

Session	Topic Name	Outcome
1	Arduino IDE + First LED	Write & upload first working Arduino program
2	Digital Output Control	Control hardware using digitalWrite
3	Timing with delay()	Create time-based LED blinking
4	Variables & Pin Mapping	Write clean, reusable code
5	Multiple Outputs	Control LED and buzzer together
6	Output Logic Practice	Generate LED & buzzer patterns
7	Digital Input – Switch	Read user input from switch
8	Conditional Statements	Control output using conditions
9	Logical Operators	Apply AND/OR logic to hardware
10	IR Sensor Basics	Detect object using IR sensor
11	IR-Based Alert	Trigger buzzer using IR sensor
12	Input–Output System	Handle multiple inputs logically
13	for Loop	Generate repeated LED patterns
14	while Loop	Create continuous looping actions
15	Loop Comparison	Understand for vs while usage
16	Loop-Based Automation	Automate LED & buzzer actions
17	Serial Monitor Basics	Monitor system status via Serial
18	Serial Data Printing	View sensor values on Serial
19	Debugging with Serial	Debug logic using Serial Monitor
20	LDR Sensor Basics	Read light intensity values
21	Threshold Logic	Build automatic night lamp
22	PWM Output	Control LED brightness
23	Analog Debugging	Analyze analog values using Serial
24	Ultrasonic Sensor Basics	Measure distance accurately
25	Distance-Based Alert	Trigger buzzer using distance
26	LCD Display Basics	Display text on LCD
27	LCD Sensor Display	Show sensor data on LCD
28	Servo Motor Basics	Control servo angle
29	Sensor-Controlled Servo	Move servo using sensor input
30	System Integration Practice	Integrate sensors, LCD & servo