

Robot Control using Bluetooth

Spoken Tutorial Project

<https://spoken-tutorial.org>

National Mission on Education through ICT

<http://sakshat.ac.in>

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7 August 2020



Learning Objectives



Learning Objectives

In this tutorial, we will learn about

- **Bluetooth Communication**



Learning Objectives

In this tutorial, we will learn about

- Bluetooth Communication
- HC-05 Bluetooth Module



Learning Objectives

In this tutorial, we will learn about

- Bluetooth Communication
- HC-05 Bluetooth Module
- Controlling a Robot using an Android application



Pre-Requisites

To follow this tutorial, you should have basic knowledge of:



Pre-Requisites

To follow this tutorial, you should have basic knowledge of:

- **Electronics**



Pre-Requisites

To follow this tutorial, you should have basic knowledge of:

- Electronics
- C or C++ programming language



System Requirements

To record this tutorial, I am using



System Requirements

To record this tutorial, I am using

- **Ubuntu Linux 16.04 OS**



System Requirements

To record this tutorial, I am using

- Ubuntu Linux 16.04 OS
- Arduino UNO board



System Requirements

To record this tutorial, I am using

- Ubuntu Linux 16.04 OS
- Arduino UNO board
- Arduino IDE



System Requirements

To record this tutorial, I am using

- Ubuntu Linux 16.04 OS
- Arduino UNO board
- Arduino IDE
- Android Phone



External Components Required



External Components Required



Bluetooth Communication



Bluetooth Communication

- Bluetooth communication is a wireless technology



Bluetooth Communication

- **Bluetooth communication is a wireless technology**
- **It is used to transfer data between different electronic devices**



Bluetooth Communication

- It provides data and audio transmission with a range of 7 to 8 meters



Bluetooth Communication

- It provides data and audio transmission with a range of 7 to 8 meters
- It is specially designed for short range wireless data communication



HC-05 Bluetooth Module



HC-05 Bluetooth Module

- **Data Mode and AT Command Mode**



HC-05 Bluetooth Module

- **Data Mode and AT Command Mode**
- **In Data Mode, it can send and receive data from other Bluetooth devices**



HC-05 Bluetooth Module

- Data Mode and AT Command Mode
- In Data Mode, it can send and receive data from other Bluetooth devices
- We will be using **Data Mode** in our tutorial



HC-05 Bluetooth Module

- **AT Command Mode** is used when you want to change the default setting of the Bluetooth module



HC-05 Bluetooth Module

- **AT Command Mode** is used when you want to change the default setting of the Bluetooth module
- For example, to change the Baud rate



Code Files



Code Files

- The files used in this tutorial are available in the **Code Files** link on this tutorial page



Code Files

- The files used in this tutorial are available in the [Code Files](#) link on this tutorial page
- Please download and extract it



Code Files

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- Please download and extract it
- Make a copy and then use it while practising



Summary

- **Bluetooth Communication**
- **HC-05 Bluetooth Module**
- **Controlling a Robot using an Android application**



About the Spoken Tutorial Project

- Watch the video available at https://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



Forum for specific questions

- Do you have questions in THIS Spoken Tutorial?
- Please visit <https://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



Acknowledgements

- **Spoken Tutorial project is funded by MHRD, Govt. of India**

