

# Introduction to Arduino

Spoken Tutorial Project

<http://spoken-tutorial.org>

National Mission on Education through ICT

<http://sakshat.ac.in>

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IIT Bombay

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# Learning Objectives

**We will learn about**



# Learning Objectives

**We will learn about**

- **The Arduino device**



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- **Features of Arduino**



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- **Installation of Arduino IDE on Ubuntu Linux**



# System Requirements



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- **Arduino UNO Board**



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- **Ubuntu Linux 14.04 OS**



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- **Arduino UNO Board**
- **Ubuntu Linux 14.04 OS**
- **Arduino IDE**

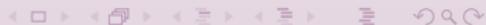


# Pre-requisites

- **Basic knowledge of Electronics**



# What is Microcontroller?



# What is Microcontroller?

- **A Microcontroller is a mini computer**



# What is Microcontroller?

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- **It contains CPU, memory, system clock and peripherals**



# What is Microcontroller?

- **A Microcontroller is a mini computer**
- **It contains CPU, memory, system clock and peripherals**
- **It performs only one task and execute one specific application at a time**



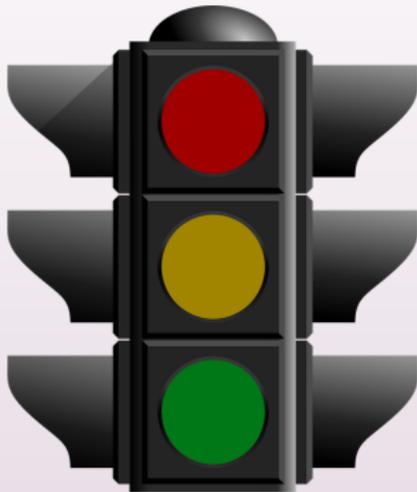
# Example: Microcontroller



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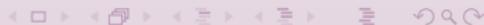
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# Arduino IDE



# Arduino IDE

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# Arduino IDE

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- **Easy to write code and upload it to the physical board**



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# Arduino IDE

- It is an open source software
- Easy to write code and upload it to the physical board
- Easy to learn the programming language with inbuilt functions
- Runs on Windows, Mac OS and Linux
- This software can be used with any Arduino board



# Installation of Arduino in Linux

```
sudo apt-get install arduino
```



# Summary

**In this tutorial we learnt about,**

- **The Arduino device**
- **Features of Arduino**
- **Components of Arduino board**
- **Microcontrollers**
- **Installation of Arduino IDE on Ubuntu Linux**



# About the Spoken Tutorial Project

- Watch the video available at [http://spoken-tutorial.org/What\\_is\\_a\\_Spoken\\_Tutorial](http://spoken-tutorial.org/What_is_a_Spoken_Tutorial)
- It summarises the Spoken Tutorial project
- If you do not have good bandwidth, you can download and watch it



# Spoken Tutorial Workshops

## The Spoken Tutorial Project Team

- Conducts workshops using spoken tutorials
- Gives certificates to those who pass an online test
- For more details, please write to [contact@spoken-tutorial.org](mailto:contact@spoken-tutorial.org)



# Forum for specific questions

- Do you have questions in **THIS Spoken Tutorial?**
- Please visit <http://forums.spoken-tutorial.org>
- Choose the minute and second where you have the question
- Explain your question briefly
- Someone from our team will answer them



# Forum for specific questions

- **The Spoken Tutorial forum is for specific questions on this tutorial**
- **Please do not post unrelated and general questions on them**
- **This will help reduce the clutter**
- **With less clutter, we can use these discussion as instructional material**



# Acknowledgements

- **Spoken Tutorial Project is a part of the Talk to a Teacher project**
- **It is supported by the National Mission on Education through ICT, MHRD, Government of India**
- **More information on this Mission is available at**

<http://spoken-tutorial.org/NMEICT-Intro>

