

Creating a New Character Device

Spoken Tutorial Project

<https://spoken-tutorial.org>

National Mission on Education through ICT

<http://sakshat.ac.in>

Mayuri Panchakshari

IIT Bombay

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Learning Objective



Learning Objective

- Create a class of a device in the **sysfs**



Learning Objective

- Create a class of a device in the **sysfs**
- Create a device file in **sysfs** and **dev** directory



System Requirements



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- VirtualBox 5.2



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- **VirtualBox 5.2**
- **Ubuntu Linux 18.04 LTS**
Operating System



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- **Linux kernel version 5.0.0-31**
generic



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- **gedit text editor**



Prerequisites



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- C programming language



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- Basics of Linux kernel



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Prerequisites

- C programming language
- Basics of Linux kernel

If not, then go through the C/C++
and Linux spoken tutorials on
<https://spoken-tutorial.org>



Class and its Device



Class and its Device

- A **class** specifies the type of **device** that has a similar behavior



Class and its Device

- A **class** specifies the type of **device** that has a similar behavior
- For example, audio devices



Class and its Device

- A **class** specifies the type of **device** that has a similar behavior
- For example, audio devices
- **Classes provide a grouping of devices based on functionality**



Class and its Device



Class and its Device

- Mostly you can associate a device with a specific class



Class and its Device

- Mostly you can associate a device with a specific class
- For example, **block devices** such as **hard drives** are associated with the **block class**



Code files



Code files

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



Code files

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- Please download and extract them



Code files

- 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



Summary



Summary

- Create a class of a device in the **sysfs**



Summary

- Create a class of a device in the **sysfs**
- Create a device file in **sysfs** and **dev** directory



Assignment

- 1 Open the `simple_driver.c` file
- 2 Create a device with a different name
- 3 Compile and load the `simple_driver.c`
- 4 See the newly created device file under the `sysfs`



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 Workshop

The Spoken Tutorial Project Team

- Conducts workshops using spoken tutorials
- Gives certificates on passing online tests
- 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 to specific questions

- Questions not related to the Spoken Tutorial?
- Do you have general / technical questions on the Embedded Linux Device Driver?
- 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
<https://fossee.in/>

