

AC and DC Circuits

Spoken Tutorial Project

<https://spoken-tutorial.org>

National Mission on Education through ICT

Spoken Tutorial & FOSSEE Team

IIT Bombay

06 September 2023



Learning Objectives



Learning Objectives

We will learn about



Learning Objectives

We will learn about

- **current flow in the AC and DC circuits**



Pre-requisites



Pre-requisites

To follow this tutorial, you should have basic knowledge of

- **Electrical Circuits**



System Requirement



System Requirement

- **Ubuntu Linux 20.04 OS**



System Requirement

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



Assignment1: DC Circuit

- 1 In the above DC circuit, change the resistor value from 10 Ohms to any value between 2 Ohms to 8 Ohms
- 2 Notice the change in the conventional current flow in the circuit represented by the yellow dots



Assignment1: DC Circuit

- 1 Check the graphical representation of the yellow line which represents the current in the circuit



Assignment2: AC Circuit

- 1 In the above AC circuit, change the resistor value from 10 Ohms to any value between 2 Ohms to 8 Ohms
- 2 Notice the change in current flow of the circuit represented by the yellow dots



Assignment2: AC Circuit

- 1 Check the graphical representation of the yellow line which represents the current in the circuit



Comparison: AC and DC power

- *** AC is most suitable for household and industrial applications**
- * DC is used in electronics, portable devices and vehicle electrical systems**



Comparison: AC and DC power

- *** AC is generated by power plants and is ideal for long distance transmission**
- * DC is generated by chemical reactions in batteries**



Comparison: AC and DC power

- *** AC power is more dangerous when it comes to electrical shocks**
- * DC is considered safe for low voltage applications**



Summary

In this tutorial, we learnt about

- **current flow in the AC and DC circuits**



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



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.**

