

Session	Topic Name	Learning Outcome
1	Arduino & Breadboard Basics	Understand Arduino UNO structure, breadboard connections, and program structure
2	Digital Output Basics	Control LED using digital output pins
3	Delay & Timing	Create timed LED blinking using delay
4	Variables & Pin Mapping	Use variables for pin assignment and cleaner code
5	Multiple Outputs	Control LED and buzzer together using Arduino code
6	IR Sensor – Digital Input	Read IR sensor values and detect objects
7	Conditional Logic (if-else)	Make decisions based on sensor input
8	Logical Operators	Combine multiple conditions in Arduino programs
9	LDR – Analog Input	Read and interpret analog sensor values
10	Threshold-Based Logic	Automate actions based on light intensity
11	PWM Output	Control LED brightness using PWM
12	Buzzer & Tone Control	Generate sound alerts using buzzer
13	Loops (for loop)	Create repeating LED patterns
14	Serial Monitor & Debugging	Debug sensor data using Serial Monitor
15	Final Mini Project	Build a complete automation system using sensors and logic