

МИНИСТЕРСТВО НАУКИ И ВЫСШЕГО ОБРАЗОВАНИЯ
РОССИЙСКОЙ ФЕДЕРАЦИИ
Федеральное государственное автономное образовательное учреждение
высшего образования
«КРЫМСКИЙ ФЕДЕРАЛЬНЫЙ УНИВЕРСИТЕТ им. В. И. ВЕРНАДСКОГО»
ФИЗИКО-ТЕХНИЧЕСКИЙ ИНСТИТУТ
Кафедра компьютерной инженерии и моделирования

ОТЧЕТ ПО ПРАКТИЧЕСКОМУ ЗАДАНИЮ №1
«СИСТЕМА КОМАНД.ВВЕДЕНИЕ В ПРОЦЕССЫ И ПОТОКИ»

Практическая работа
по дисциплине «Программная инженерия»
студента 1 курса группы ПИ-б-о-241(1)
Коробка Илья Леонидович

09.03.04 «Программная инженерия»

Симферополь, 2025

Ход работы

1. Справочная система Linux

1. Чтобы просмотреть справочную страницу по команде нужно воспользоваться утилитой `man`.

```
MAN(1)
NAME
    man - an interface to the system reference manuals
```

2. Для того чтобы настроить отображение кириллицы мне пришлось ввести пару команд:

```
sudo apt install console-cyrillic
sudo dpkg-reconfigure console-setup
```

В появившемся окне я оставил формат `utf-8` и поменял используемый алфавит на тот, что содержит кириллицу.

Итоговая команда выглядит так: `man -L ru ls`

```
LS(1)
ИМЯ
    ls - выводит список содержимого каталога
```

3.

ubuntu manuals

focal (1) ls.1plan9.gz

Provided by: 9base_6-7build1_amd64 🐙

NAME

ls, lc - list contents of directory

SYNOPSIS

ls [-dlnmpqrstufQ] name ...

4.

```
boss@ubuntu-serv:~$ apropos -a add user group
addgroup (8)          - add or manipulate users or groups
adduser (8)           - add or manipulate users or groups
adduser.conf (5)      - configuration file for adduser (8) and addgroup (8)
boss@ubuntu-serv:~$
```

5.

```

boss@ubuntu-serv:~$ whatis -w "*grp*"
chgrp (1)          - change group ownership
getpgrp (2)        - set/get process group
grpck (8)          - verify integrity of group files
grpconv (8)        - convert to and from shadow passwords and groups
grpunconv (8)      - convert to and from shadow passwords and groups
newgrp (1)         - log in to a new group
setpgrp (2)        - set/get process group
tcgetpgrp (3)      - get and set terminal foreground process group
tcsetpgrp (3)      - get and set terminal foreground process group
boss@ubuntu-serv:~$

```

6.

```

Next: Stand-alone Info, Up: (dir)

Stand-alone GNU Info
*****

This documentation describes the stand-alone Info reader which you can
use to read Info documentation.

```

7.

```

Next: dir invocation, Up: Directory listing

10.1 'ls': List directory contents
=====

The 'ls' program lists information about files (of any type, including
directories). Options and file arguments can be intermixed arbitrarily,
as usual. Later options override earlier options that are incompatible.

```

8.

```

Usage: ls [OPTION]... [FILE]...
List information about the FILES (the current directory by default).
Sort entries alphabetically if none of -cftuvSUX nor --sort is specified.

```

9. Для проверки я выбрал команду ls самая сжатая информация через ключ --help. Более полная через info, а в man расписываются все мелочи.

2. Файлы и утилиты для работы с ними

1.

```

boss@ubuntu-serv:~$ pwd
/home/boss
boss@ubuntu-serv:~$

```

```

boss@ubuntu-serv:/$ ls -all
total 88
drwxr-xr-x 23 root root 4096 Mar 17 06:56 .
drwxr-xr-x 23 root root 4096 Mar 17 06:56 ..
lrwxrwxrwx 1 root root 7 Apr 22 2024 bin -> usr/bin
drwxr-xr-x 2 root root 4096 Feb 26 2024 bin.usr-is-merged
drwxr-xr-x 3 root root 4096 Mar 17 13:21 boot
dr-xr-xr-x 2 root root 4096 Mar 17 06:53 cdrom
drwxr-xr-x 19 root root 4040 Mar 17 13:29 dev
drwxr-xr-x 108 root root 4096 Mar 17 07:41 etc
drwxr-xr-x 4 root root 4096 Mar 17 07:16 home
lrwxrwxrwx 1 root root 7 Apr 22 2024 lib -> usr/lib
lrwxrwxrwx 1 root root 9 Apr 22 2024 lib64 -> usr/lib64
drwxr-xr-x 2 root root 4096 Feb 26 2024 lib.usr-is-merged
drwx----- 2 root root 16384 Mar 17 06:56 lost+found
drwxr-xr-x 2 root root 4096 Feb 16 20:51 media
drwxr-xr-x 2 root root 4096 Feb 16 20:51 mnt
drwxr-xr-x 2 root root 4096 Feb 16 20:51 opt
dr-xr-xr-x 179 root root 0 Mar 17 13:29 proc
drwx----- 3 root root 4096 Mar 17 07:37 root
drwxr-xr-x 27 root root 800 Mar 17 13:35 run
lrwxrwxrwx 1 root root 8 Apr 22 2024/sbin -> usr/sbin
drwxr-xr-x 2 root root 4096 Aug 22 2024/sbin.usr-is-merged
drwxr-xr-x 2 root root 4096 Mar 17 07:07 snap
drwxr-xr-x 2 root root 4096 Feb 16 20:51 srv
dr-xr-xr-x 13 root root 0 Mar 17 13:59 sys
drwxrwxrwt 14 root root 4096 Mar 17 13:35 tmp
drwxr-xr-x 12 root root 4096 Feb 16 20:51 usr
drwxr-xr-x 13 root root 4096 Mar 17 07:07 var

```

2.

```

boss@ubuntu-serv:/$ ls -allSr
total 88
dr-xr-xr-x 13 root root 0 Mar 17 13:59 sys
dr-xr-xr-x 178 root root 0 Mar 17 13:29 proc
lrwxrwxrwx 1 root root 7 Apr 22 2024 lib -> usr/lib
lrwxrwxrwx 1 root root 7 Apr 22 2024 bin -> usr/bin
lrwxrwxrwx 1 root root 8 Apr 22 2024/sbin -> usr/sbin
lrwxrwxrwx 1 root root 9 Apr 22 2024 lib64 -> usr/lib64
drwxr-xr-x 27 root root 800 Mar 17 13:35 run
drwxr-xr-x 19 root root 4040 Mar 17 13:29 dev
drwxr-xr-x 13 root root 4096 Mar 17 07:07 var
drwxr-xr-x 12 root root 4096 Feb 16 20:51 usr
drwxrwxrwt 14 root root 4096 Mar 17 13:35 tmp
drwxr-xr-x 2 root root 4096 Feb 16 20:51 srv
drwxr-xr-x 2 root root 4096 Mar 17 07:07 snap
drwxr-xr-x 2 root root 4096 Aug 22 2024/sbin.usr-is-merged
drwx----- 3 root root 4096 Mar 17 07:37 root
drwxr-xr-x 2 root root 4096 Feb 16 20:51 opt
drwxr-xr-x 2 root root 4096 Feb 16 20:51 mnt
drwxr-xr-x 2 root root 4096 Feb 16 20:51 media
drwxr-xr-x 2 root root 4096 Feb 26 2024 lib.usr-is-merged
drwxr-xr-x 4 root root 4096 Mar 17 07:16 home
drwxr-xr-x 108 root root 4096 Mar 17 07:41 etc
dr-xr-xr-x 2 root root 4096 Mar 17 06:53 cdrom
drwxr-xr-x 3 root root 4096 Mar 17 13:21 boot
drwxr-xr-x 2 root root 4096 Feb 26 2024 bin.usr-is-merged
drwxr-xr-x 23 root root 4096 Mar 17 06:56 ..
drwxr-xr-x 23 root root 4096 Mar 17 06:56 .
drwx----- 2 root root 16384 Mar 17 06:56 lost+found

```

3.

```

tree: missing argument to -L option.
boss@ubuntu-serv:/$ tree -L 1
.
├── bin -> usr/bin
├── bin.usr-is-merged
├── boot
├── cdrom
├── dev
├── etc
├── home
├── lib -> usr/lib
├── lib64 -> usr/lib64
├── lib.usr-is-merged
├── lost+found
├── media
├── mnt
├── opt
├── proc
├── root
├── run
├── sbin -> usr/sbin
├── sbin.usr-is-merged
├── snap
├── srv
├── sys
├── tmp
├── usr
└── var

26 directories, 0 files

```

4.

```

[drwxr-xr-x  0] machinecheck2
├── [-rw-r--r-- 4.0K] autosuspend_delay_ms
├── [-rw-r--r-- 4.0K] control
├── [-rw-r--r-- 4.0K] runtime_active_kids
├── [-rw-r--r-- 4.0K] runtime_active_time
├── [-rw-r--r-- 4.0K] runtime_enabled
├── [-rw-r--r-- 4.0K] runtime_status
├── [-rw-r--r-- 4.0K] runtime_suspended_time
├── [-rw-r--r-- 4.0K] runtime_usage
├── [-rw-r--r-- 4.0K] print_all
├── [lrwxrwxrwx  0] subsystem -> ../../../../bus/machinecheck
├── [-rw-r--r-- 4.0K] trigger
├── [-rw-r--r-- 4.0K] uevent
└── [drwxr-xr-x  0] machinecheck2
    ├── [-rw-r--r-- 4.0K] check_interval
    ├── [-rw-r--r-- 4.0K] cmci_disabled
    ├── [-rw-r--r-- 4.0K] dont_log_ce
    ├── [-rw-r--r-- 4.0K] ignore_ce
    └── [-rw-r--r-- 4.0K] monarch_timeout

```

6-7-8.

```

boss@ubuntu-serv:~$ cd /
boss@ubuntu-serv:/$ cd ~
boss@ubuntu-serv:~$ cd -
/
boss@ubuntu-serv:/$

```

9.

```

boss@ubuntu-serv:~/home$ cd
boss@ubuntu-serv:~$ mkdir project
boss@ubuntu-serv:~$ mkdir -p project

```


10.

```

boss@ubuntu-serv:~$ mkdir -p project/app/items project/app/site
boss@ubuntu-serv:~$ tree -L 3
├── project
│   └── app
│       ├── items
│       └── site
5 directories, 0 files

```

11-12-13.

```

5 directories, 0 files
boss@ubuntu-serv:~$ touch ./project/app/site/empty.html
boss@ubuntu-serv:~$ cd project/app/site
boss@ubuntu-serv:~/project/app/site$ ls
empty.html
boss@ubuntu-serv:~/project/app/site$ echo "import socketserver" > app.py
boss@ubuntu-serv:~/project/app/site$ echo "from http.server import SimpleHTTPRequestHandler" >> app.py
boss@ubuntu-serv:~/project/app/site$ echo "with socketserver.TCPServer(('',8000), SimpleHTTPRequestHandler) as httpd:" >> app.py
boss@ubuntu-serv:~/project/app/site$ echo "    httpd.serve_forever()" >> app.py
boss@ubuntu-serv:~/project/app/site$ _

```

14.

```

boss@ubuntu-serv:~/project/app/site$ cat ./app.py
import socketserver
from http.server import SimpleHTTPRequestHandler
with socketserver.TCPServer(('',8000), SimpleHTTPRequestHandler) as httpd:
    httpd.serve_forever()
boss@ubuntu-serv:~/project/app/site$

```

```

boss@ubuntu-serv:~$ tree -L 4
├── project
│   └── app
│       ├── items
│       └── site
│           ├── app.py
│           └── empty.html
5 directories, 2 files
boss@ubuntu-serv:~$ _

```

15-17.

```

boss@ubuntu-serv:~/project/app/site$ cat << GOD >> index.html
> <!DOCTYPE html>
> <html lang="en">
> <head>
>   <meta charset="UTF-8">
>   <title>Animals</title>
> </head>
> <body>
>   <a href="./all.html">All</a><br>
>   <a href="./cats.html">Cats</a><br>
>   <a href="./dogs.html">Dogs</a>
> </body>
> </html>
> GOD
boss@ubuntu-serv:~/project/app/site$ cat index.html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Animals</title>
</head>
<body>
  <a href="./all.html">All</a><br>
  <a href="./cats.html">Cats</a><br>
  <a href="./dogs.html">Dogs</a>
</body>
</html>
boss@ubuntu-serv:~/project/app/site$ cd ../../
boss@ubuntu-serv:~/project$ cd ..
boss@ubuntu-serv:~$ tree -L 4
.
├── project
│   └── app
│       ├── items
│       └── site
│           ├── app.py
│           ├── empty.html
│           └── index.html
5 directories, 3 files
boss@ubuntu-serv:~$ _

```

18-19.

```

boss@ubuntu-serv:~/project/app/site$ head -n 6 index.html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Animals</title>
</head>
boss@ubuntu-serv:~/project/app/site$ tail -n 6 index.html
<body>
  <a href="./all.html">All</a><br>
  <a href="./cats.html">Cats</a><br>
  <a href="./dogs.html">Dogs</a>
</body>
</html>
boss@ubuntu-serv:~/project/app/site$

```

20-25.

```
"dog5" 2L, 28B written
boss@ubuntu-serv:~/project/app/items/dogs$ cat dog1 dog2 dog3 dog4 dog5
<li class="dog">Adriel</li>

<li class="dog">Joji</li>
<li class="dog">Loli</li>

<li class="dog">Babyk</li>

<li class="dog">Layki</li>

boss@ubuntu-serv:~/project/app/items/dogs$
```

26-28.

```
boss@ubuntu-serv:~/project/app/site$ find ../items -type f -name 'dog*' -exec cat ../items/{} > dogs \;
boss@ubuntu-serv:~/project/app/site$ find ../items -type f -name 'cat*' -exec cat ../items/{} > cats \;
boss@ubuntu-serv:~/project/app/site$ find ../items -type f -name '*' -exec cat ../items/{} > all \;
boss@ubuntu-serv:~/project/app/site$
```

```
boss@ubuntu-serv:~/project/app/site$ cat all
<li class="cat">Rizhik</li>
<li class="cat">Murzik</li>
<li class="cat">Bobik</li>
<li class="cat">Zhopik</li>
<li class="cat">Chmopik</li>
<li class="dog">Loli</li>
<li class="dog">Layki</li>
<li class="dog">Adriel</li>
<li class="dog">Joji</li>
<li class="dog">Babyk</li>
boss@ubuntu-serv:~/project/app/site$
```

29-30.

```
boss@ubuntu-serv:~/project/app/site$ cd
boss@ubuntu-serv:~$ tree -L 7
```

```

├── project
│   ├── app
│   │   ├── cats.html
│   │   └── items
│   │       ├── cats
│   │       │   ├── cat1
│   │       │   ├── cat2
│   │       │   ├── cat3
│   │       │   ├── cat4
│   │       │   └── cat5
│   │       └── dogs
│   │           ├── dog1
│   │           ├── dog2
│   │           ├── dog3
│   │           ├── dog4
│   │           └── dog5
│   └── site
│       ├── all
│       ├── all.html
│       ├── app.py
│       ├── cats
│       ├── cats.html
│       ├── dogs
│       ├── dogs.html
│       ├── empty.html
│       └── index.html
└── templates
    ├── footer
    └── header
```

```
8 directories, 22 files
boss@ubuntu-serv:~$
```


31-32.

```

no: cannot stat cat: no such file or directory
boss@ubuntu-serv:~/project/app/items$ for file in tigers/cat*; do
> mv "$file" "${file/cat/tiger}"
> done
boss@ubuntu-serv:~/project/app/items$ ls
cats dogs tigers
boss@ubuntu-serv:~/project/app/items$ ls tigers
tiger1 tiger2 tiger3 tiger4 tiger5
boss@ubuntu-serv:~/project/app/items$ _

```

33-35.

```

tiger1 tiger2 tiger3 tiger4 tiger5
boss@ubuntu-serv:~/project/app/items$ cp -r dogs lupus
boss@ubuntu-serv:~/project/app/items$ ls
cats dogs lupus tigers
boss@ubuntu-serv:~/project/app/items$ for file in lupus/dog*; do mv "$file" "${file/dog/lupus}"; done
boss@ubuntu-serv:~/project/app/items$ ls lupus
lupus1 lupus2 lupus3 lupus4 lupus5
boss@ubuntu-serv:~/project/app/items$

```

36-37.

```

boss@ubuntu-serv:~/project$ grep -l class -r >> animals
boss@ubuntu-serv:~/project$ ls
animals app templates
boss@ubuntu-serv:~/project$ cat animals
app/items/tigers/tiger2
app/items/tigers/tiger3
app/items/tigers/tiger4
app/items/tigers/tiger1
app/items/tigers/tiger5
app/items/cats/cat5
app/items/cats/cat1
app/items/cats/cat2
app/items/cats/cat3
app/items/cats/cat4
app/items/lupus/lupus4
app/items/lupus/lupus2
app/items/lupus/lupus1
app/items/lupus/lupus3
app/items/lupus/lupus5
app/items/dogs/dog3
app/items/dogs/dog5
app/items/dogs/dog1
app/items/dogs/dog2
app/items/dogs/dog4
app/site/cats.html
app/site/cats
app/site/all
app/site/all.html
app/site/dogs.html
app/site/dogs

```

38.

```

boss@ubuntu-serv:~/project$ cat animals | grep -v '\.html$' > trash
boss@ubuntu-serv:~/project$ cat trash
app/items/tigers/tiger2
app/items/tigers/tiger3
app/items/tigers/tiger4
app/items/tigers/tiger1
app/items/tigers/tiger5
app/items/cats/cat5
app/items/cats/cat1
app/items/cats/cat2
app/items/cats/cat3
app/items/cats/cat4
app/items/lupus/lupus4
app/items/lupus/lupus2
app/items/lupus/lupus1
app/items/lupus/lupus3
app/items/lupus/lupus5
app/items/dogs/dog3
app/items/dogs/dog5
app/items/dogs/dog1
app/items/dogs/dog2
app/items/dogs/dog4
app/site/cats
app/site/all
app/site/dogs
boss@ubuntu-serv:~/project$ _

```

39-40.

```

boss@ubuntu-serv:~$ cp -r project project_copy
boss@ubuntu-serv:~$ ls
project project_copy
boss@ubuntu-serv:~$ tree -L 3
.
├── project
│   ├── app
│   │   ├── cats.html
│   │   └── site
│   └── trash
│       ├── animals
│       ├── items
│       ├── templates
│       └── trash
└── project_copy
    ├── app
    │   ├── cats.html
    │   └── site
    └── trash
        ├── animals
        ├── items
        ├── templates
        └── trash

13 directories, 6 files
boss@ubuntu-serv:~$

```

41.

```
boss@ubuntu-serv:~/project$ tree -L 8
```

```
├── app
│   ├── cats.html
│   └── site
│       ├── all.html
│       ├── app.py
│       ├── cats.html
│       ├── dogs.html
│       ├── empty.html
│       └── index.html
├── trash
│   ├── animals
│   ├── items
│   │   ├── cats
│   │   │   ├── cat1
│   │   │   ├── cat2
│   │   │   ├── cat3
│   │   │   ├── cat4
│   │   │   └── cat5
│   │   ├── dogs
│   │   │   ├── dog1
│   │   │   ├── dog2
│   │   │   ├── dog3
│   │   │   ├── dog4
│   │   │   └── dog5
│   │   ├── lupus
│   │   │   ├── lupus1
│   │   │   ├── lupus2
│   │   │   ├── lupus3
│   │   │   ├── lupus4
│   │   │   └── lupus5
│   │   └── tigers
│   │       ├── tiger1
│   │       ├── tiger2
│   │       ├── tiger3
│   │       ├── tiger4
│   │       └── tiger5
│   ├── templates
│   │   ├── footer
│   │   └── header
│   └── trash
```

```
10 directories, 31 files
```

```
boss@ubuntu-serv:~/project$ rm -r trash
```

```
boss@ubuntu-serv:~/project$ ls
```

```
app
```

```
boss@ubuntu-serv:~/project$
```

42-44.

```

boss@ubuntu-serv:~$ curl 127.0.0.1:8000
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Animals</title>
</head>
<body>
  <a href="/all.html">All</a><br>
  <a href="/cats.html">Cats</a><br>
  <a href="/dogs.html">Dogs</a>
</body>
</html>
boss@ubuntu-serv:~$ curl 127.0.0.1:8000/all.html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Animals</title>
</head>
<body>
  <ul>
<li class="cat">Rizhik</li>
<li class="cat">Murzik</li>
<li class="cat">Bobik</li>
<li class="cat">Zhopik</li>
<li class="cat">Chmopik</li>
<li class="dog">Loli</li>
<li class="dog">Layki</li>
<li class="dog">Adriel</li>
<li class="dog">Joji</li>
<li class="dog">Babyk</li>
  </ul>
</body>
</html>

```

45-47.

```

boss@ubuntu-serv:~$ nl docs
1 /usr/share/doc/python3-yaml/examples/yaml-highlight/yaml_hl.cfg: HTML docum
2 /usr/share/doc/libjson-c5/README.html: HTML docum
3 /usr/share/doc/time/time.html: HTML docum
long lines (427)
4 /usr/share/doc/base-passwd/users-and-groups.html: HTML docum
5 /usr/share/doc/shared-mime-info/shared-mime-info-spec.html/index.html: HTML docum
6 /usr/share/doc/shared-mime-info/shared-mime-info-spec.html/x34.html: HTML docum
7 /usr/share/doc/shared-mime-info/shared-mime-info-spec.html/x500.html: HTML docum
8 /usr/share/doc/shared-mime-info/shared-mime-info-spec.html/b521.html: HTML docum
9 /usr/share/doc/bpfcc-tools/examples/doc/sslsniff_example.txt: HTML docum
10 /usr/share/doc/kbd/font-formats/font-formats-3.html: HTML docum
11 /usr/share/doc/kbd/font-formats/font-formats.html: HTML docum
12 /usr/share/doc/kbd/font-formats/font-formats-2.html: HTML docum
13 /usr/share/doc/kbd/font-formats/font-formats-1.html: HTML docum
14 /usr/share/doc/kbd/font-formats/font-formats-4.html: HTML docum
15 /usr/share/doc/kbd/font-formats/font-formats-5.html: HTML docum
16 /usr/share/doc/netplan/netplan.html: HTML docum
long lines (391)
17 /usr/share/doc/adduser/examples/adduser.local.conf.examples/skel.other/index.html: HTML docum
18 /usr/share/doc/bc/bc.html: HTML docum
0)
19 /usr/share/doc/gdisk/cgdisk.html: HTML docum
20 /usr/share/doc/gdisk/gdisk.html: HTML docum
21 /usr/share/doc/gdisk/index.html: HTML docum
22 /usr/share/doc/gdisk/fixparts.html: HTML docum
23 /usr/share/doc/gdisk/sgdisk.html: HTML docum
24 /usr/share/doc/gawk/examples/network/eliza.awk: HTML docum
25 /usr/share/doc/gawk/examples/network/remconf.awk: HTML docum
26 /usr/share/doc/gawk/examples/network/maze.awk: HTML docum
27 /usr/share/doc/gawk/examples/network/hello-serv.awk: HTML docum
28 /usr/share/doc/gawk/examples/network/panic.awk: HTML docum
29 /usr/share/doc/gawk/examples/network/statist.awk: HTML docum
30 /usr/share/doc/nano/nano.html: HTML docum
31 /usr/share/doc/nano/faq.html: HTML docum
3)
32 /usr/share/doc/git/RelNotes/2.32.0.txt: HTML docum
33 /usr/share/doc/git/RelNotes/1.6.3.txt: HTML docum
34 /usr/share/doc/man-db/examples/manpage.example.sgml: HTML docum

```

48-49.

```

/usr/share/doc/python3-yaml/examples/yaml-highlight/yaml_hl.cfg:      HTML do
/usr/share/doc/libjson-c5/README.html:      HTML do
/usr/share/doc/time/time.html:      HTML do
es (427)
/usr/share/doc/base-passwd/users-and-groups.html:      HTML do
/usr/share/doc/shared-mime-info/shared-mime-info-spec.html/index.html:      HTML do
/usr/share/doc/shared-mime-info/shared-mime-info-spec.html/x34.html:      HTML do
/usr/share/doc/shared-mime-info/shared-mime-info-spec.html/x500.html:      HTML do
/usr/share/doc/shared-mime-info/shared-mime-info-spec.html/b521.html:      HTML do
/usr/share/doc/bpfcc-tools/examples/doc/sslsniff_example.txt:      HTML do
/usr/share/doc/kbd/font-formats/font-formats-3.html:      HTML do
/usr/share/doc/kbd/font-formats/font-formats.html:      HTML do
/usr/share/doc/kbd/font-formats/font-formats-2.html:      HTML do
/usr/share/doc/kbd/font-formats/font-formats-1.html:      HTML do
/usr/share/doc/kbd/font-formats/font-formats-4.html:      HTML do
/usr/share/doc/kbd/font-formats/font-formats-5.html:      HTML do
/usr/share/doc/netplan/netplan.html:      HTML do
es (391)
/usr/share/doc/adduser/examples/adduser.local.conf.examples/skel.other/index.html:      HTML do
/usr/share/doc/bc/bc.html:      HTML do
/usr/share/doc/gdisk/cgdisk.html:      HTML do
/usr/share/doc/gdisk/gdisk.html:      HTML do
/usr/share/doc/gdisk/index.html:      HTML do
/usr/share/doc/gdisk/fixparts.html:      HTML do
/usr/share/doc/gdisk/sgdisk.html:      HTML do
/usr/share/doc/gawk/examples/network/eliza.awk:      HTML do
/usr/share/doc/gawk/examples/network/remconf.awk:      HTML do
/usr/share/doc/gawk/examples/network/maze.awk:      HTML do
/usr/share/doc/gawk/examples/network/hello-serv.awk:      HTML do
/usr/share/doc/gawk/examples/network/panic.awk:      HTML do
/usr/share/doc/gawk/examples/network/statist.awk:      HTML do
/usr/share/doc/nano/nano.html:      HTML do
/usr/share/doc/nano/faq.html:      HTML do
/usr/share/doc/git/RelNotes/2.32.0.txt:      HTML do
/usr/share/doc/git/RelNotes/1.6.3.txt:      HTML do
/usr/share/doc/man-db/examples/manpage.example.sgml:      HTML do
~

```

50.

```

=====
=  Welcome to the VIM Tutor  -  Version 1.7  =
=====

Vim is a very powerful editor that has many commands, too many to
explain in a tutor such as this.  This tutor is designed to describe
enough of the commands that you will be able to easily use Vim as
an apose editor.

```


3. Пользователи и группы

1-3.

```
boss@ubuntu-serv:~$ whoami
boss
boss@ubuntu-serv:~$ sudo whoami
[sudo] password for boss:
root
boss@ubuntu-serv:~$ groups
boss sudo users
boss@ubuntu-serv:~$ sudo groups
root
boss@ubuntu-serv:~$ groups daemon
daemon : daemon
boss@ubuntu-serv:~$ id
uid=1001(boss) gid=1001(boss) groups=1001(boss),27(sudo),100(users)
boss@ubuntu-serv:~$ sudo id
uid=0(root) gid=0(root) groups=0(root)
boss@ubuntu-serv:~$ id daemon
uid=1(daemon) gid=1(daemon) groups=1(daemon)
boss@ubuntu-serv:~$
```

4.

```
boss@ubuntu-serv:~$ nl /etc/passwd
 1 root:x:0:0:root:/root:/bin/bash
 2 daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
 3 bin:x:2:2:bin:/bin:/usr/sbin/nologin
 4 sys:x:3:3:sys:/dev:/usr/sbin/nologin
 5 sync:x:4:65534:sync:/bin:/bin/sync
 6 games:x:5:60:games:/usr/games:/usr/sbin/nologin
 7 man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
 8 lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
 9 mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
10 news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
11 uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
12 proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
13 www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
14 backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
15 list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
16 irc:x:39:39:ircd:/run/ircd:/usr/sbin/nologin
17 _apt:x:42:65534::/nonexistent:/usr/sbin/nologin
18 nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
19 systemd-network:x:998:998:systemd Network Management:/:/usr/sbin/nologin
20 systemd-timesync:x:997:997:systemd Time Synchronization:/:/usr/sbin/nologin
21 dhcpcd:x:100:65534:DHCP Client Daemon,,,:/usr/lib/dhcpcd:/bin/false
22 messagebus:x:101:102::/nonexistent:/usr/sbin/nologin
23 systemd-resolve:x:992:992:systemd Resolver:/:/usr/sbin/nologin
24 pollinate:x:102:1::/var/cache/pollinate:/bin/false
25 polkitd:x:991:991:User for polkitd:/:/usr/sbin/nologin
26 syslog:x:103:104::/nonexistent:/usr/sbin/nologin
27 uidd:x:104:105::/run/uidd:/usr/sbin/nologin
28 tcpdump:x:105:107::/nonexistent:/usr/sbin/nologin
29 tss:x:106:108:TPM software stack,,,:/var/lib/tpm:/bin/false
30 landscape:x:107:109::/var/lib/landscape:/usr/sbin/nologin
31 fwupd-refresh:x:989:989:Firmware update daemon:/var/lib/fwupd:/usr/sbin/nologin
32 usbmux:x:108:46:usbmux daemon,,,:/var/lib/usbmux:/usr/sbin/nologin
33 vboxuser:x:1000:1000:vboxuser:/home/vboxuser:/bin/bash
34 boss:x:1001:1001:main,,,:/home/boss:/bin/bash
```

5.

```

boss@ubuntu-serv:~$ nl /etc/shells
 1 # /etc/shells: valid login shells
 2 /bin/sh
 3 /usr/bin/sh
 4 /bin/bash
 5 /usr/bin/bash
 6 /bin/rbash
 7 /usr/bin/rbash
 8 /usr/bin/dash
 9 /usr/bin/screen
10 /usr/bin/tmux

```

6.

```

wpa:~$ cat /etc/passwd
usbmux:x:108:46:usbmux daemon,,,:/var/lib/usbmux:/usr/sbin/nologin
vboxuser:x:1000:1000:vboxuser:/home/vboxuser:/bin/bash
boss:x:1001:1001:main,,,:/home/boss:/usr/bin/screen

```

7.

```

$ ls
docs project project_copy
$ cd project
$ ls
app
$ tree -L 4

```

8.

```

$
$ /bin/bash
boss@ubuntu-serv:~$

```

9.

```

boss@ubuntu-serv:~$ chsh -s /bin/bash bo
Password:
boss@ubuntu-serv:~$

```

10.

```

boss@ubuntu-serv:~$ _

```

11-12.

```

root@ubuntu-serv:/home/boss# cp /etc/shadow /etc/shadow1
root@ubuntu-serv:/home/boss# _

```

13-14.

```

Ubuntu 24.04.2 LTS ubuntu-serv tty1

ubuntu-serv login: boss
Welcome to Ubuntu 24.04.2 LTS (GNU/Linux 6.8.0-55-generic x86_64)

```

15-16.

```

boss::20164:0:99999:7:::
boss@ubuntu-serv:~$ sudo rm /etc/shadow
boss@ubuntu-serv:~$ sudo cp /etc/shadow1 /etc/shadow
sudo: account validation failure, is your account locked?
sudo: a password is required
boss@ubuntu-serv:~$

```

17.

```

"/etc/shadow" 34L, 943B written
root@ubuntu-serv:/home/boss# cp /etc/shadow1 /etc/shadow
root@ubuntu-serv:/home/boss#

```

18.

```

ubuntu-serv login: boss
Password:

```

19.

```

games:x:60:boss
users:x:100:boss
root:x:65534:

```

20.

```

boss@ubuntu-serv:~$ groups
boss sudo users
boss@ubuntu-serv:~$

```

21.

```

boss@ubuntu-serv:~$ groups
boss sudo games users
boss@ubuntu-serv:~$ _

```

22.

```

ip:~:~:
mail:$1$MPEZcemT$mjAUzNRCcNfuWsy1LAWs1::
news:~:~:

```

23-24.

```

boss@ubuntu-serv:~$ groups
mail sudo games users boss
boss@ubuntu-serv:~$ _

```

25.

```

exit
boss@ubuntu-serv:~$ groups
boss sudo games users
boss@ubuntu-serv:~$ _

```

26-28.

```

boss: !$y$j9T$DsQzdMaJ01HdZeLtm7orv0$KkG7kfXkG6h2NVDY2YBTaMKQ1f.LgyrADwi9Bd0/qR1:20164:0:99999:7:::
root@ubuntu-serv:/home/boss#

```

29.

```
Login incorrect
ubuntu-srv login: boss
Password:

Login incorrect
ubuntu-srv login: _
```

30-32.

```
boss@ubuntu-srv:~$ sudo passwd --expire boss
[sudo] password for boss:
passwd: password changed.
boss@ubuntu-srv:~$
```

33-34.

```
New password:
Retype new password:
You must choose a longer password.
New password:
Retype new password:
You must choose a longer password.
New password:
Retype new password:
Welcome to Ubuntu 24.04.2 LTS (GNU/L
```

35-37.

```
# here are the per-package modules (the "Primary" block)
password [success=1 default=ignore] pam_unix.so md5 minlen=1
# here's the fallback if no module succeeds
```

38-39.

```
ubuntu-srv login: boss
Password:
You are required to change your password immediately (administrator enforced).
Changing password for boss.
Current password:
New password:
Retype new password:
Welcome to Ubuntu 24.04.2 LTS (GNU/Linux 6.8.0-55-generic x86_64)
```