

Programming OpenPLC

Spoken Tutorial Project

<https://spoken-tutorial.org>

National Mission on Education through ICT

<http://sakshat.ac.in>

Harsha Priyanka

IIT Bombay

16 March 2020



Learning Objectives



Learning Objectives

- **Program the OpenPLC version 1 Mainboard**



System Requirements



System Requirements

- **Ubuntu Linux 18.04 operating system**



System Requirements

- **Ubuntu Linux 18.04 operating system**
- **OpenPLC version 1 Mainboard**



System Requirements

- **Ubuntu Linux 18.04 operating system**
- **OpenPLC version 1 Mainboard**
- **24V, 2A SMPS**



System Requirements

- **Ubuntu Linux 18.04 operating system**
- **OpenPLC version 1 Mainboard**
- **24V, 2A SMPS**
- **USBasp programmer**



Pre-requisites



Pre-requisites

- How to generate a hex file of a ladder diagram in LDmicro



Pre-requisites

- How to generate a hex file of a ladder diagram in LDmicro
- If not, please refer to the relevant tutorials in this series from <https://spoken-tutorial.org>



Code Files-sample.hex



Code Files-sample.hex

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



Code Files-sample.hex

- The files used in this tutorial are available in the Code Files link on this tutorial page
- Please download and extract them



Code Files-sample.hex

- The files used in this tutorial are available in the Code Files link on this tutorial page
- Please download and extract them
- Make a copy and then use them while practising



Additional reading material



Additional reading material

- Precautions that should be taken before programming



Additional reading material

- **Precautions that should be taken before programming**
- **Ways to troubleshoot when the Mainboard is not programmed properly**



Controller's part number list

List of part number for Controllers and Programmers is given in the below link:

https://www.nongnu.org/avrdude/user-manual/avrdude_4.html#Option-Descriptions



Summary

- **Program the OpenPLC version 1 Mainboard**



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 questions

- 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

You will have to register to ask questions



Forum for specific questions

- Questions not related to the Spoken Tutorial?
- Do you have general / technical questions on the Software?
- Please visit the FOSSEE Forum
<https://forums.fossee.in/>
- Choose the Software and post your question



Acknowledgements

Spoken Tutorial project is supported by

- **National Mission on Education through ICT (NMEICT)**
- **Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching**

Initiatives of MHRD, Government of India



THANK YOU!

For more Information, visit our website
<https://fossee.in/>

