

# Series and Parallel Resistance

**Spoken Tutorial Project**

**<https://spoken-tutorial.org>**

**National Mission on Education through ICT**

**Spoken Tutorial & FOSSEE Team**

**IIT Bombay**

**29 August 2023**



# Learning Objectives



# Learning Objectives

**We will learn how**



# Learning Objectives

**We will learn how**

- **To connect Resistors in series and parallel circuits**



# Learning Objectives

## We will learn how

- To connect Resistors in series and parallel circuits
- Voltage and Current characteristics behave in series and parallel circuits

# System Requirement



# System Requirement

- **Ubuntu Linux 20.04 OS**



# System Requirement

- **Ubuntu Linux 20.04 OS**
- **CircuitJS Application**





# Pre-requisites



# Pre-requisites

To follow this tutorial, you should have basic knowledge of

- **Electrical Circuits**



# Series Resistance



# Series Resistance



# Parallel Resistance



# Parallel Resistance



# Assignment - Series Resistance

- 1 In the same circuit, change the value of resistors as  $R1 = 4K \text{ Ohms}$ ,  $R2 = 2K \text{ Ohms}$ ,  $R3 = 100 \text{ Ohms}$
- 2 Change the DC power supply voltage to 5 Volts
- 3 Notice the current flowing and voltage drop at each resistor



# Assignment - Parallel Resistance

- 1 Change the DC voltage supply value to 5 Volts
- 2 Notice the change in voltage and current for each resistor





# Summary

**In this tutorial, we learnt how**

- **To connect Resistors in series and parallel circuits**
- **Voltage and current characteristics behave in series and parallel circuits**



# About the Spoken Tutorial Project

- Watch the video available at [https://spoken-tutorial.org/What\\_is\\_a\\_Spoken\\_Tutorial](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](mailto:contact@spoken-tutorial.org)



# Answers for THIS Spoken Tutorial

- Questions in THIS Spoken Tutorial?
- Visit <https://forums.spoken-tutorial.org>
- Choose the minute and second where you have the question
- Explain your question briefly
- The Spoken Tutorial project will ensure an answer



# Acknowledgements

**Spoken Tutorial project was established by the Ministry of Education(MoE), Govt of India**



# Thank You

**This tutorial has been contributed by  
FOSSEE and Spoken Tutorial Project,  
IIT Bombay.**

