Lesson 5: Embedded Linux Device Driver – Kernel Mode (Assignment 5)

Command – lsmod

A screenshot of a computer program

Description automatically generated

Command - modinfo backlight

A screenshot of a computer screen

Description automatically generated

Command - ls /lib/modules/$(uname -r)

A screenshot of a computer screen

Description automatically generated

Command - sudo modprobe -r i2c\_bcm2835

A screenshot of a computer program

Description automatically generated

Command - sudo modprobe i2c\_bcm2835

A screenshot of a computer screen

Description automatically generated

**Steps for Building Kernel Module**

Command - sudo apt update

A screenshot of a computer

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Command - sudo apt upgrade

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Command - sudo apt-cache search linux-headers

A screen shot of a computer screen

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Command - sudo apt install raspberrypi-kernel-headers

A computer screen shot of a computer program

Description automatically generated

Command - dpkg -L raspberrypi-kernel-headers

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SourceCode - km-1-hello\_c

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SourceCode – Makefile

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Output - make (km-1-hello)

A screenshot of a computer

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Output - insmod km-1-hello\_ko

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Description automatically generated

Output - rmmod km-1-hello\_ko

A screenshot of a computer screen

Description automatically generated

Resulting Linux directoryA screen shot of a computer

Description automatically generated

Building The kernel

A screenshot of a computer screen

Description automatically generated