Session	Topic	Activity Title	What Students Will Do
1	Intro to Components	"Explore the Parts"	Identify and handle LED, resistors, buzzers, motors, sensors.
2	Breadboard & Circuit	"Make It Glow"	Connect LED with resistor on breadboard and light it up.
3	Switch & Buzzer	"Press to Alert"	Wire a switch and buzzer; sound the alarm with a button press.
4	Series & Parallel	"Glow Show"	Build series and parallel LED circuits and compare brightness.
5	DC Motor Basics	"Spin the Wheels"	Run a DC motor using a battery and switch.
6	Potentiometer	"Dim the Lights"	Control LED brightness using a potentiometer.
7	Arduino Setup	"Hello, LED!"	Upload first LED blink code using Arduino IDE.
8	Buzzer with Arduino	"Musical Beeps"	Create patterns of beeps with the buzzer using code.
9	Digital Input	"Push to Shine"	Read switch input to control an LED using Arduino.
10	Analog Input	"Light It Your Way"	Use potentiometer to vary LED brightness using PWM.
11	IR Sensor	"Invisible Guard"	Detect objects and turn on LED using IR sensor.
12	IR + Buzzer	"Intruder Alarm"	Make an alert system that buzzes when an object is near.
13	Touch Sensor	"Touch and Light"	Use touch sensor to turn on a light or buzzer.
14	LDR Sensor	"Day-Night Light"	Turn on LED when it gets dark using LDR.
15	Sensor Combo	"Smart Room Light"	Combine LDR + IR to auto-turn lights on/off with motion & light.
16	Mini Project	"Security Box"	Build a lock box that sounds alarm when touched/detected.
17	Motor Driver Intro	"Motor Maestro"	Connect motor driver to Arduino and run DC motor.
18	Forward/Reverse Drive	"Car Dance"	Make motor spin in both directions using H-bridge logic.
19	Speed Control	"Race Track"	Control car motor speed using a potentiometer.
20	Obstacle Stopper	"Smart Stop"	Use IR to stop motor when obstacle is detected.
21	Touch Start	"Tap to Go!"	Touch sensor starts or stops car motor.
22	Light-Aware Headlights	"Auto Lights On!"	Use LDR to turn on car headlights in low light.
23	Car Assembly	"Build the Chassis"	Assemble motor, chassis, wheels and wiring.
24	Manual Drive with Arduino	"Remote Car"	Run car forward, backward, stop via code.
25	IR Line Follower Logic	"Stay on Track"	Use 2 IR sensors to follow black line.
26	Obstacle Avoidance Car	"Think Before Move"	Use IR to stop or turn car on obstacle.
27	Touch-Activated Car	"Touch to Drive"	Drive car only when touched.
28	Smart Lighting Car	"Light Detect Car"	Auto-headlights on car using LDR + LED.
29	Smart Car Test	"The RoboDrive"	Combine sensors to make car smart: avoid, touch, light aware.
30	Final Project Showcase	"Innovation Expo"	Present and demo final smart car project to peers or parents.