

Mixing Assembly and C programming

Spoken Tutorial Project

<http://spoken-tutorial.org>

National Mission on Education through ICT

<http://sakshat.ac.in>

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Learning Objectives



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- Write a function in **Assembly** routine to perform initialisation



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- Write a function in **Assembly** routine to perform initialisation
- Call that **Assembly** routine in **AVR-GCC** program to blink the Dot LED of the Seven segment display



Pre-requisites



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



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

- **Electronics**



Pre-requisites

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

- Electronics
- AVR-GCC



Pre-requisites

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

- Electronics
- AVR-GCC
- **Assembly programming**



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**
- **Seven segment display**



External Devices

- **Breadboard**
- **Seven segment display**
- **220 ohm Resistor**



External Devices

- Breadboard
- Seven segment display
- 220 ohm Resistor
- **Arduino UNO Board**



External Devices

- Breadboard
- Seven segment display
- 220 ohm Resistor
- Arduino UNO Board
- Jumper Wires



Summary

- **Write a function in Assembly routine to perform initialisation**
- **Call that Assembly routine in AVR-GCC program to blink the Dot LED**



Assignment

- **Change the above program to increase the delay**
- **Observe the delay in the blinking of the Dot LED**



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

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- More information on this Mission is available at

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

