- Please find exactly same item if alternative item is no	ot okay (specified as NO in okay with alternative?)		
				notor controller, Arduino Mega, and DC/DC regulator), or	r to provide access to battery switches	
Category	Aluminum Frame	_	Specification see cabot2 e2.stp file	Description	Example Item	Category tem Quantity Specification Description Example tem
Body					http://www.arrana.arra/da/D0707V04V04	Body/Aluminum Frame(1)see cabot2_e2_stp_file(
	Rivet		1/8" x 23/64"		https://www.amazon.com/dp/B0727XS1XC/	Body Rivet 100 1/8" x 23/64" Link (https://www.amazon.com/dp/B0727XS1XC/)
,	Suitcase (Cover)		Carry-on lagguage fits to CaBot	Delivered through Amazon (CMU version)	https://www.amazon.com/dp/B0727XS1XC	Body Suitcase (Cover) 1 Carry-on lagguage fits to CaBot Delivered through Amazon (CMU version) Link (https://www.amazon.com/dp/B0727XS1XC)
-	Screw		M3, 16mm length, Hex Socket			Body Screw 25 M3, 16mm length, Hex Socket
,	Screw Washer		M3, 32mm length, Hex Socket			Bodylscrew[10]M3, 32mm length, Hex Socket
,	Lock nut		M3 0.5 mm thread. Hex lock Nut			Body Washer[20 M3 Body Lock nut[20 M3, 0.5 mm thread, Hex lock Nut
	Screw		M6, 10mm length, Hex Socket (no nuts required)	to fix handle and the force sensor		BODY/LOCK HULZUIMS, U.S. ITHI TITERED, TEST STORE NUTITION TO THE STORE
	Spacer		Ф3mm, 60mm height, dual female hex pillar	to fix nariole and the force sensor	h#//	soxyjscerejojev, urumni lenguh, nex Socket (no nuis required) joi nx nanue and one torce sensor) § BodylSpacerj4(495mm, 60mm height, dual female hex pillar[[I.link](https://www.newega.com/p/0PS-008N-002237item=9SIA27C3TJ0345)
	Handle Print				https://www.newegg.com/p/oPS-008N-00223	7
			see stl files under handle directory 6x6x4 3mm	print one each		Handle Handle Print 1 see sti files under handle directory print one each
	Tactile push button		2 54mm interval 6 v 9 holes	handle buttons attach 4 buttons and insert into the handle		Handle Tactile push button 4 6x6xx4.3mm handle buttons
	Prototype PCB Arduino Nano		2.54mm interval, 6 x 9 noies Arduino Nano		diamental and	Handle Prototype PCB 1[2.54mm interval, 6 x 9 holes attach 4 buttons and insert into the handle
	cables/headers		wire and pin header between handle and nano	Can be merge into Arduino Mega, but keep separated cor wire from handle to Arduino Nano	inguration	Handle/Arduino Nano/1/Arduino Nano/Can be merge into Arduino Mega, but keep separated configuration Handle/cables/headers/10/wire and pin header between handle and nano/wire from handle to Arduino Nano/
	Vibrators		Dimension: 10mm diameter, 2.7mm thick	attached to handle	https://www.odofruit.com/orodust/4004	· · · · · · · · · · · · · · · · · · ·
	Soft double adhesive tape		1/8 inch thinkness x 7/8 inch width x 5 inch length total	needs to put this between vibrator and the handle	https://www.adafruit.com/product/1201	Handle Vibrators 3 Dimension: 10mm diameter, 2.7mm thick attached to handle [Link](https://www.adafruit.com/product/1201) Handle Soft double adhesive tape 1 1/8 inch thinkness x 7/8 inch width x 5 inch length total needs to put this between vibrator and the handle Link https://www.amazon.com/dp/B07G
	Motor		DUAL SHAFT MOTOR - D5065 270KV	needs to put this between vibrator and the handle	https://www.amazon.com/dp/B07GBMT736	Handie Soft double adnesive tape 1 7/8 inch thinkness x //8 inch width x 5 inch length total needs to put this between vibrator and the handie Linky nttps://www.amazon.com/opi80/Gi Mobility Motor 2 DUAL SHAFT MOTOR - D5065 270KV Link (https://odriverobotics.com/shop/odrive-custom-motor-d5065)
			CULAMT102-V			
,	Encoder Controller	_	56V connector is optional		https://odriverobotics.com/shop/cui-amt-102 https://odriverobotics.com/shop/odrive-v36	
Mobility	Controller	1	2 7/8 inch ~ 3 inch, black or matched color with the	with connector is easy to insattl	nttps://odriveropotics.com/snop/odrive-v36	Mobility[Controller[1]56V, connector is optional with connector is easy to insatll [Link](https://odriverobotics.com/shop/odrive-v36)
Mobility	Wheel	2	suitcase cover		http://www.banebots.com/product/T81P-294E	Mobility Wheel 2 2 7/8 inch ~ 3 inch, black or matched color with the suitcase cover Link (http://www.banebots.com/product/T81P-294BO.html)
Mobility	Wheel Hub	2	8mm shaft			Mobility/Wheel Hub/2/8mm shaftliff_inkl/(http://www.banebots.com/oroduct/T81H-RM81.html)
Mobility	Caster	2	1 5/8 inch wheel, 3/8 16 thread		https://www.mcmaster.com/2834T11	Mobility Caster 2 1 5/8 inch wheel, 3/8 16 thread [Link](https://www.mcmaster.com/2834T11)
	Nut		3/8 16 thread	two nuts under body (kind of spacer)		Mobility Nut 4 3/8 16 thread two nuts under body (kind of spacer)
	Lock nut		3/8 16 thread	one lock nut above body		Mobility Lock nut 2 3/8 16 threadlone lock nut above body
PC	Zotac		ZBOX-EN72070V	, , , , , , , , , , , , , , , , , , , ,	https://store.zotac.com/magnus-en72070v-wi	PC Zotac 1 ZB0X.EN72070V Link (https://store.zotac.com/magnus-en72070v-with-windows-10-zbox-en72070v-u-w2b)
PC	Memory	2	DDR4 SODIMM 2666, 16 GB			PC Memory 2 DDR4 SODIMM 2666, 16 GB
Power	Power connector	1	7.4 x 5.0 mm connector (Zotac 2070)	This is an example connection 5.5x2.1 > 7.4x5.0 + 5.5x2.1 cable Needs to find a proper connector to the computer. Possible option is to cut official AC adapter cable		Power[Power connector] I7.4 x 5.0 mm connector (Zotac 2070)[This is an example connection 5.5x2 1.3 x 4.5x0 + 5.5x2 1.4 and 1.5x0 +
	DC/DC Regulator		15A (300w @ 19.5v)	36v -> 19.5v, PC, force sensor, and LiDAR	https://www.amazon.com/dp/B01GFVI6R6	PowerIDC/IDC Regulator/11/15A (300w @ 19.5v) 36v -> 19.5v, PC, force sensor, and LiDAR [Link](https://www.amazon.com/dp/B01GFV16R6)
	Cable+connector		XT60 Female, 14AWG	battery2 (parallel) to regulator		Power[Cable+connector]1 XT60 Female, 14AWG battery2 (parallel) to regulator
	Battery on off switch		XT60 Female, 14AWG	between battery1 and motor controller		Power[Battery on off switch]1IXT60 Female, 14AWG between battery1 and motor controller
	12 Gage cable		12AWG	motor controller to motor		Power 12 Gage cable 1 12AWG motor controller to motor
	Battery	3	36V 98Wh (less than 100wh)	CaBot requires at least 3 (2 for computer, 1 for motor)	https://www.ebikes.ca/shop/electric-bicvcle-p	a Power[Battery[3]:369 98Wh (less than 100wh)[CaBot requires at least 3 (2 for computer, 1 for motor)][Linkl(https://www.ebikes.ca/shop/electric-bicycle-parts/batteries/36v-liqo-battery.html
Power	Charger	2	36V 2A Charger	2 chargers are combenient		Power[Charger]2]36V 2A Charger]2 chargers are combenient [Link](https://www.ebikes.ca/shop/electric-bicycle-parts/chargers/36v-2a-charger.html)
	Force Sensor		3kg			9 Sensor Force Sensor 13kg [Link (https://item.taobac.com/item.htm?spm=a129.2.0.0.66402eddY0sXl3&id=554342186657& =43jn0h9v1e9)
	Sensor Amplifier	1	. •			© Sensor/Sensor Amplifier[1] [Link] (https://item.taobao.com/item.htm?spm=a1z10.5-c.w4002.4299160466.30.1659930466WM9103ki=647565559463)
	Arduino mega	1	Arduino Mega			Sensor/Arduino mega 1 Arduino Mega Link https://store.arduino.cc/usa/mega-2560-13)
			BNO055 adafruit, not from other company because they			
	BNO055 adafruit		also provides library to ctonrol sensors MPR121 adafruit, not from other company because they	IMU (connecting to Arduino Mega)		Sensor BNO055 adafruit 1 BNO055 adafruit, not from other company because they also provides library to ctorrol sensors IMU (connecting to Arduino Mega)
Sensor	MPR121 adafruit	1	also provides library to ctonrol sensors	capacitive Touch sensor (connecting to Arduino Mega)		Sensor MPR121 adafruit 1 MPR121 adafruit, not from other company because they also provides library to ctonrol sensors capacitive Touch sensor (connecting to Arduino Mega)
Sensor	Conductive tape	1	Condactive			Sensor Conductive tape 1 Condactive
	Arduino mega shield		General shield or Cabot's custom PCB	with pins	https://github.com/RealCabot/simplePCB	Sensor Arduino mega shield 1 General shield or Cabot's custom PCB with pins [Link](https://github.com/RealCabot/simplePCB)
Sensor	RealSense D435	1				Sensor RealSense D435 1
	Velodyne		Velodyne VLP16 (Pack Lite)			Sensor Velodyne 1 Velodyne VLP16 (Pack Lite)
Sensor	Camera mount pall	1	1/4 inch - 20 thread (female and male), 10cm long	Something like in the url		Sensor Camera mount pall 1 1/4 inch - 20 thread (female and male), 10cm long Something like in the url
	Screw		1/4 inch - 20 thread			Sensor Screw 1 1/4 inch - 20 thread
	Flat washer		1/4 inch - 1 inch	to protect pipe from vending		Sensor Flat washer 2 1/4 inch - 1 inch to protect pipe from vending
Sensor	Lock Nut		1/4 inch - 20 thread	to shorten the male threads (put it between pole and lidar)		Sensor Lock Nut 1 1/4 inch - 20 thread to shorten the male threads (put it between pole and lidar)
	Ethercable	1	RJ45, 1 feet			Misc Ethercable 1 RJ45, 1 feet
	HDMI dumy	1			https://www.amazon.com/dp/B07FB64V4Y	Misc HDMI dumy 1 [Link](https://www.amazon.com/dp/B07FB64V4Y)
Misc	USB hub		USB2.0	to prevent wireless signal interference from USB3.0		Misc USB hub 1 USB2.0 to prevent wireless signal interference from USB3.0
Misc	Speaker	1	Small, USB power, Line-in	Optional	https://www.amazon.com/dp/B07QDPRYYD	Misc Speaker 1 Small, USB power, Line-in Optional [Link](https://www.amazon.com/dp/B07QDPRYYD)