



## Electric Vehicle (EV) Designing

### **Chapter 1 : Introduction to Electric Vehicle**

- What is Electrical Vehicle?
- Types of Electric vehicle
- Benefits
- Fun facts

### **Chapter 2 : Electric Vehicle Components**

- Battery
- Motor
- Actuator
- Sensors
- Display
- LED Lights
- Charging Mechanism

### **Chapter 3 : Fundamental Concepts of EV**

- Battery Related Concepts (Short Circuit, Open Circuit & Precautions)
- Motor Related Concepts
- Relay Operating Concepts
- LED (light) operating concepts

## **Chapter 4 : Electronic Symbols and circuits**

- Electronic Symbols and circuit sketches
- Ohm's Law

## **Chapter 5 : Introduction to EV Programming**

- Tokens in C language
- Data types
- Operators
- C program Structure
- printf function

## **Chapter 6 : C language Concepts**

- Keywords
- scanf function
- Format specifiers
- Escape sequence

## **Chapter 7 : Conditional Statements in C language**

- If condition
- If else condition
- If else ladder
- Nested if else

## **Chapter 8 : Loops in C language**

- While loop
- Do while loop

- For loop
- Nested for loop

### **Chapter 9 : Functions in C language**

- Without return type without arguments
- With return type with arguments
- Random function

### **Chapter 10 : Introduction to Simulation Software**

- What is simulation software?
- Navigation of simulation software
- Account creation in simulation software

### **Chapter 11 : EV Designing Platform (Introduction to Arduino)**

- Specifications
- Arduino Software
- Led Interfacing with Arduino
- What is Sinking and Sourcing ?
- Arduino Functions

### **Chapter 12 : EV Horn Designing Mechanism**

- Functions related to switch
- Introduction to Buzzer
- Functions related to buzzer

## **Chapter 13 : EV Dashboard Designing**

- What is LCD?
- Functions of LCD
- 7 segment applications

## **Chapter 14 : EV Motor Interfacing**

- DC motor
- Motor Functions

## **Chapter 15 : Data Communication in EV**

- Types of communication
- Baud rate and bit rate
- Serial functions

## **Chapter 16 : Sensor Based Light Control in EV**

- Functions used for LDR Interfacing
- Difference between analog and digital signal

## **Chapter 17 : Motion Detection & Engine Temp. Measurement in EV**

- PIR sensor working principle
- Function used for PIR sensor
- Temperature sensor working principle
- Functions used for Temperature sensor

<b>Sr. No</b>	<b><u>Live Projects</u> : Electric Vehicle (EV) Designing</b>
<b>1</b>	Speed Indicator
<b>2</b>	Light Intensity Solar Meter
<b>3</b>	Battery Charge Indicator
<b>4</b>	Security Alarm
<b>5</b>	Light Activated Alarm
<b>6</b>	Anti -theft System
<b>7</b>	Weather report display
<b>8</b>	Time Display
<b>9</b>	Vehicle Selection System
<b>10</b>	Remote controller car
<b>11</b>	Music System Equalizer
<b>12</b>	Mini information Pallet
<b>13</b>	Upper Dipper light control
<b>14</b>	GTA gaming car
<b>15</b>	AC Mode Selection
<b>16</b>	Guess the number game design
<b>17</b>	Simple Calculator