



LINUX

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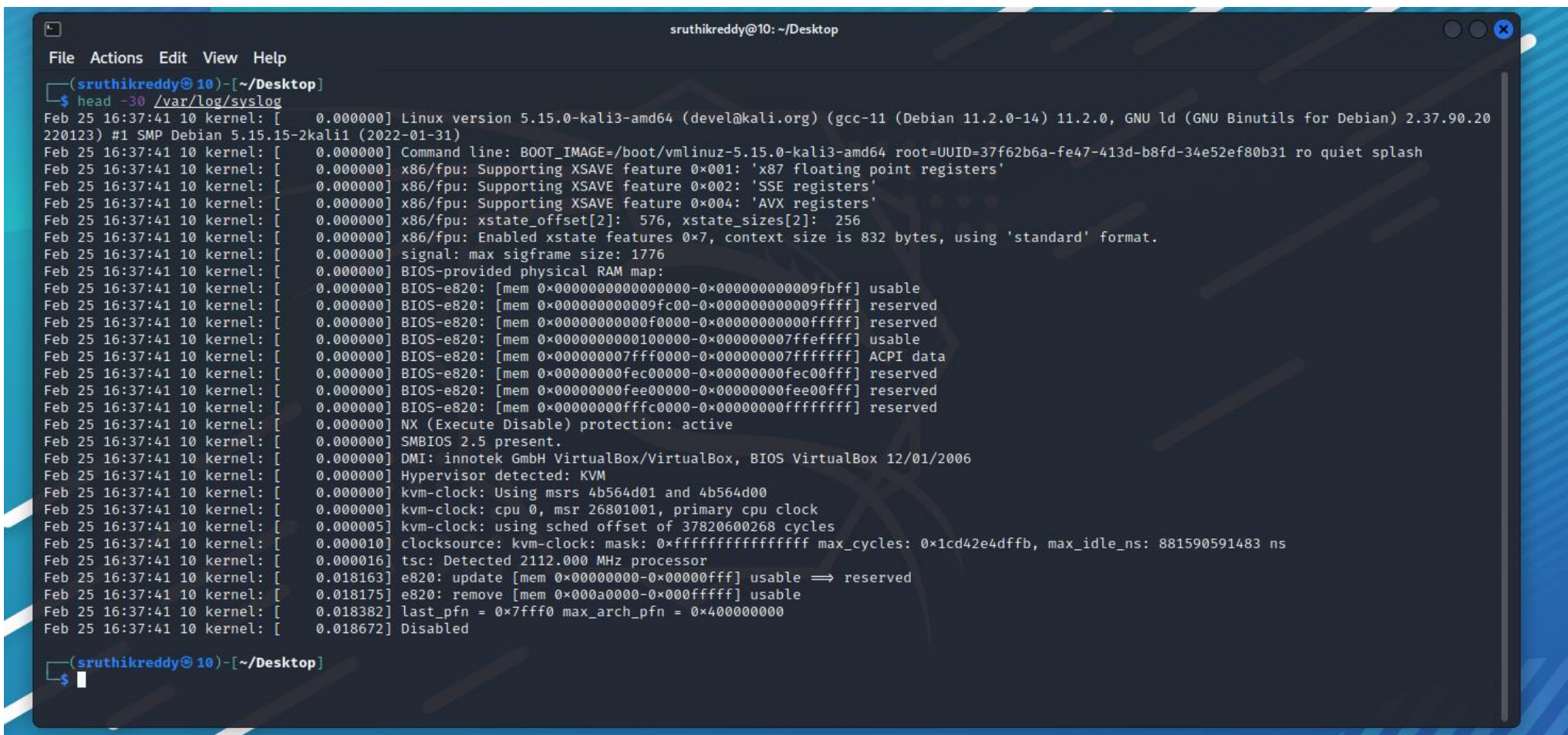
- Write a bash script to echo your name 25 times

```
GNU nano 6.0
#!/usr/bin/bash
n=25
for((i=0;i<n;i++))
do
echo "SruthikReddy"
done
```


- What command should I use to display the first 30 entries of syslog file?

Command

`head -30 /var/log/syslog`

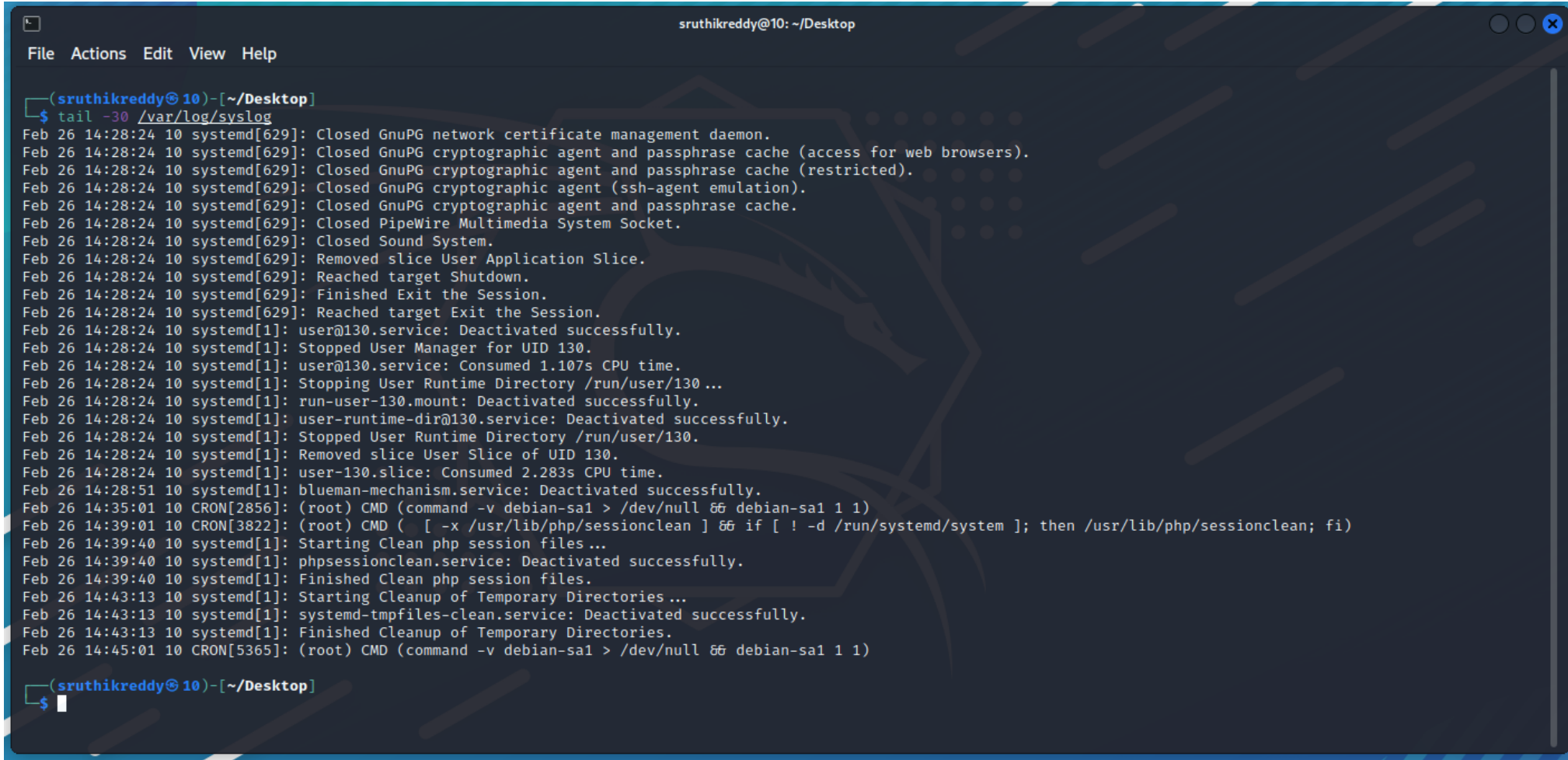


```
sruthikreddy@10: ~/Desktop
File Actions Edit View Help
(sruthikreddy@10)~[~/Desktop]
$ head -30 /var/log/syslog
Feb 25 16:37:41 10 kernel: [ 0.000000] Linux version 5.15.0-kali3-amd64 (devel@kali.org) (gcc-11 (Debian 11.2.0-14) 11.2.0, GNU ld (GNU Binutils for Debian) 2.37.90.20
220123) #1 SMP Debian 5.15.15-2kali1 (2022-01-31)
Feb 25 16:37:41 10 kernel: [ 0.000000] Command line: BOOT_IMAGE=/boot/vmlinuz-5.15.0-kali3-amd64 root=UUID=37f62b6a-fe47-413d-b8fd-34e52ef80b31 ro quiet splash
Feb 25 16:37:41 10 kernel: [ 0.000000] x86/fpu: Supporting XSAVE feature 0x001: 'x87 floating point registers'
Feb 25 16:37:41 10 kernel: [ 0.000000] x86/fpu: Supporting XSAVE feature 0x002: 'SSE registers'
Feb 25 16:37:41 10 kernel: [ 0.000000] x86/fpu: Supporting XSAVE feature 0x004: 'AVX registers'
Feb 25 16:37:41 10 kernel: [ 0.000000] x86/fpu: xstate_offset[2]: 576, xstate_sizes[2]: 256
Feb 25 16:37:41 10 kernel: [ 0.000000] x86/fpu: Enabled xstate features 0x7, context size is 832 bytes, using 'standard' format.
Feb 25 16:37:41 10 kernel: [ 0.000000] signal: max sigframe size: 1776
Feb 25 16:37:41 10 kernel: [ 0.000000] BIOS-provided physical RAM map:
Feb 25 16:37:41 10 kernel: [ 0.000000] BIOS-e820: [mem 0x0000000000000000-0x000000000009fbff] usable
Feb 25 16:37:41 10 kernel: [ 0.000000] BIOS-e820: [mem 0x000000000009fc00-0x000000000009ffff] reserved
Feb 25 16:37:41 10 kernel: [ 0.000000] BIOS-e820: [mem 0x00000000000f0000-0x00000000000fffff] reserved
Feb 25 16:37:41 10 kernel: [ 0.000000] BIOS-e820: [mem 0x0000000000100000-0x00000000007fffff] usable
Feb 25 16:37:41 10 kernel: [ 0.000000] BIOS-e820: [mem 0x0000000007fff000-0x0000000007ffffff] ACPI data
Feb 25 16:37:41 10 kernel: [ 0.000000] BIOS-e820: [mem 0x00000000fec00000-0x00000000fec0ffff] reserved
Feb 25 16:37:41 10 kernel: [ 0.000000] BIOS-e820: [mem 0x00000000fee00000-0x00000000fee0ffff] reserved
Feb 25 16:37:41 10 kernel: [ 0.000000] BIOS-e820: [mem 0x00000000fffc0000-0x00000000ffffff] reserved
Feb 25 16:37:41 10 kernel: [ 0.000000] NX (Execute Disable) protection: active
Feb 25 16:37:41 10 kernel: [ 0.000000] SMBIOS 2.5 present.
Feb 25 16:37:41 10 kernel: [ 0.000000] DMI: innotek GmbH VirtualBox/VirtualBox, BIOS VirtualBox 12/01/2006
Feb 25 16:37:41 10 kernel: [ 0.000000] Hypervisor detected: KVM
Feb 25 16:37:41 10 kernel: [ 0.000000] kvm-clock: Using msrs 4b564d01 and 4b564d00
Feb 25 16:37:41 10 kernel: [ 0.000000] kvm-clock: cpu 0, msr 26801001, primary cpu clock
Feb 25 16:37:41 10 kernel: [ 0.000005] kvm-clock: using sched offset of 37820600268 cycles
Feb 25 16:37:41 10 kernel: [ 0.000010] clocksource: kvm-clock: mask: 0xffffffffffffffff max_cycles: 0x1cd42e4dffb, max_idle_ns: 881590591483 ns
Feb 25 16:37:41 10 kernel: [ 0.000016] tsc: Detected 2112.000 MHz processor
Feb 25 16:37:41 10 kernel: [ 0.018163] e820: update [mem 0x00000000-0x00000fff] usable ==> reserved
Feb 25 16:37:41 10 kernel: [ 0.018175] e820: remove [mem 0x000a0000-0x000fffff] usable
Feb 25 16:37:41 10 kernel: [ 0.018382] last_pfn = 0x7fff0 max_arch_pfn = 0x400000000
Feb 25 16:37:41 10 kernel: [ 0.018672] Disabled
(sruthikreddy@10)~[~/Desktop]
$
```

- What command should I use to display the last 30 entries of syslog file?

Command

`tail -30 /var/log/syslog`



```
sruthikreddy@10: ~/Desktop
File Actions Edit View Help

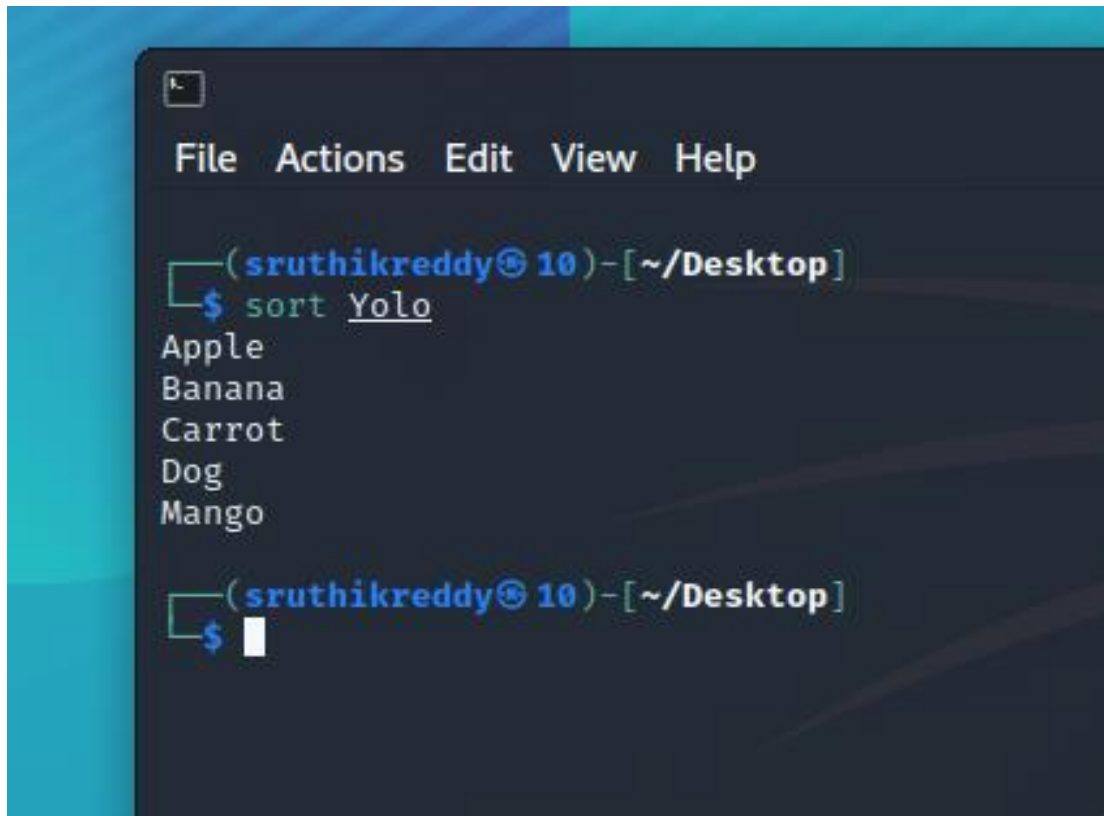
(sruthikreddy@10)~[~/Desktop]
$ tail -30 /var/log/syslog
Feb 26 14:28:24 10 systemd[629]: Closed GnuPG network certificate management daemon.
Feb 26 14:28:24 10 systemd[629]: Closed GnuPG cryptographic agent and passphrase cache (access for web browsers).
Feb 26 14:28:24 10 systemd[629]: Closed GnuPG cryptographic agent and passphrase cache (restricted).
Feb 26 14:28:24 10 systemd[629]: Closed GnuPG cryptographic agent (ssh-agent emulation).
Feb 26 14:28:24 10 systemd[629]: Closed GnuPG cryptographic agent and passphrase cache.
Feb 26 14:28:24 10 systemd[629]: Closed PipeWire Multimedia System Socket.
Feb 26 14:28:24 10 systemd[629]: Closed Sound System.
Feb 26 14:28:24 10 systemd[629]: Removed slice User Application Slice.
Feb 26 14:28:24 10 systemd[629]: Reached target Shutdown.
Feb 26 14:28:24 10 systemd[629]: Finished Exit the Session.
Feb 26 14:28:24 10 systemd[629]: Reached target Exit the Session.
Feb 26 14:28:24 10 systemd[1]: user@130.service: Deactivated successfully.
Feb 26 14:28:24 10 systemd[1]: Stopped User Manager for UID 130.
Feb 26 14:28:24 10 systemd[1]: user@130.service: Consumed 1.107s CPU time.
Feb 26 14:28:24 10 systemd[1]: Stopping User Runtime Directory /run/user/130...
Feb 26 14:28:24 10 systemd[1]: run-user-130.mount: Deactivated successfully.
Feb 26 14:28:24 10 systemd[1]: user-runtime-dir@130.service: Deactivated successfully.
Feb 26 14:28:24 10 systemd[1]: Stopped User Runtime Directory /run/user/130.
Feb 26 14:28:24 10 systemd[1]: Removed slice User Slice of UID 130.
Feb 26 14:28:24 10 systemd[1]: user-130.slice: Consumed 2.283s CPU time.
Feb 26 14:28:51 10 systemd[1]: blueman-mechanism.service: Deactivated successfully.
Feb 26 14:35:01 10 CRON[2856]: (root) CMD (command -v debian-sa1 > /dev/null && debian-sa1 1 1)
Feb 26 14:39:01 10 CRON[3822]: (root) CMD ( [ -x /usr/lib/php/sessionclean ] && if [ ! -d /run/systemd/system ]; then /usr/lib/php/sessionclean; fi)
Feb 26 14:39:40 10 systemd[1]: Starting Clean php session files...
Feb 26 14:39:40 10 systemd[1]: phpsessionclean.service: Deactivated successfully.
Feb 26 14:39:40 10 systemd[1]: Finished Clean php session files.
Feb 26 14:43:13 10 systemd[1]: Starting Cleanup of Temporary Directories...
Feb 26 14:43:13 10 systemd[1]: systemd-tmpfiles-clean.service: Deactivated successfully.
Feb 26 14:43:13 10 systemd[1]: Finished Cleanup of Temporary Directories.
Feb 26 14:45:01 10 CRON[5365]: (root) CMD (command -v debian-sa1 > /dev/null && debian-sa1 1 1)

(sruthikreddy@10)~[~/Desktop]
$
```

- What command should I use to arrange the entries of a file

- Alphabetically

Sorted in order

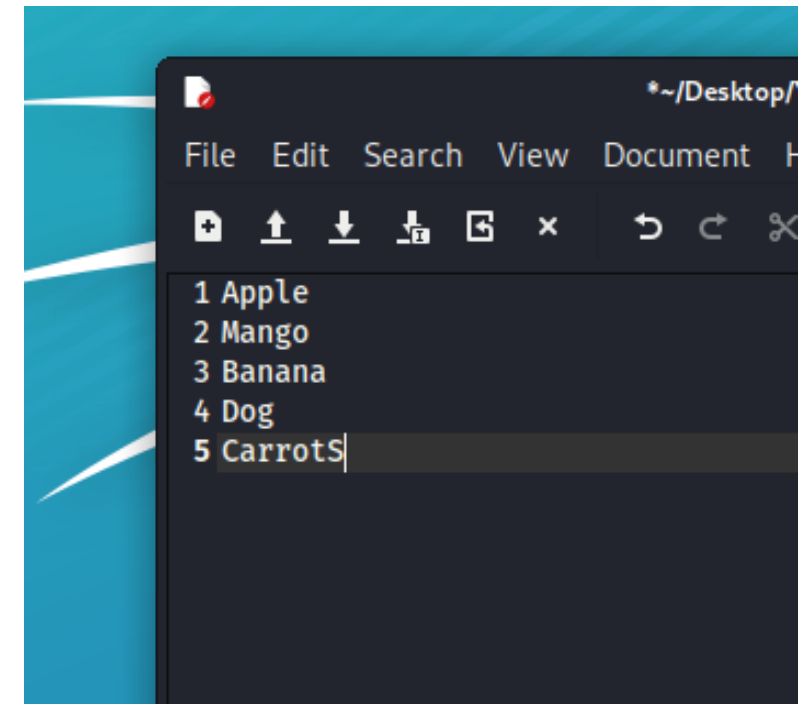


A terminal window with a dark background and light blue text. The prompt is `(sruthikreddy@10) - [~/Desktop]`. The command `$ sort Yolo` has been entered. The output is a list of words: `Apple`, `Banana`, `Carrot`, `Dog`, and `Mango`, each on a new line. Below this, the prompt is shown again with a cursor.

```
(sruthikreddy@10) - [~/Desktop]
$ sort Yolo
Apple
Banana
Carrot
Dog
Mango

(sruthikreddy@10) - [~/Desktop]
$
```

Original

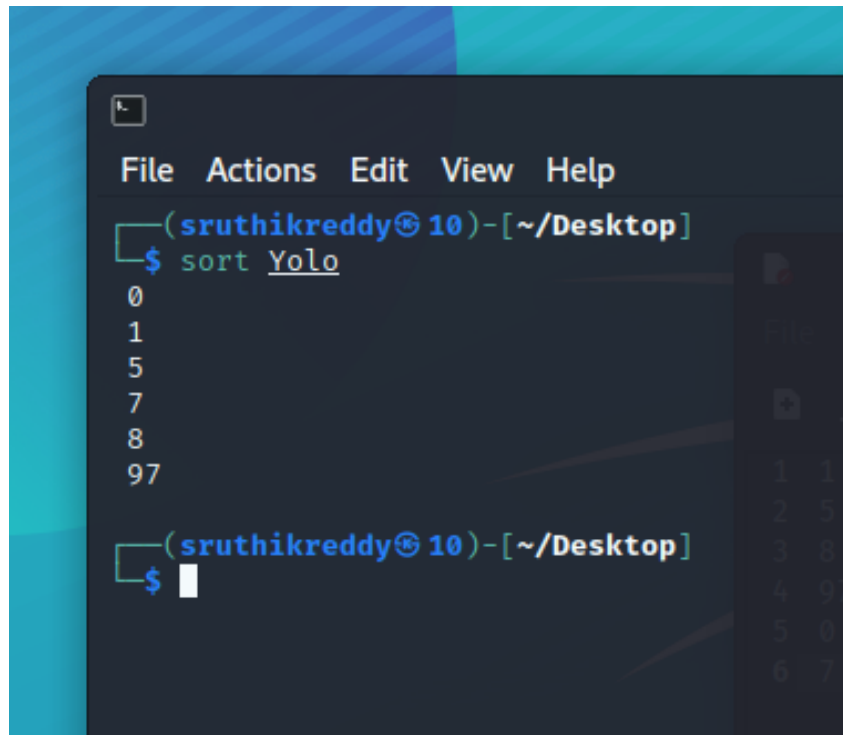


A text editor window with a dark background and light blue text. The title bar shows `*~/Desktop/`. The menu bar includes `File`, `Edit`, `Search`, `View`, `Document`, and `H`. The toolbar has icons for file operations. The content area shows a list of words: `1 Apple`, `2 Mango`, `3 Banana`, `4 Dog`, and `5 Carrots`, each on a new line. The cursor is at the end of the last line.

```
*~/Desktop/
File Edit Search View Document H
1 Apple
2 Mango
3 Banana
4 Dog
5 Carrots
```

◦ Numerical order

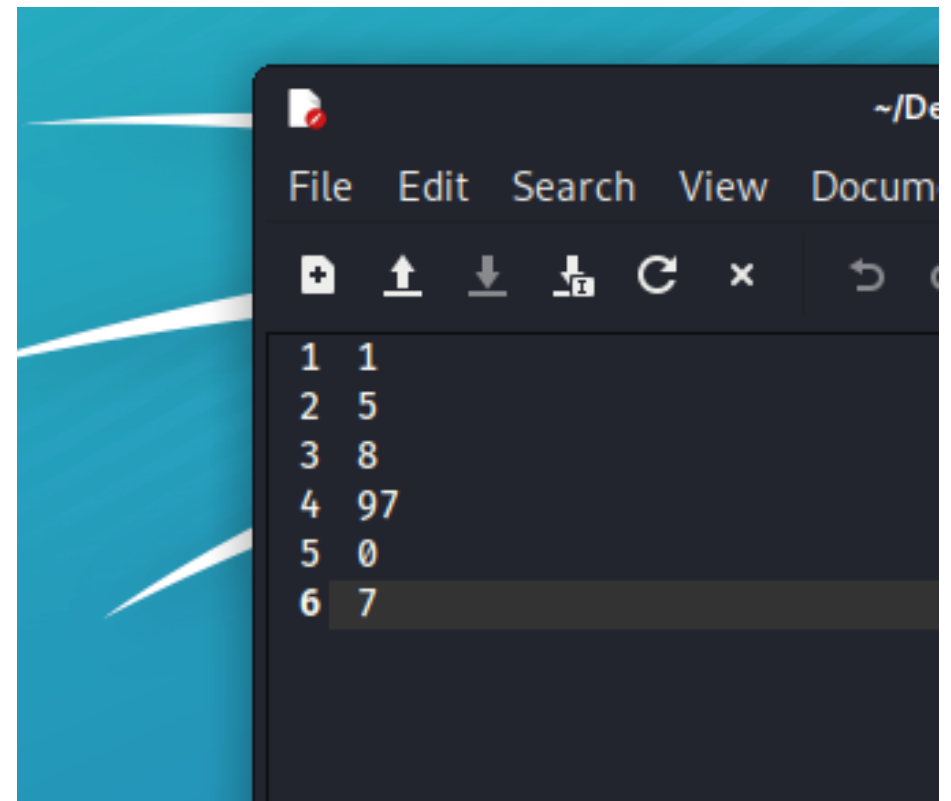
Sorted



```
(sruthikreddy@10)-[~/Desktop]
$ sort Yolo
0
1
5
7
8
97
```

The terminal window shows the command `sort Yolo` being executed. The output is a list of numbers: 0, 1, 5, 7, 8, and 97, which are sorted in numerical order.

Original

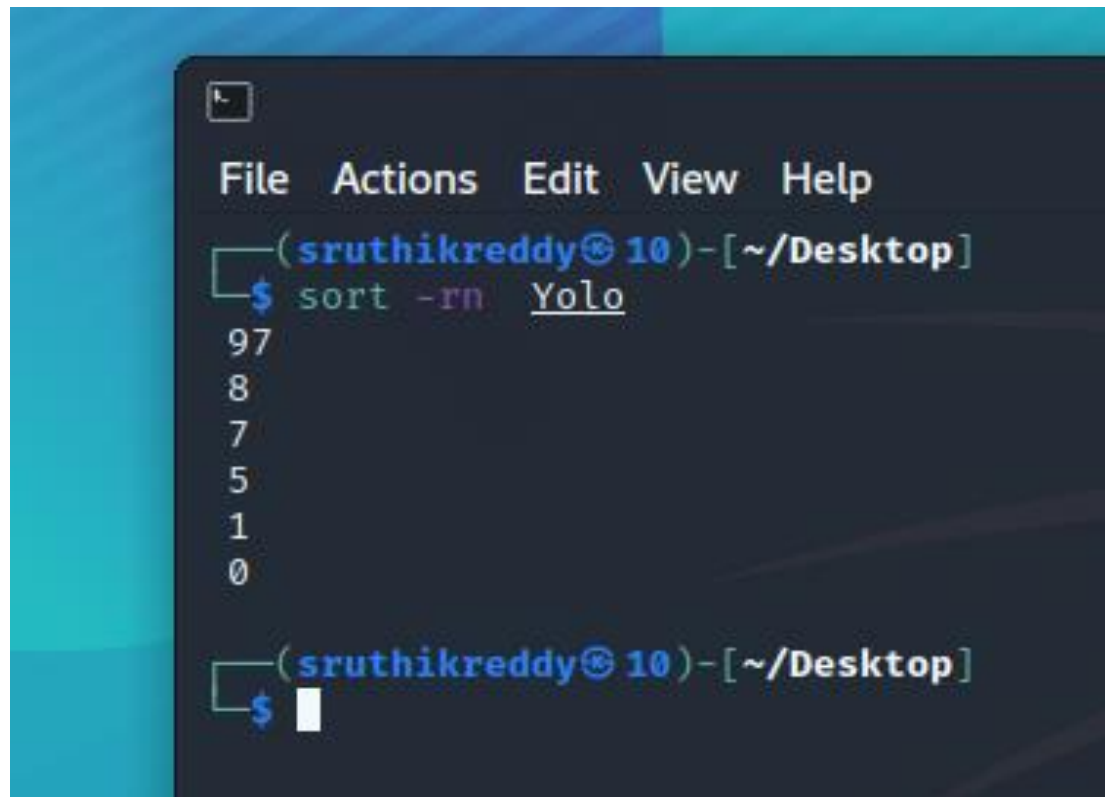


```
1 1
2 5
3 8
4 97
5 0
6 7
```

The text editor window shows the original content of the file 'Yolo'. It contains six lines of text, each with a line number followed by a space and a number: 1 1, 2 5, 3 8, 4 97, 5 0, and 6 7.

◦ Reverse order

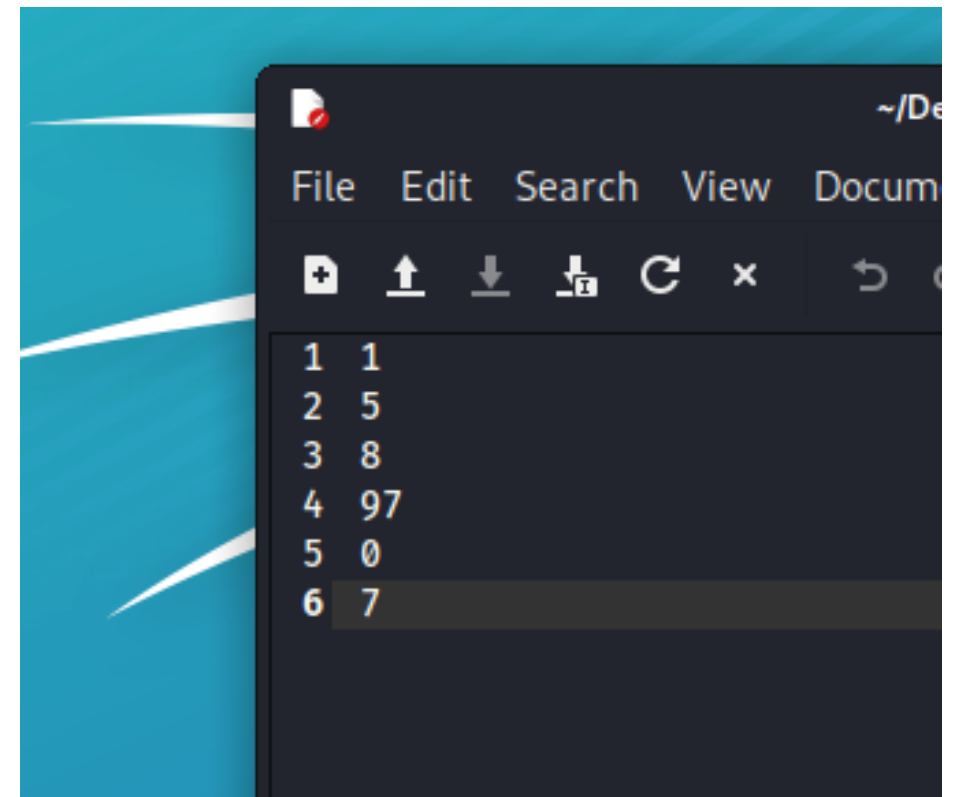
Sorted



```
(sruthikreddy@10)-[~/Desktop]  
$ sort -rn Yolo  
97  
8  
7  
5  
1  
0  
  
(sruthikreddy@10)-[~/Desktop]  
$
```

A terminal window with a dark background and light blue text. The prompt is `(sruthikreddy@10)-[~/Desktop]`. The command `sort -rn Yolo` is entered. The output is a list of numbers: 97, 8, 7, 5, 1, 0. The prompt is then shown again with a cursor.

Original

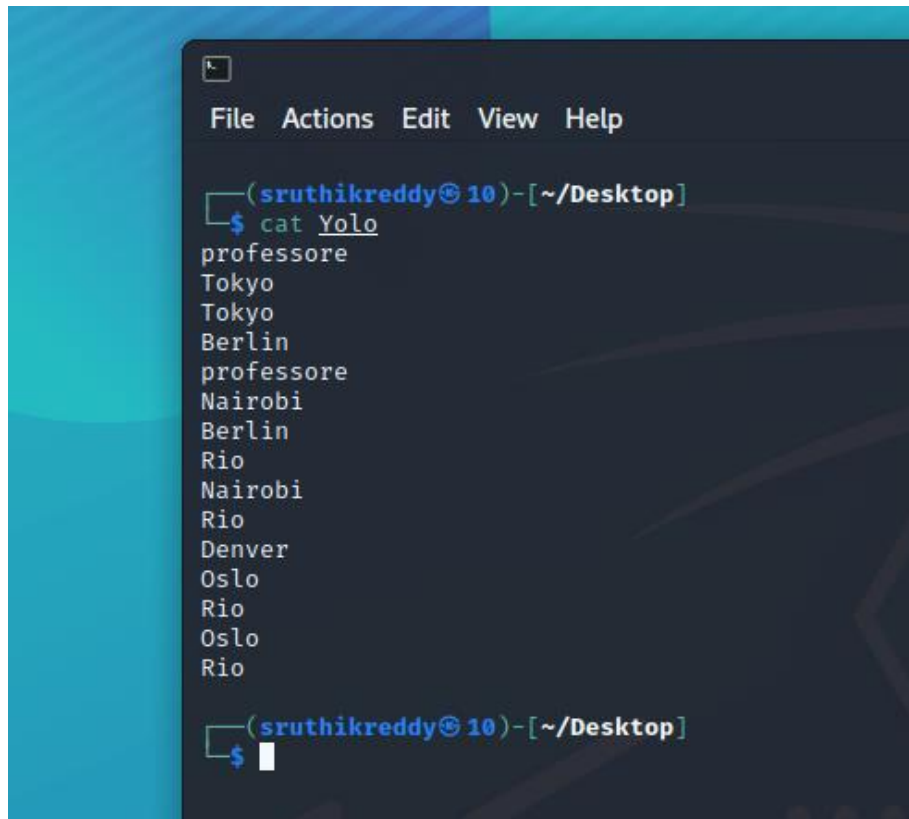


```
1 1  
2 5  
3 8  
4 97  
5 0  
6 7
```

A text editor window with a dark background and light blue text. The menu bar includes File, Edit, Search, View, and Document. The toolbar includes icons for new, open, save, undo, redo, and close. The content area shows a list of numbers: 1 1, 2 5, 3 8, 4 97, 5 0, 6 7. The line containing '6 7' is highlighted.

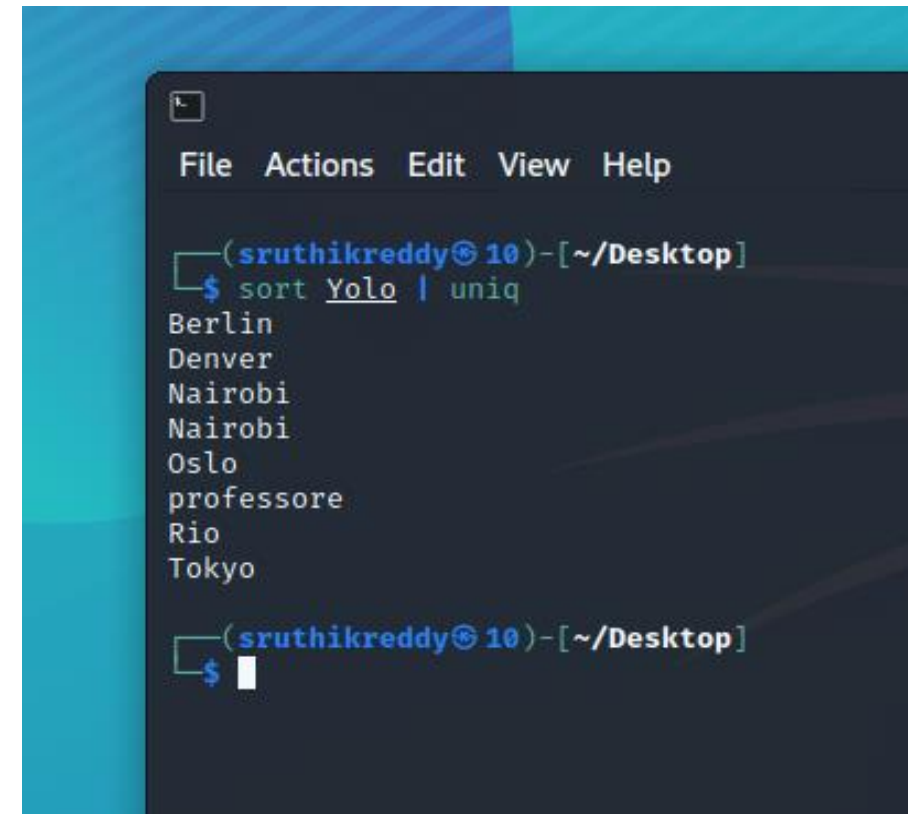
- Copee is a hard-working cop. He found a case and almost at the verge of cracking it. It could be his best breakthrough. He has the list of criminals but lots of duplicates are there. He needs to find the only one that is **different**. He sought your help. How will you sort this issue?

Original



```
(sruthikreddy@10)-[~/Desktop]
$ cat Yolo
professore
Tokyo
Tokyo
Berlin
professore
Nairobi
Berlin
Rio
Nairobi
Rio
Denver
Oslo
Rio
Oslo
Rio
```

Sorted



```
(sruthikreddy@10)-[~/Desktop]
$ sort Yolo | uniq
Berlin
Denver
Nairobi
Nairobi
Oslo
professore
Rio
Tokyo
```


- What are the four parts of file's permission?

- Read(r) – Allowed to read the file
- Write(w) – Allowed to change the contents of file
- Execute – Allowed to use the file as a command
- Delete – Allowed to move the file to trash