

== Ch 1 Introduction to Embedded Systems ==

== Ch 2 Programming ARM Processors ==

- * [<http://www.zap.org.au/elec2041-cdrom/unswelec2041/experiment5.pdf> zap *]
- * [<https://www.ece.cmu.edu/~ee349/f-2012/lab2/lab2-handout.pdf> cmu *]
- * [<http://www.waynewolf.us/embedded-book-2e/> W.Wolf]

"" Compiling and Linking using gcc ""

- * [<http://www.tenouk.com/ModuleW.html> tenouk *]
- * [<http://csapp.cs.cmu.edu/public/ch7-preview.pdf> linking - CSAPP *]
- * [<http://www.cs.swarthmore.edu/~newhall/unixhelp/compilecycle.html> swarthmore]

"" Making Libraries ""

- * [<http://www.cprogramming.com/tutorial/shared-libraries-linux-gcc.html> cprogramming *]
- * [<http://tldp.org/HOWTO/Program-Library-HOWTO/shared-libraries.html> tldp *]
- * [http://www.compsci.hunter.cuny.edu/~sweiss/resources/software_libraries.pdf Weiss *]

"" ELF ""

- * [<http://www2.cs.uidaho.edu/~krings/CS270/Notes.S10/270-F10-04.pdf> uidaho]
- * [<https://www.cs.umd.edu/users/hollings/cs412/s03/prog1/elf.pdf> umd]
- * [<https://mdsp.googlecode.com/files/libelf-by-example-20100112.pdf> libelf]

"" ARM Assembly ""

- * [http://users.ece.utexas.edu/~valvano/EE345M/Arm_EE382N_4.pdf utexas]
- * [http://www.heyrick.co.uk/assembler/ARM_Asembler]
- * [http://infocenter.arm.com/help/topic/com.arm.doc.qrc00011/QRC0001_UAL.pdf Quick Reference Card]
- * [<http://www.coranac.com/tonc/text/asm.htm> Whirlwind Tour]
- * [<http://www.davespace.co.uk/arm/introduction-to-arm/index.html> davespace]
- * [https://www.cs.princeton.edu/courses/archive/fall06/cos318/precepts/precept_1_1.pdf bootup]
- * [http://www.cs.nyu.edu/courses/spring07/G22.3130-001/code_gen.html byu]

== Ch 3 GNU Toolchain ==

""Gnu Toolchains for ARM Processors""

- :: [<http://www.bravegnu.org/gnu-eprog/> bravegnu.org]
- :: [<http://vineelkumarreddy.wordpress.com/Linardo+QEMUconfiguration/> configuration]
- :: [<http://www.opensourceforu.com/2011/06/qemu-for-embedded-systems-development-part-1> opensourceforu.com]
- * [<http://web.eecs.umich.edu/~prabal/teaching/eecs373-f12/notes/notes-toolchain.pdf> toolchain]

* Mentor Graphics' Sourcery CodeBench

:: [<http://www.mentor.com/embedded-software/sourcery-tools/sourcery-codebench/editions/lite-edition/> Sourcery CodeBench] Download ARM Processor - the EABI Release

* YAGARTO (Yet Another GNU ARM Toolchain)

:: [<http://sourceforge.net/projects/yagarto/> YAGARTO website]

:: [<http://www.cl.cam.ac.uk/projects/raspberrypi/tutorials/os/downloads.html> YAGARTO+MinGW for windows]

:: [<http://www.emb4fun.de/archive/gabmt/> YAGARTO for windows]

* Linaro

:: [<https://wiki.linaro.org/WorkingGroups/ToolChain> Linaro Toolchain]

* [http://en.wikipedia.org/wiki/List_of_ARM_Cortex-M_development_tools List of ARM Cortex-M development tools]

""ARM Emulator""

* QEMU - a open source processor emulator

:: [<http://xecddesign.com/qemu-emulating-raspberry-pi-the-easy-way/> xec design ***]

:: [<http://en.wikipedia.org/wiki/QEMU> Wikipedia Pages]

:: [http://wiki.qemu.org/Main_Page QEMU Home]

:: [http://en.wikibooks.org/wiki/QEMU/Installing_QEMU Installing QEMU]

:: [<http://qemu.weilnetz.de/qemu-doc.html> QEMU User Documentation]

:: [<http://cgi.cs.indiana.edu/~nhusted/dokuwiki/doku.php?id=tools:qemuforarm> QEMU for ARM Linux]

:: [<https://help.ubuntu.com/community/Installation/QemuEmulator> Ubuntu]

== Ch 4 Raspberry Pi Bare Metal Programming ==

* [http://wiki.osdev.org/ARM_RaspberryPi_Tutorial_C_GPIO_Programming - osdev]

* [<http://blog.bobuhiro11.net/2014/01-13-baremetal.html> GPIO Programming - bobuhiro11]

* [<http://www.valvers.com/open-software/raspberry-pi/> Bare Metal C Programming - Valvers]

* [<http://www.cl.cam.ac.uk/projects/raspberrypi/tutorials/os/index.html> Bare Metal Assembly Programming - Cambridge]

* [http://digitalcommons.macalester.edu/mathcs_honors/32/ Embedded OS Xinu for RPi]

== Ch 5 Embedded Linux ==

* Paul Krzyzanowski' OS Lecture Notes

:: [<https://www.cs.rutgers.edu/~pxk/416/notes/09-memory.html> Memory Management]

:: [<https://www.cs.rutgers.edu/~pxk/416/notes/10-paging.html> Paging]

:: [<https://www.cs.rutgers.edu/~pxk/416/notes/11-devices.html> Device Driver]

:: [<https://www.cs.rutgers.edu/~pxk/416/notes/12-fileSystems.html> File System]

* UBoot

:: [<http://wiki.openwrt.org/doc/techref/bootloader/uboot> Das U-Boot]

:: [http://www.denx.de/wiki/DULG/Manual_UBoot Manual]

:: [http://www.stlinux.com/u-boot/introduction_stlinux UBoot introduction]

:: [http://elinux.org/RPi_U-Boot RPi UBoot]
:: [<http://stackoverflow.com/questions/16317623/how-does-raspberry-pis-boot-loader-work> RPi Booting Process-1]
:: [<http://lynxline.com/lab-3-r-pi-booting-process/> RPi Booting Process-2]
:: [http://processors.wiki.ti.com/index.php/Linux_Core_U-Boot_User%27s_Guide UBoot User Guide]
::
[http://cache.freescale.com/files/32bit/doc/quick_ref_guide/MEDIA5200UBPG/MEDIA5200UBPG.pdf UBoot Quick Reference]
:: [<http://www.nxp.com/documents/other/uboot.pdf> UBoot Quick Start]

* Device Driver

:: [<http://www.linuxdevcenter.com/pub/a/linux/2007/07/05/devhelloworld-a-simple-introduction-to-device-drivers-under-linux.html> /dev/hello_world]
:: [http://elinux.org/Device_drivers_elinux device driver page]
:: [<http://www.opensourceforu.com/2010/12/writing-your-first-linux-driver/> opensource for u device driver series]
:: [<http://sysprogs.com/VisualKernel/tutorials/raspberry/leddriver/> RPi LED device driver example]
:: [http://www.theseus.fi/bitstream/handle/10024/74679/Nguyen_Vu.pdf?sequence=1 RPi GPIO device driver]

* System Call : ioctl, mknod

:: [<http://www.opensourceforu.com/2011/08/io-control-in-linux/> ioctl & device driver]
:: [<http://www.makelinux.net/ldd3/chp-6-sect-1> makelinux]
:: [<http://www.mech.tohoku-gakuin.ac.jp/rde/contents/linux/drivers/ioctl.html> ioctl example]

* [<http://tinycorelinux.net/welcome.html> Tiny Core Linux]

* [<https://sourceware.org/newlib/> Newlib]

* [http://elinux.org/Linux_Tiny Linux Tiny]

== ARM ==

* ARM Architecture

: [https://web.eecs.umich.edu/~prabal/teaching/eecs373-f10/readings/ARM_Architecture_Overview.pdf umich]

* Difference between ARM7 and ARM9

:: [<http://science.blurtit.com/3658747/difference-between-arm7-and-arm9> blurtit]
:: [http://tech.icfull.com/201011/Comparison-processor-ARM7-ARM9-processor_3945.html icfull]
:: [<http://infocenter.arm.com/help/index.jsp?topic=/com.arm.doc.faqs/ka13706.html> arm]
:: [<http://www.edaboard.com/thread3901.html> edaboard]
:: [<http://stackoverflow.com/questions/12570116/what-is-the-difference-between-arm7-and-arm7s> stackoverflow]
:: [<http://stackoverflow.com/questions/4381102/differences-between-arm-architectures-from-a-c-programmers-perspective> stackoverflow]

== Serial Communications ==

== SBC (Single Board Computers) ==

"" Arduino ""

* <http://robodino.org/resources/arduino> Arduino Cheat Sheet]

"" Raspberry Pi ""

* http://elinux.org/RPi_Hub RPi Hub at elinux.org]

* <http://www.raspberrypi.org/forums/viewforum.php?f=72&sid=9085fa26256ed12be721d83280a324c0> RPi Bare Metal Forum]

* <http://www.themagpi.com/issue/issue-12/article/raspberry-pi-operating-systems-all-you-can-eat-raspberry-pi/> RPi OS's]

"" Beagleboard ""

* <http://elinux.org/BeagleBoard> BeagleBoard at elinux.org]

"" Phidget "" : (Physical Widget)

:: <https://en.wikipedia.org/wiki/Phidget> wikipedia page]

:: <http://grouplab.cpsc.ucalgary.ca/phidgets/> phidget project page]

:: <http://www.phidgets.com/> phidget product shop]

==External links==

* <http://www.inf.ufpr.br/rtv06/iot/IoT%20-%20A%20survey.pdf> The IoT : A Survey]

* http://www.ee.ic.ac.uk/pcheung/teaching/ee2_computing/ Intro to Computer Systems (Cheung)]

* <http://www.csee.umbc.edu/~cpatel2/links/310/> Systems Design and Computing (Patel)]

* <http://www.waynewolf.us/embedded-book-2e/Overheads/> Computers as Components (Wayne)]