

S. No.:	Components:	Quantity:	Price per piece:	Price:	Jusification
1	Female 2.1*5.5mm for DC Power Jack Adapter Connector Plug For CCTV Camera	1	46	50	Connects the battery to the power circuit.
2	Arduino Uno R3 with Cable	1	500	500	Main control board for programming and executing commands.
3	Pro-Range OT5330M 7.4V 35.5kg.cm 180° Metal Gear Digital Servo Motor	3	1800	5400	High torque for precise arm movements.
4	TowerPro MG995 Metal Gear Servo Motor (180° Rotation)-Good Quality	2	309	618	Used for less intensive movements.
5	JK42HS48-1684-01 NEMA17 4.4 kg-cm Stepper Motor – Round Type Shaft	1	550	550	Used for turning of turb table (robot base)
6	16-Channel 12-bit PWM/Servo Driver I2C interface PCA9685 for Arduino Raspberry Pi	1	250	250	Expands control of multiple servos through Arduino.
7	A4988 Stepper Motor Driver Module with Heat Sink For 3D Printer (Red)	1	101	101	Used for the control of stepper motors
8	ART IFACT 100 Pieces of 10mm Silver Bearing Ball - Use is Cycle Ball Bearing Wheel Bearing	1	300	300	Used for the smooth movement of robot base
9	Jumper wires (Dupont Cable Male/Male, Male/Female, Female/Female Cable Combo)	2	120	240	Connects electrical components within circuits.

10	Solderless 400 pin breadboard – Normal Quality – Without Packing	1	37	37	Temporary platform for circuit assembly.
11	XL6019 DC-DC 5A Adjustable Boost Power Supply Module	2	200	400	Adjusts power levels as needed.
12	6200ZZ Bearing 10x30x9 Shielded Miniature Ball Bearings (4pcs)	2	160	320	Allows smooth arm movement by reducing friction.
13	100uF 50V Aluminum Electrolytic Surface Mount Capacitor -(pack of 5)	1	60	60	Used for stable voltage supply in circuits.
14	Reed Switches Module	4	60	240	Complements reed switches for better detection.
15	Neodymium Magnet	1	300	300	Interacts with reed switches for movement detection.
16	Tactile Push Button Switch 6x6x5 (Pack of 10)	8	20	160	Provides manual control or reset options.
17	10k Ohm 0.5W Metal Film Resistor (Pack of 50)	2	50	100	Regulates current flow in circuits.
18	74HC165 8-Bit Parallel In/Serial Out Shift Register IC	9	30	270	Expands input/output pins for added functionalities.
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