Learn C Language with Robotics

- **Explaination about Arduino**
- **Concept of Input , Output and Brain**
- **Types of communication**
- **Explaination about LED , Resistor , Motor**
- **LED blinking code**
- **Explaination about 5 LED module**
- **5 LED module codes**
  - 5 LED together on off.
  - 5 LED on off one by one.
  - 5 LED on off in increasing and decreasing order.
- **Types of Languages**
- **What is C Language**
- **Steps for Making Program**
- **Explanation of Header File**
- **Printf Function**
  - **PR**-1: WAP to print “WELCOME TO THE WORLD OF C”
  - **PR**-2: WAP to print BIO-DATA
  - **Use of new line and space in printf**
  - **Some Pattern using Printf Function**
- **Data Types**
  - Integer, Float, Char
  - **PR**-3: WAP to print int , float , char value

- **Variables & its Rules**
  - Global Variable
  - Local Variable
- **Arithmatic Operator**
  - Calculator
- **Scanf Function**
  - **PR-4:** Write a Program to Accept Number from user
- **Arduino- Operator**
  - Arithmetic Operator
  - **PR**-5: WAP to print addition , subtraction , multiplication , division , modulo
  - **PR**-6: WAP to print Number & its Square
  - **PR**-7: WAP to find Area of Circle
  - **PR**-8: WAP to Calculate Simple Interest
  - **PR**-9: WAP to find Area of Triangle
  - **PR**-10: WAP to convert Centimeter to Meter
  - **PR**-11: WAP to find Average Temperature of five sunny days assume Temperature in Celsius
  - **PR**-12: WAP to accept Integer and display it Octal and Hexadecimal formats
  - **PR**-13: WAP to convert Celsius to Fahrenheit
- **Binary Numbers**
- **Bitwise Operator**
- **Concept of if-else**

- **Switch Module**
  - Value reading of switch module.
  - Switch module with Led .
  - Switch module with Led Module.
  - Switch module with buzzer.
- **Public Counter**
- **Automatic Car**
- **Relational Operator**
  - **PR**-14: WAP to check accepted no is 5 or not
  - **PR**-15:WAP to Accept 2 Integer Numbers and Find Maximum Number
  - **PR**-WAP to check whether a Number is Even or Odd
  - **PR**-16: WAP to check whether a Year is Leap Year or Not
- **Concept of if- else Ladder**
- **Logical Operator**
  - **PR**-17: WAP to find Accepted Value is Negative , Positive , Zero
  - **PR**-18: WAP to find Maximum between Three Numbers using Logical Operator
  - **PR**-19: WAP to check whether a Number is Divisible by 5 and 11 or not
- **Potentiometer Module**
  - Potentiometer value reading.
  - Potentiometer with led .
  - Potentiometer with 5 led module.
  - Potentiometer with voltage converter
- **Joytick Module**

- Joystick value reading.
- Joystick with 13 number LED.
- Joystick with 5 Led module.

- **Joystick Operated Robot**
- **Nested if-else Concept**
  - **PR-**27: WAP to Book My Show
  - **PR-**28: WAP to Candy Vending Machine
  - **PR-**29: WAP to Flight Booking System
  - **PR-**30: WAP to Hotel Booking System
- **Bluetooth Module**
  - Bluetooth with 13 number LED.
  - Bluetooth with 5 LED Module.
  - Bluetooth flag variable programs.
- **Remote control car**
- **Ternary Operator**
  - **PR**-31: WAP to find Accepted Value is Negative , Positive , Zero
  - **PR**-32:WAP to Accept 2 Integer Numbers and Find Maximum Number
  - **PR**-33: WAP to find Maximum between Three Numbers using Logical Operator
  - **PR**-34: WAP to check whether a Number is Divisible by 5 and 11 or not
  - **PR**-35: WAP to check whether a Number is Even or Odd
- **Night detector system**
- **Touch Operated Robot- Using Ternary Operator**

- **Switch Case**
  - **PR**-36: WAP to Read any Digit, Display it in a Word
  - **PR**-37: WAP to Read any Month Number in Integer and Display Number of Days for that Month
  - **PR**-38: WAP to Make Calculator
- **Seven Segment Display**
- **Seven Segment Display Using Switch Case**
- **LED on off with Bluetooth Module using Switch Case**
- **IR Sensor**
  - Value reading of IR sensor
  - IR sensor with 13 number Led
  - IR sensor with 5 Led Module
- **Cocept of Relay**
- **Automatic Handsanitizer Dispenser**
- **Loops**
- **Entry Control Loop**
- **While Loop**
  - **PR**-39: WAP to Print 1 to 10
  - **PR**-40: WAP to reverse 20 to 0
  - **PR**-41: WAP to print Sum of 1 to 10
  - **PR**-42: WAP to find factorial of Given Number
  - **PR**-43: WAP to find power of Given Number
  - **PR**-44: WAP to print Even Number 10 to 20
  - **PR**-45: WAP to print Table of Entered Number

- PR-46: WAP to print Fibonacci Series

- 5 LED Module On-Off using While Loop
- Distance Measurement Device
- Height Measurement Device
- LCD Display Interfacing with Arduino and Ultrasonic Sensor
- Blind stick
- Exit Control Loop
- Do- While Loop
    - PR-47: WAP to Print 1 to 10
    - PR-48: WAP to reverse 20 to 0
    - PR-49: WAP to print Sum of 1 to 10
    - PR-50: WAP to find factorial of Given Number
    - PR-51: WAP to find power of Given Number
    - PR-52: WAP to print Even Number 10 to 20
    - PR-53: WAP to print Table of Entered Number
    - PR-54: WAP to print Fibonacci Series
- FOR Loop
    - PR-55: WAP to Print 1 to 10
    - PR-56: WAP to reverse 20 to 0
    - PR-57: WAP to print Sum of 1 to 10
    - PR-58: WAP to find factorial of Given Number
    - PR-59: WAP to find power of Given Number
    - PR-60: WAP to print Even Number 10 to 20
    - PR-61: WAP to print Table of Entered Number

    - PR-62: WAP to print Fibonacci Series
- Servo Motor
- Potentiometer with Servo Motor using Map Function
- Servo using for loop
- LED Intensity Control Using FOR Loop
- Motor Speed Control Using FOR Loop
- Nested Loops
    - Pattern Using Nested Loops
- Array
    - One-dimensional Array
    - PR-63:WAP to enter and print array element using for loop
    - PR-64:WAP to sum of all array element
    - PR-65:WAP to copy the content of one array to another array
    - Two-dimensional Array
    - PR-66:WAP to finding sum of two matrices
    - PR-67:WAP to transpose of 2*2 matrix
    - PR-68:WAP to finding Multiplication of two Matrices
    - 7 segment using array
- String
    - PR-69:WAP to initialize and print string
    - PR-70:WAP to find string length
    - PR-71:WAP to convert string to lowercase
    - PR-72:WAP to reverse string
- Keypad password system

- **Functions**
  - PR-73:Function to sum two numbers.(w/o return type w/o argument)
  - PR-74:Function to find average(w return type w/o argument)
  - PR-75:Function to find simple interest(w/o return type w argument)
- **Goto Statement**
  - PR -76: WAP to print the given number is even or odd.
  - PR -77: WAP to print the given number is positive or negative.
  - PR -78: WAP to print the given year is leap year or not.
  - PR -79: WAP to print the sum of first five natural numbers.
  - PR -80: WAP to calculate the sum and average of positive numbers.
  - PR -76: WAP to print the table of given number.
- **5 led on/off using function**
- **Making car using function**
- **Proximity IR Sensor- Metal Detector**
- **Structure**
  - **PR-**76:WAP to print Employee's ID, NAME using string
  - **PR-**77:WAP to input bookcode,booktitle,author name,price.
- **Keypad Matrix**
- **Pointer**
  - PR-78:WAP to illustrate pointers
  - PR-79:WAP Arithmetic operators using pointers
  - PR-80:WAP to pointer with array

- **File Handling**
    - PR-81:WAP to open file,write into a file and read from file using fopen(),fclose(),getc(),putc()
    - PR-82:WAP to write into and read from the file using fprintf and fscanf