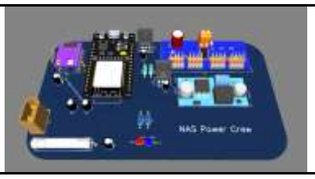
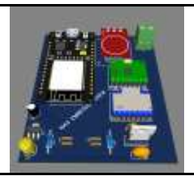
Bill of Materials

Project Name	Gesture Controlled Robotic Arm
Assembly Name	Power Drive and Gesture Control
Assembly Revision	1.1
Date of Approval	
Total Piece	66
Total Cost	₹ 6,902.00

S.NO	Part Name	Assemblies & Subassemblies	Part Description	Unit Cost	Quantity	Total Cost	Procurement Details
1	LM7805CT	Power Drive	5V regulator	₹ 15.00	4	₹ 60.00	3 required in design
2	AMS1117-3.3	Gesture Control	3.3V regulator	₹ 25.00	2	₹ 50.00	1 required in design
3	ESP-32-WROOM	Power Drive and Gesture Control	MCU	₹ 500.00	2	₹ 1,000.00	
4	MPU-6050	Gesture Control	Gyroscope and accel	₹ 200.00	3	₹ 600.00	2 required in design
5	TTP223	Gesture Control	Touch Sensor	₹ 20.00	2	₹ 40.00	1 required in design
6	DRV8825	Power Drive	Stepper Motor Driver	₹ 300.00	1	₹ 300.00	
7	FLEX SENSOR 4.5" LENGTH	Gesture Control	Flex Sensors	₹ 450.00	4	₹ 1,800.00	2 required in design
8	10k ohm resistor	Gesture Control	resistor 1/4W	₹ 1.00	10	₹ 10.00	2 required in design
9	100uf	Power Drive	capacitors	₹ 2.00	4	₹ 8.00	2 required in design
10	220nf	Power Drive	capacitors	₹ 2.00	4	₹ 8.00	2 required in design
11	100nf	Power Drive and Gesture Control	capacitors	₹ 1.00	4	₹ 4.00	3 required in design
12	22uf	Gesture Control	capacitors	₹ 2.00	4	₹ 8.00	1 required in design
13	10uf	Gesture Control	capacitors	₹ 2.00	5	₹ 10.00	1 required in design
14	2.4k res	Power Drive	resistor 1/4W	₹ 1.00	4	₹ 4.00	2 required in design
15	LM2596S-5.0/NOPB	Power Drive	Buck Converter	₹ 75.00	1	₹ 75.00	
16	PCA9685	Power Drive	Servo Driver	₹ 450.00	1	₹ 450.00	
17	NEMA 17	Power Drive	Stepper Motor	₹ 600.00	1	₹ 600.00	
18	12V PSU	Power Drive	Power Supply	₹ 868.00	1	₹ 868.00	
19	3 Pin Cord	Power Drive	Power Supply wire	₹ 90.00	1	₹ 90.00	
20	Connectors	Power Drive and Gesture Control	Connectors for PCB	₹ 50.00	1	₹ 50.00	
21	Pin Headers	Power Drive and Gesture Control	Pin Headers for PCB	₹ 20.00	2	₹ 40.00	
22	Fuse and Fuse holder	Power Drive	Fuse (minimum 2.5A)	₹ 27.00	1	₹ 27.00	
23	MG995	Power Drive	Servo	₹ 310.00	2	₹ 620.00	
24	SG 90	Power Drive	Servo	₹ 90.00	2	₹ 180.00	

Total =	₹ 6,902.00