Input and Output Control (IOCTL)

Spoken Tutorial Project
https://spoken-tutorial.org
National Mission on Education through ICT
http://sakshat.ac.in

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- **ioctl() function**

Learning Objective

- **ioctl() function**
- **Data transfer between user space and kernel space using ioctl function**

System Requirements

- **VirtualBox 5.2**

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- **gedit text editor**

- **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 this https://spoken-tutorial.org

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- **For example, ioctl function can be used to rewind a tape drive**
- **By default, the kernel does not have a system call for such device operations**

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- **The user program test.c will send and receive integer data to/from the driver**

Code files

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

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- Make a copy and then use them while practising

Summary

- Ioctl function()
- Data transfer between user space and kernel space using ioctl function

Assignment

1. Compile and load **simple_driver.c**
2. Compile and execute **test.c**
3. Pass a different integer value as per your choice
4. See the output using **dmesg** command

- 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

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/