

Interfacing LCD through AVR-GCC Programming

Spoken Tutorial Project

<http://spoken-tutorial.org>

National Mission on Education through ICT

<http://sakshat.ac.in>

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IIT Bombay

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Learning Objectives



Learning Objectives

- Interface a LCD to Arduino board



Learning Objectives

- **Interface a LCD to Arduino board**
- **Write an AVR-GCC program to display a digit on LCD**



Pre-requisites



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



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- **Electronics**



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- **Electronics**
- **C programming**
- **AVR-GCC**



System Requirements



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- **Arduino UNO Board**



System Requirements

- **Arduino UNO Board**
- **Ubuntu Linux operating system 14.04**



External Devices



External Devices

- **Breadboard**



External Devices

- Breadboard
- LCD 16x2



External Devices

- Breadboard
- LCD 16x2
- Arduino UNO Board



External Devices

- Breadboard
- LCD 16x2
- Arduino UNO Board
- Potentiometer



External Devices

- Breadboard
- LCD 16x2
- Arduino UNO Board
- Potentiometer
- Jumper Wires

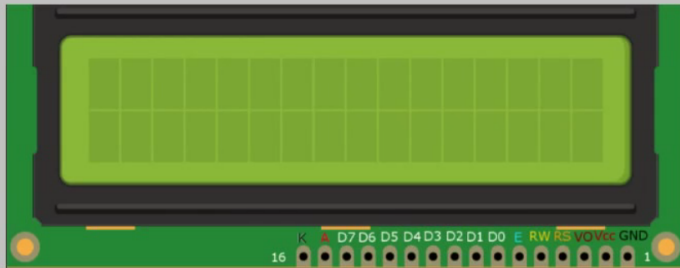


External Devices

- Breadboard
- LCD 16x2
- Arduino UNO Board
- Potentiometer
- Jumper Wires
- Pin headers



LCD



Assignment

- **Modify the above code to display any other digit from 0-9**
- **Modify the above code to build a counter which counts from 0 to 9**



Summary

- **Interface a LCD to Arduino board**
- **Write an AVR-GCC program to display a digit on LCD**



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 for specific questions

- Do you have questions in **THIS Spoken Tutorial?**
- Please visit
<http://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 a part of the Talk to a Teacher project
- It is supported by the National Mission on Education through ICT, MHRD, Government of India
- More information on this Mission is available at

<http://spoken-tutorial.org/NMEICT-Intro>

