EMERTXE
The future - ready IT institute

Project title || Home Automation System

Submitted By || Syed Zulfiqar Ali

Submitted to || Emertxe Information & Technology

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Project title || Home Automation System

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Project Outline

Introduction
- Project Overview

Requirements
- Software
- Hardware

Language
- C
- C++

Internet of Things
- Application
- Example

Arduino Uno
- Architecture
- Software

Conclusion
- Programming Learning
- IoT learning
- Project Learning
- Future Learning

Introduction

- **Project Overview**

Project Overview

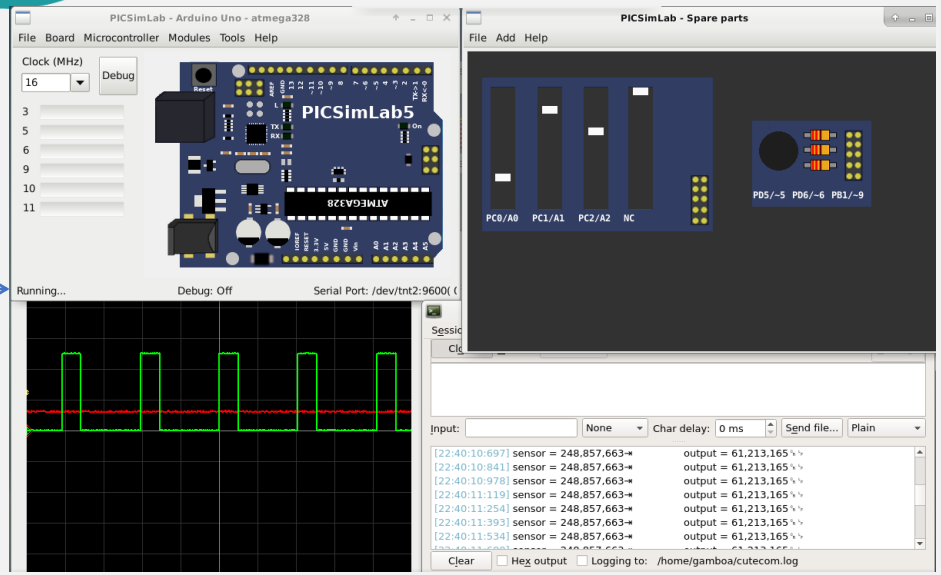
- About Home Automation

Requirements

- Software
- Hardware

ARDUINO

Blynk



Language

- C
- C++

Topics learnt in C :

- Data type Modifier & Qualifier
- Conditionals & loops
- Operators
- Arrays & Pointers
- Function
- Storage classes
- Pre-processor

```
/* The structure of C */
/*
PROGRAM    : Demonstrate structure of C
PROGRAMMER: Ramana
DATE       : 30 Aug 2014 */

#include<stdio.h>
int y;
void fibnoci(void);

void main()
{
y=5+6;
printf("\n Sum of 5 and 6 is:\t",y);
fibnoci();
}

void fibnoci()
{
int first=0, second=1, next=1,i,numb;
printf("enter ur number");
scanf("%d",&numb);
printf("1\t");
for(i=0;i<numb;i++)
{
next=first+second;
first=second;
second=next;
printf("%d\t",next);
} }
```

Documentation

Pre-processor directives
Global Declaration
Function Declaration

main function

User defined function

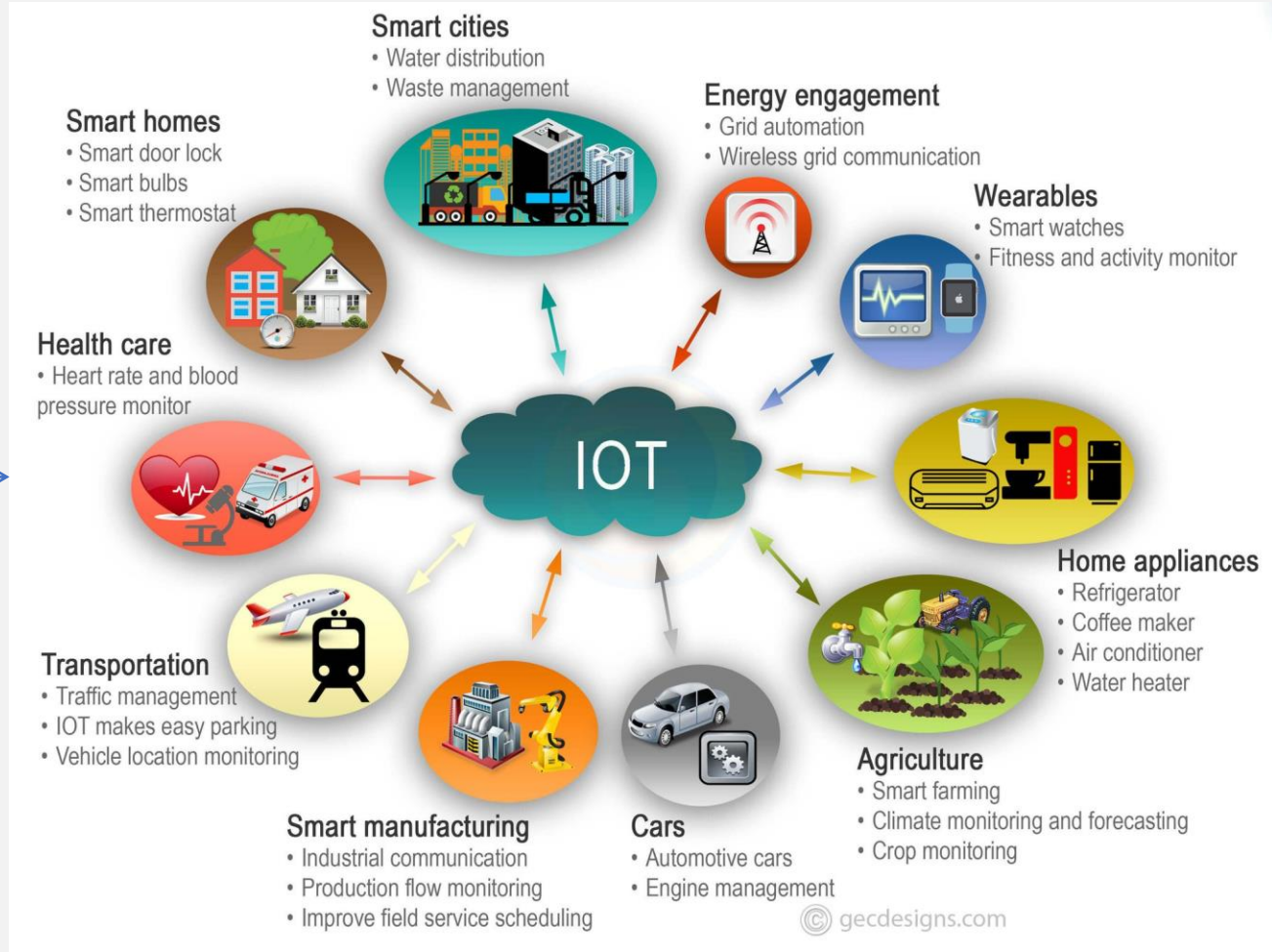
Internet of Things

- Application
- Example

Technology that facilitates communication between devices over the internet.

- Applications:
- Automobile
- Manufacturing
- Logistic and Transport
- For Business

- Examples:
- Wearable Health Monitors
- Smart Cars
- Smart Buildings
- Home Automation



Arduino Uno

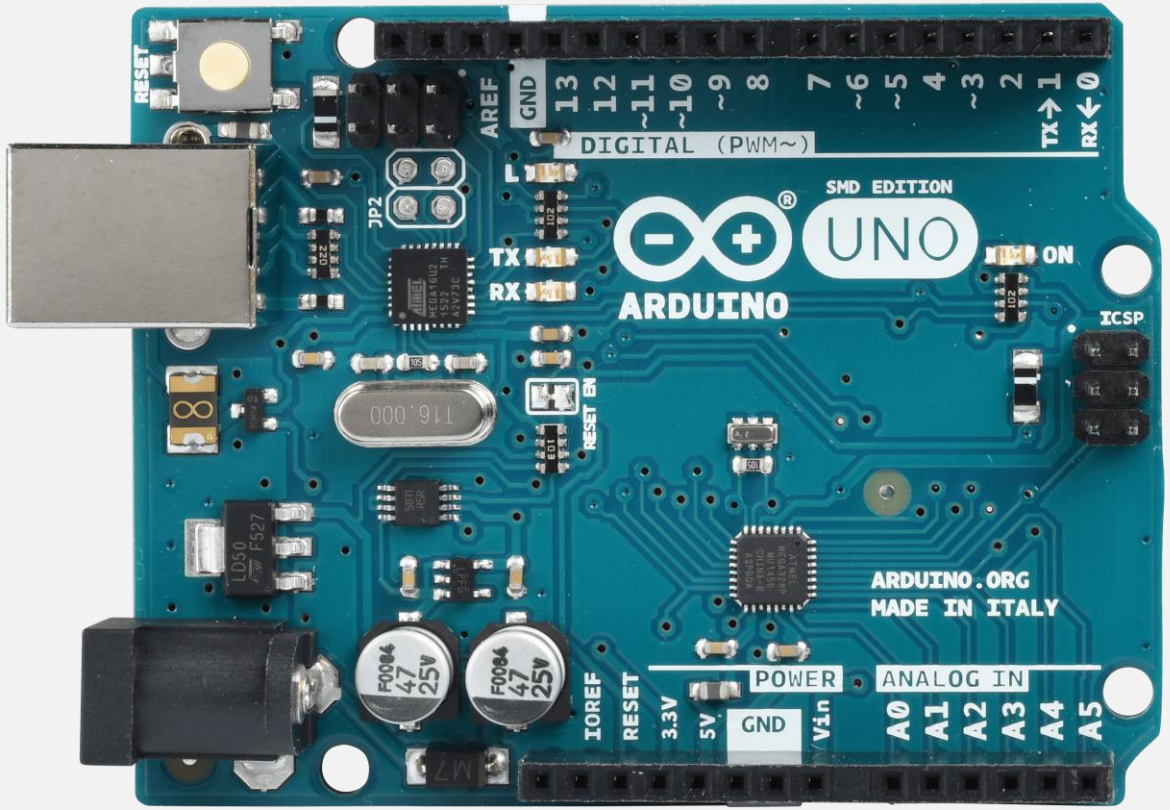
- Architecture
- Software

Architecture

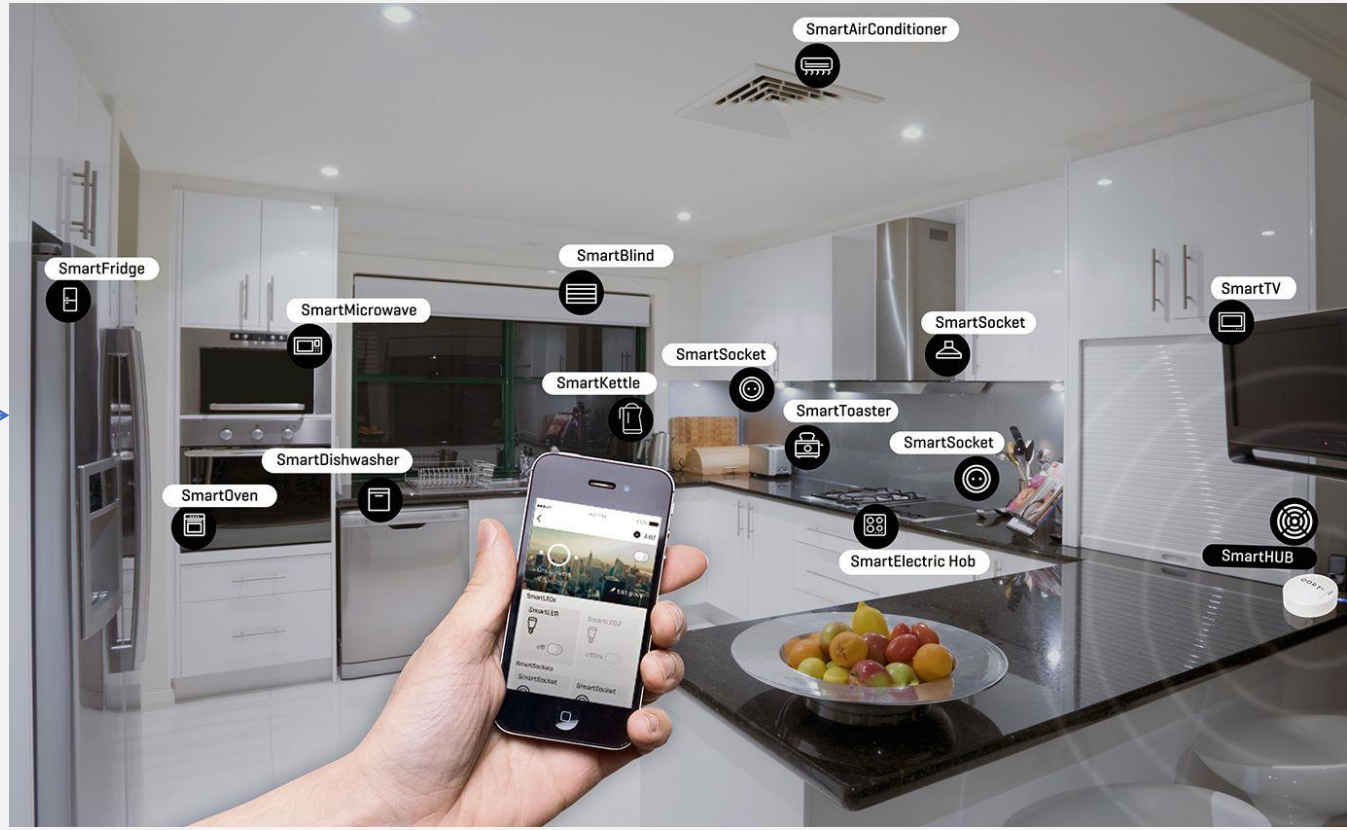
- Digital Pins
- Analogue pins
- Power Pins
- ADC
- Oscillator
- PWM pins

Software

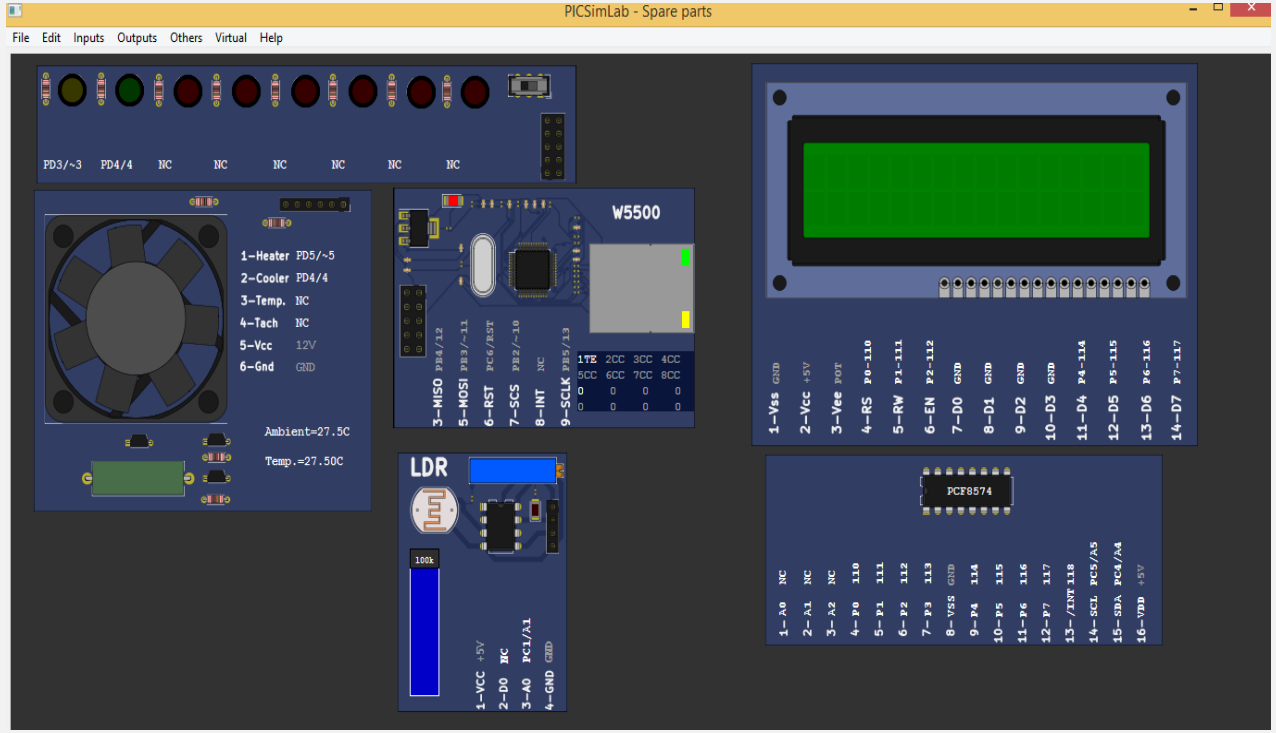
- Arduino IDE
- Support C , C++

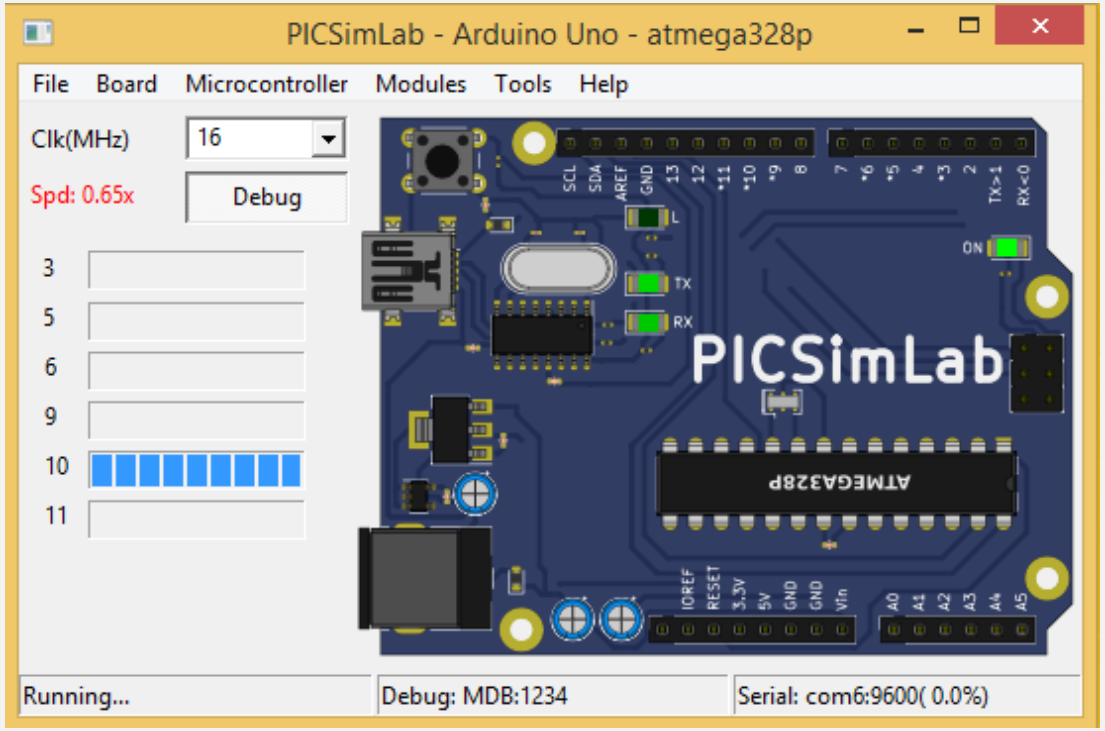


Why home automation ?



Project Simulation





Conclusion

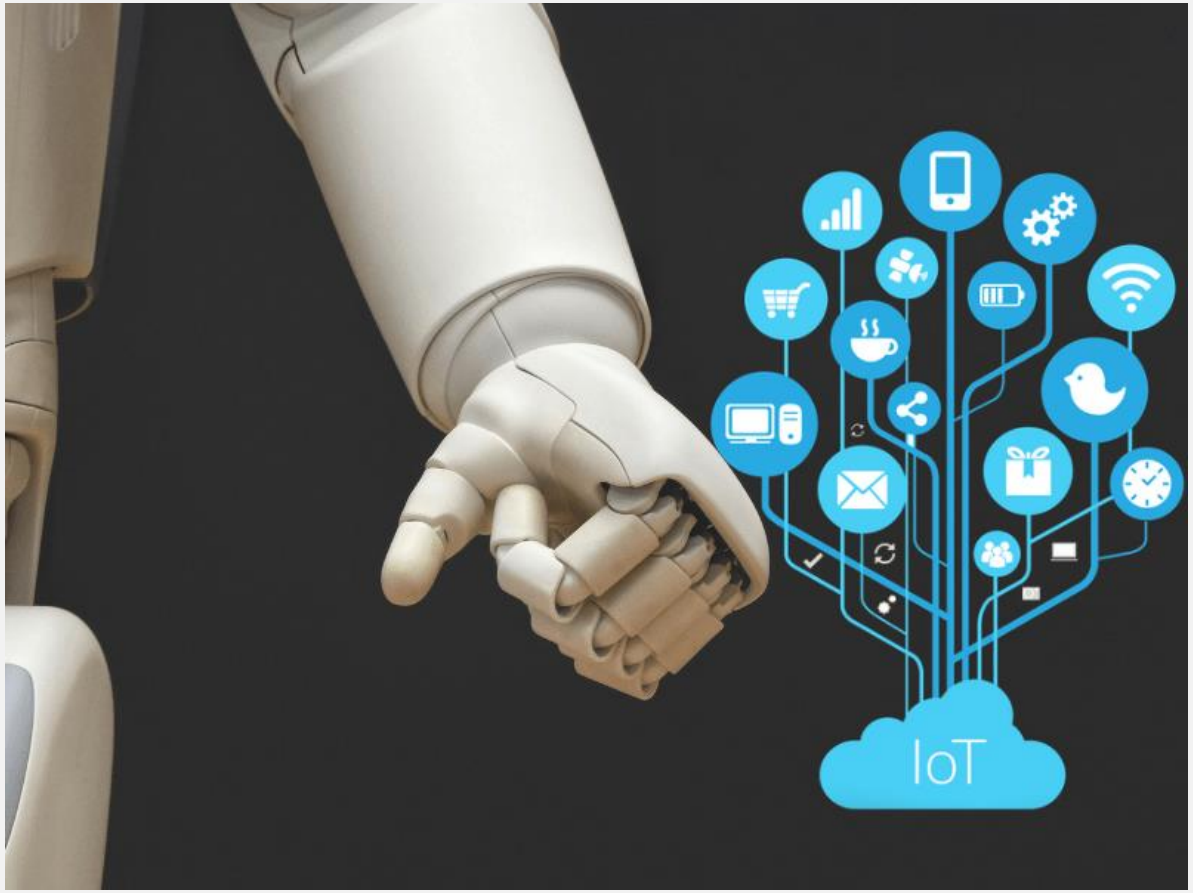
❖ Programming Learning

- ❖ high degree of flexibility and performance
- ❖ ability to integrate with a wide range of hardware and software systems

Conclusion

- IoT Learning

- Enhance the convenience, security, and energy efficiency of a home
- create intelligent automation systems
- cloud computing, data analytics, and machine learning algorithms



Conclusion

- Project Learning

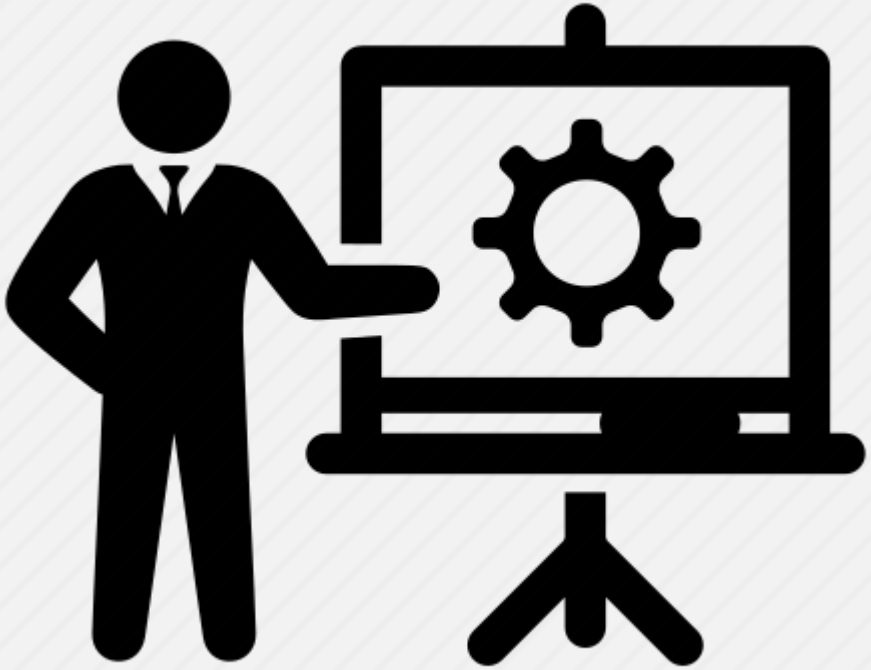
- Effective approach for gaining hands-on experience
- skills in building home automation projects using IoT technology

Conclusion

- Future Learning

- AI-based systems
- advanced sensors, platforms
- cloud computing, data analytics, machine learning, and cyber security

Project Demo



Thank You

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