

LESSON ONE

- Introduction to Arduino boards
- Arduino UNO overview
- Using the Arduino IDE
- C++ basic syntax & Variables
- LEDs, Resistors, Breadboards & Buzzer
- Exercises: D1-D2 & P1

LESSON TWO

- Analog and Digital signals
- Potentiometer & Button
- Logical conditions
- Combined conditions
- Buzzer & LEDs Continued
- Exercises: D3 & P2-4

LESSON THREE

- Introduction to motors
- DC motors
- Motor Drivers (L293D)
- Controlling Multiple motors
- Speed & Direction
- Exercises: D4 & P5-6

LESSON FOUR

- Analog input & output
- For Loop
- Functions summary
- Serial Monitor
- Buttons input manipulation
- Exercises: D5-7 & P7-9

LESSON FIVE

- Introduction to sensors
- Temperature sensor (TMP36)
- Data Types
- Introduction to LCD
- Exercises: D8-10 & P10-11

LESSON SIX

- Using LCD
- Introduction to Servo motors
- Libraries
- Controlling multiple servos
- Exercises: D11-14 & P12-15

LESSON SEVEN

- Infrared communication
- IR transmitter & receiver
- Controlling DC & servo motors with IR Communication
- Exercises: D15-16 & P16-17

LESSON EIGHT

- Ultrasonic sensor
- Advanced Projects
- Exercises: D17 & P18-19

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ARDUINO DISCOVERY

CORE CLASSROOM COURSE