



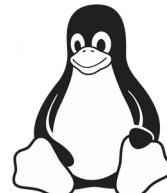
GNU/Linux 101



~whoami

Cansu TOPUKÇU

@heidenroslein

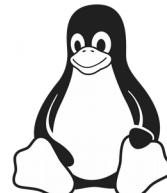




~whoishe

Onur OLGUN

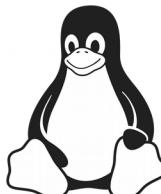
@brmrush



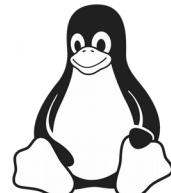


KAZANIMLAR

- Bu ne dersi?
- Ne göstereceksiniz?
- Neler yapabiliyor olacağım?

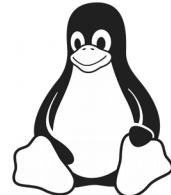


Tanış olalım



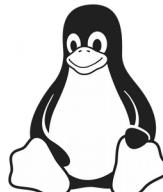


SHALL WE ?



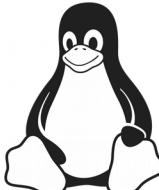
GNU Nedir ?

- 1984 – Richard Matthew STALLMAN
- UNIX işletim sistemine alternatif olmak üzere tasarlandı
- Tam donanımlı bir işletim sistemi olmaktan bir kernel uzaktaydı.



Linux Nedir ?

- 1991 – Linus Torvalds
- Kernel
- GPL License
- 2018'deki 4.15 versiyonunda >23.3 milyon satır C kodu
- Dünya çapında ~10000 developer



GNU / Linux

GNU / Linux

GNU GENERAL PUBLIC LICENSE - Version 3, / boot mem_init();
29 June 2007 - Copyright © 2007 Free Software Foundation, Inc. <<http://fsf.org/>>

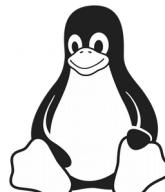
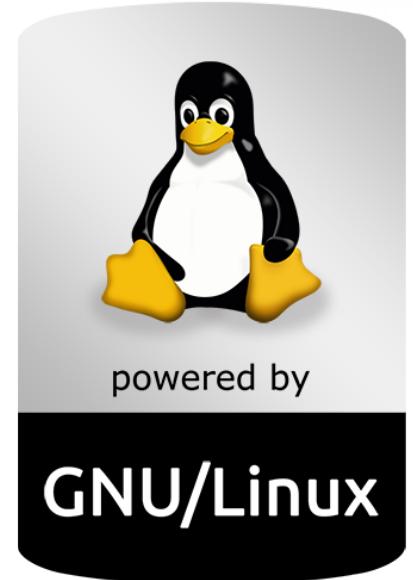
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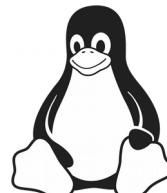
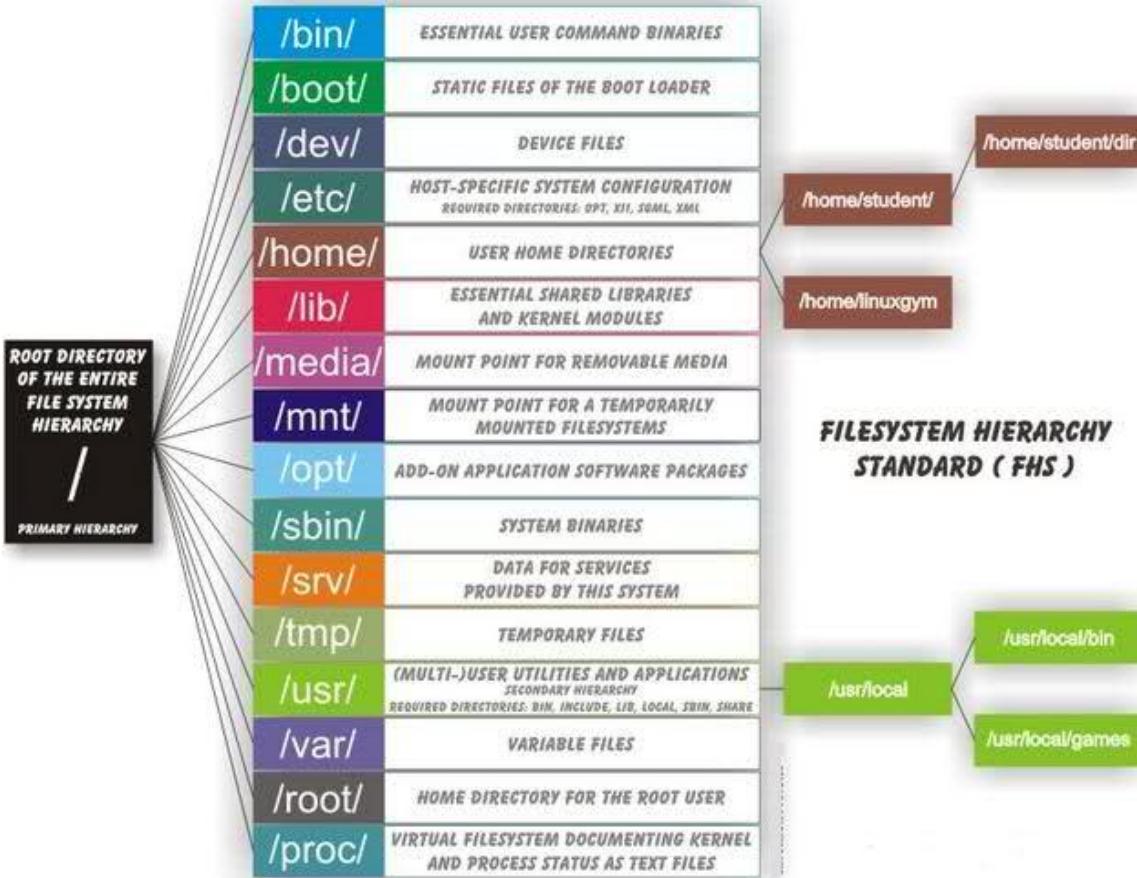
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```
page_address_init();
pr_notice("%s", linux_banner);
setup_arch(command_line);
mm_init_cpumask(mm);
setup_command_line(command_line);
setup_nr_cpu_ids();
setup_per_cpu_areas();
boot_cpu_state_init();
smp_prepare_boot_cpus();
build_all_zonelists(NULL, NULL);
page_alloc_init();
pr_notice("Kernel command line: %s\n",
parse_early_param());
after_dashes = parse_args("Booting kernel
    static command line, _start param
    -stop-param - start param
    -I, -1, NULL, unknown bootoption)
if (!IS_RX_OR_NULL(after_dashes))
    parse_args("Setting init args", after_dashes,
    NULL, set_init_arg);
jump_label_init();
setup_log_buf(0);
pidhash_init();
vfs_caches_init_early();
soft_main_executable();
tzap_init();
mm_init();
sched_init();
preempt_disable();
if (WARN(!irqs_disabled(),
        "Interrupts were enabled *very* early"))
    local_irq_disable();
idr_init_cache();
rcu_init();
trace_init();
context_tracking_init();
early_irq_init();
init_IRQ();
Tick_init();
rcu_init_hrtimers();
hrtimers_init();
softirq_init();
timekeeping_init();
time_init();
sched_clock_postinit();
printk_mmu_init();
perf_event_init();
profile_init();
call_function_init();
WARN(!irqs_disabled(), "Interrupts were
early_boot_irqs_disabled = false; local
kmem_cache_init_late();
kernel_init_freeable();
async_synchronize_full();
free_initmem();
mark_readonly();
system_state = SYSTEM_RUNNING;
```

GNU/Linux Nedir?

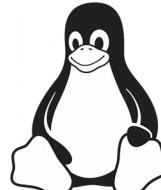
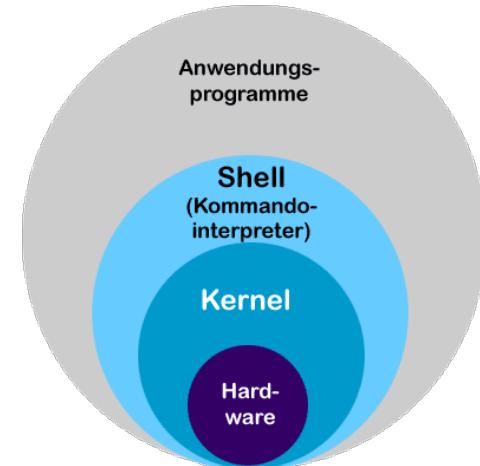
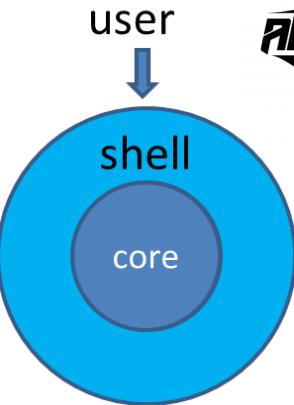
- İşletim sistemi
- Her şey dosyadır ve hiyerarşik bir düzen vardır i.e. Filesystem Hierarchy Standard
- Yapılan işlemler aslında arka planda yorumlanıp sonra da çalıştırılan komutlardır





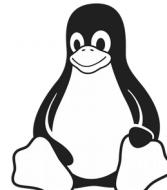
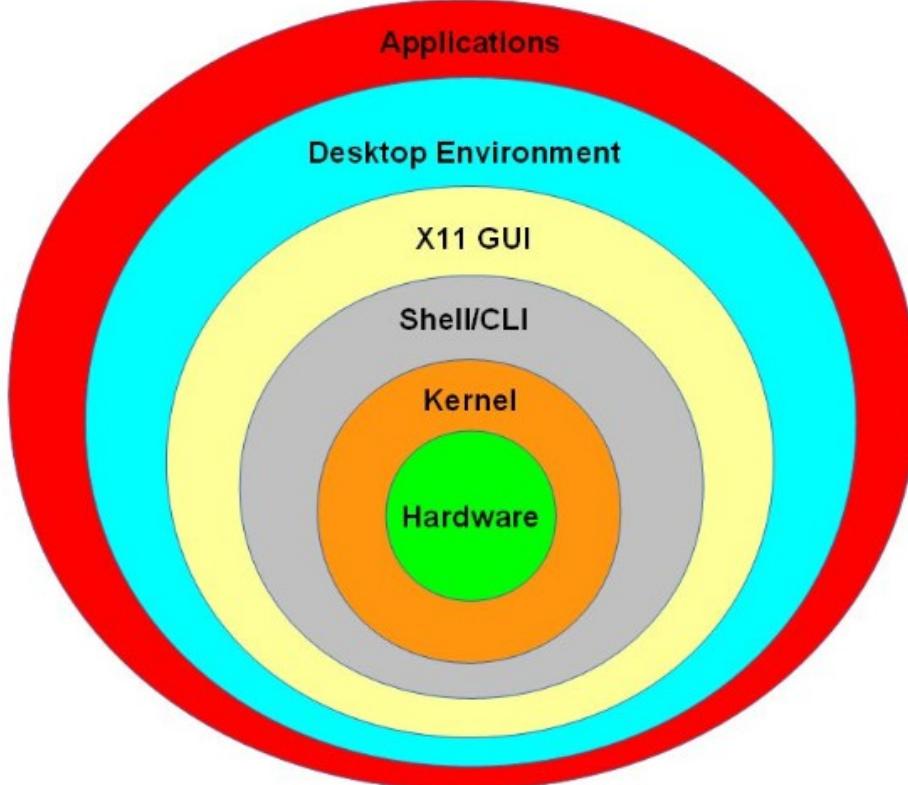
OS, GUI, Shell ve Kernel

- Kernel: İşletim sisteminin kalbi; donanımla yazılımın haberleşmesi, process ve bellek denetimi
- Shell: Kernel ile kullancı arasında köprü





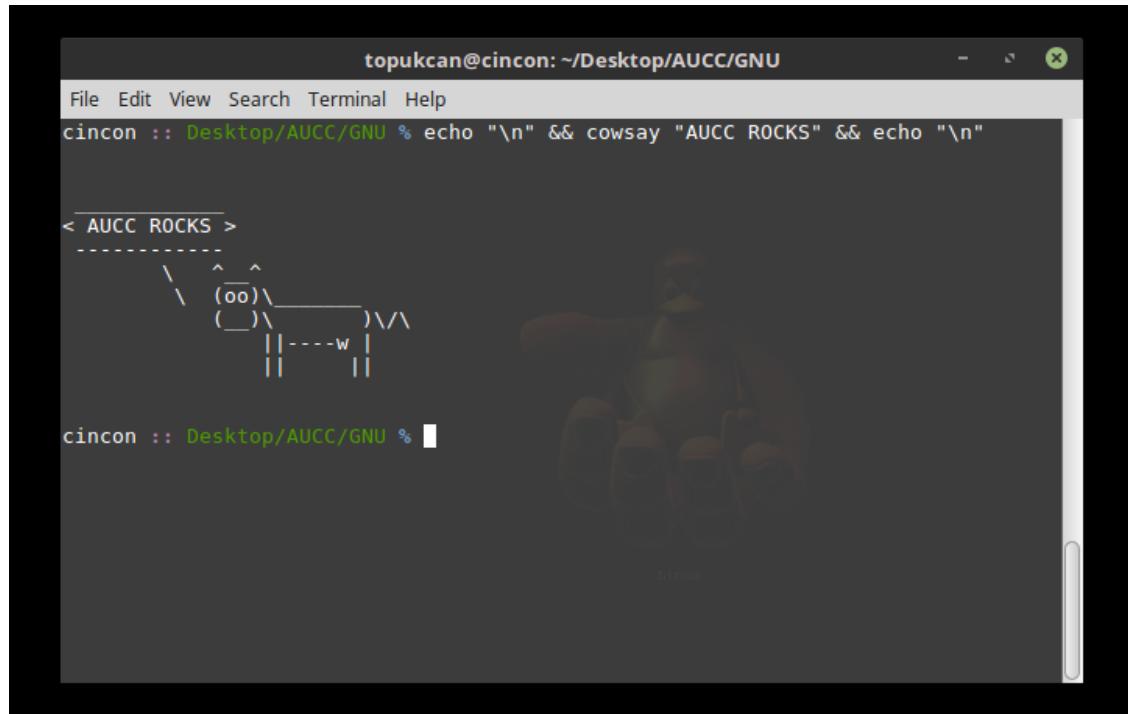
Full Linux System Diagram



Terminal nedir?

“A terminal window, also referred to as a terminal emulator, is a text-only window in a graphical user interface (GUI) that emulates a console.”

-LINFO |
http://www.linfo.org/terminal_window.html



A screenshot of a terminal window titled "topukcan@cincon: ~/Desktop/AUCC/GNU". The window shows the command "echo '\n' && cowsay \"AUCC ROCKS\" && echo '\n'" being run. The output is a text-based ASCII art of a dog's head with the text "< AUCC ROCKS >" above it. The dog has a wide-open mouth, showing its tongue and teeth. Below the terminal window, a blurred background image of a person's hand holding a smartphone is visible.





Terminalde neler yapılabilir?

- Komut verme
- Uygulama çalışma
- İndirme işlemi gerçekleştirme
- Güncelleme yapma
- Zamanlı iş yaptırmaya

ve daha bir sürü
şey..

The image shows a terminal window at the top and a web browser window below it. Both windows display the logo of the Ankara University Cyber Club (AUCC), which features a stylized white cat head with the acronym 'AUCC' integrated into its design.

Terminal Window Content:

```
cincon :: ~ % firefox aucyberclub.org
cincon :: ~ %
```

Web Browser Window Content:

Ankara University Cyber Club - AUCC - Mozilla Firefox

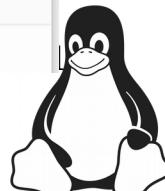
https://www.aucyberclub.org

Ankara University Cyber Club

Ankara University Cyber Club, Ekim 2016'da Ankara Üniversitesi Bilgisayar Mühendisliği Bölümü'nde kurulmuş olup hacker etiğini ve kültürünü benimserek bilgi güvenliği farkındalığı oluşturmayı, üretmeyi ve bilgisini paylaşmayı hedeflemektedir.

~ whoami

Duvurular HackYard



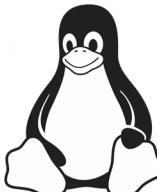
Komut verme

komut [parametre] [argüman]

komutun işleyişini
değiştirir

komuta işlemesi için
verilir

- Birden fazla komut vermek için → &



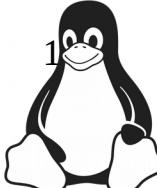
Hangisi;

-komut

-parametre

-argüman

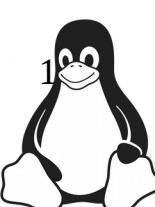
```
cincon :: Desktop/AUCC/GNU % ls -la /bin/bash
-rwxr-xr-x 1 root root 1037440 May 26 2017 /bin/bash
```





Dosya Komutları

- ls
- cd
- pwd
- mkdir
- cp
- mv





EOF

