



# CODTECH IT SOLUTIONS

## EMBEDDED SYSTEMS INTERNSHIP TASKS

COMPLETE ANY TWO TASKS  
OUT OF SIX!



VERIFIED BY  
CODTECH IT SOLUTIONS



## TASK ONE: LED BLINKING WITH ARDUINO

**Program an Arduino board to blink an LED at a specific interval. This project introduces basic embedded programming concepts and interfacing with hardware.**

## TASK TWO: TEMPERATURE AND HUMIDITY MONITORING WITH DHT SENSOR

**Interface a DHT sensor with an Arduino to measure temperature and humidity. Display the readings on an LCD screen or serial monitor.**



## TASK THREE: HOME AUTOMATION SYSTEM WITH RASPBERRY PI

**Create a home automation system using a Raspberry Pi. Control appliances (like lights or fans) via a web interface or mobile app.**

## TASK FOUR: REAL-TIME DATA LOGGING WITH STM32

**Program an STM32 microcontroller to log sensor data in real-time. Store data on an SD card or send it over a wireless module like Wi-Fi or Bluetooth.**

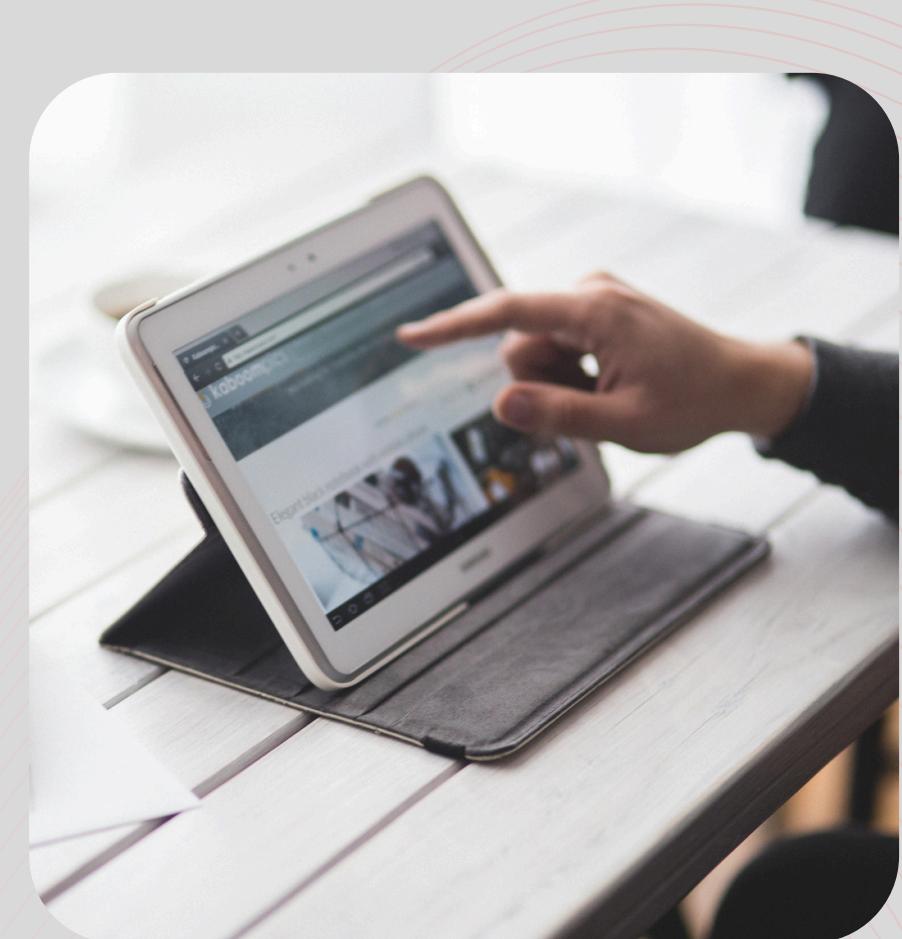


## TASK FIVE: VEHICLE TRACKING SYSTEM WITH GPS AND GSM

**Develop a vehicle tracking system using Arduino or a similar microcontroller with GPS and GSM modules. Track the vehicle's location in real-time and send the data to a web server for display.**

## TASK SIX: SMART HOME IOT SYSTEM

**Build a smart home IoT system using a Raspberry Pi or similar platform. This project involves integrating various sensors and actuators to create a smart home environment that can be controlled and monitored remotely.**



## BENEFITS OF THIS INTERNSHIP :

### 1).PLACEMENT SUPPORT

- INTERVIEW TRAINING
- RESUME & LINKEDIN BUILDING TOOLS
- SELF INTRODUCTION EXAMPLES

### 2) EXPERIENCE CERTIFICATE

### 3) MENTOR SUPPORT TO DO GIVEN PROJECTS

### 4) FLEXIBLE WORKING HOURS{WORK WHEN YOU ARE FREE AND SUBMIT THE TASKS WITHIN THE DEADLINE}

# INSTRUCTIONS:



1. DEVELOP ADVANCED FEATURES: EXTEND THE FUNCTIONALITY OF YOUR PROJECT BY ADDING ADVANCED FEATURES OR REFINING EXISTING ONES AS PER THE REQUIREMENTS FOR GIVEN TASKS.
2. Update the code in GitHub: Make necessary changes and improvements to your codebase. Commit the updated code to your GitHub repository.
3. Share the GitHub URL at submission link: After updating your code on GitHub, retrieve the updated repository URL and submit it via the provided submission link in whatsapp group .

NOTE:POST YOUR OFFER LETTER IN LINKEDIN AND TAG US @CODTECHITSOLUTIONS , SHARE THAT POST URL TO WHATSAPP GROUP ADMIN .