

Simulation and Compilation

Spoken Tutorial Project

<https://spoken-tutorial.org>

National Mission on Education through ICT

<http://sakshat.ac.in>

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Learning Objectives



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- **Simulate a ladder diagram**



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- **Simulate a ladder diagram**
- **Compile a ladder diagram in LDmicro**



System Requirements



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- **Ubuntu Linux 18.04 operating system**



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- **Ubuntu Linux 18.04 operating system**
- **LDmicro**



Pre-requisites



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- How to create a ladder diagram in LDmicro



Pre-requisites

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



LDmicro - Simulator



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- **LDmicro has an in-built simulator**



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- **It helps to verify ladder diagram before experimenting on the actual hardware**



LDmicro - Simulator

- **LDmicro has an in-built simulator**
- **It helps to verify ladder diagram before experimenting on the actual hardware**
- **It reduces the hardware damage due to improper code**



Code Files - sample.ld



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- The file **sample.ld** used in this tutorial is available in the **Code Files** link of this tutorial page



Code Files - sample.ld

- The file **sample.ld** used in this tutorial is available in the **Code Files** link of this tutorial page
- Please download and use them while practising



Cycle time



Cycle time

It is the time taken from

- reading the input states



Cycle time

It is the time taken from

- reading the input states
- executing the program



Cycle time

It is the time taken from

- reading the input states
- executing the program
- updating the outputs



Pre-Compilation Checklist



Pre-Compilation Checklist

- Selection of proper Microcontroller



Pre-Compilation Checklist

- Selection of proper Microcontroller
- Setting Microcontroller parameters



Pre-Compilation Checklist

- Selection of proper Microcontroller
- Setting Microcontroller parameters
- Assigning ports to I/O instructions



Summary

- **Simulate a ladder diagram**
- **Compile a ladder diagram in LDmicro**



Assignment

- 1 Change the cycle time to 3 secs and 10 secs
- 2 Observe the changes while simulating



About the Spoken Tutorial Project

- Watch the video available at 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



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



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THANK YOU!

For more Information, visit our website
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