

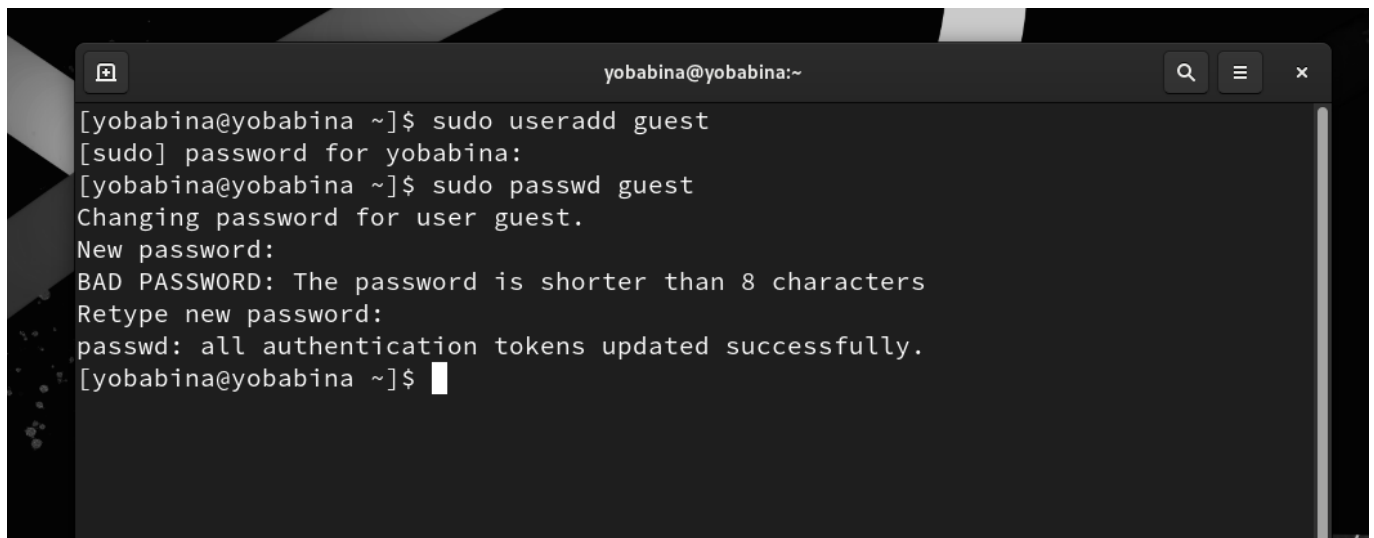
Презентация к лабораторной работе №2

Цель работы

Получение практических навыков работы в консоли с атрибутами файлов, закрепление теоретических основ дискреционного разграничения доступа в современных системах с открытым кодом на базе ОС Linux.

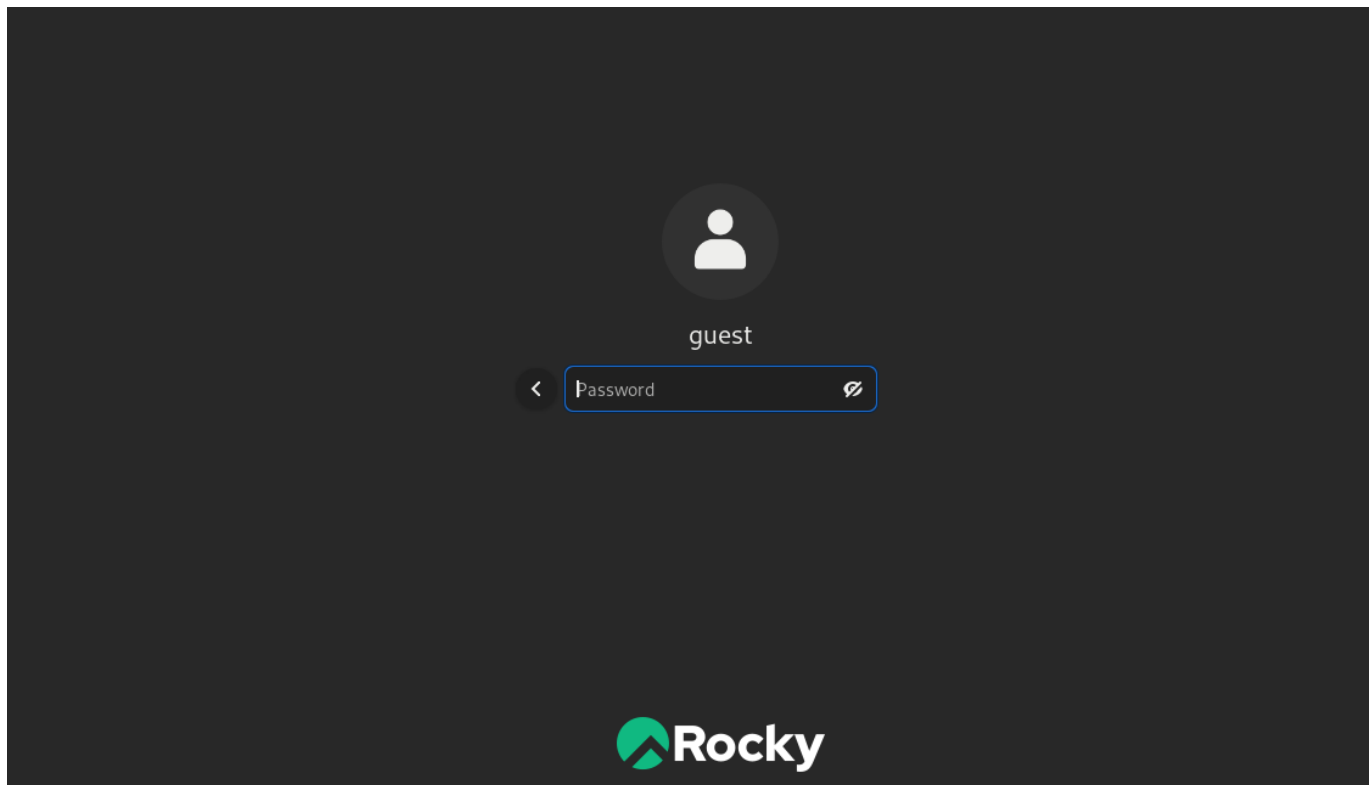
Выполнение работы

Создание пользователя

A screenshot of a terminal window with a dark background. The window title is 'yobabina@yobabina:~'. The terminal shows the following commands and output: [yobabina@yobabina ~]\$ sudo useradd guest, [sudo] password for yobabina:, [yobabina@yobabina ~]\$ sudo passwd guest, Changing password for user guest., New password:, BAD PASSWORD: The password is shorter than 8 characters, Retype new password:, passwd: all authentication tokens updated successfully., [yobabina@yobabina ~]\$.

```
yobabina@yobabina:~  
[yobabina@yobabina ~]$ sudo useradd guest  
[sudo] password for yobabina:  
[yobabina@yobabina ~]$ sudo passwd guest  
Changing password for user guest.  
New password:  
BAD PASSWORD: The password is shorter than 8 characters  
Retype new password:  
passwd: all authentication tokens updated successfully.  
[yobabina@yobabina ~]$
```

Вход в систему от имени пользователя guest:

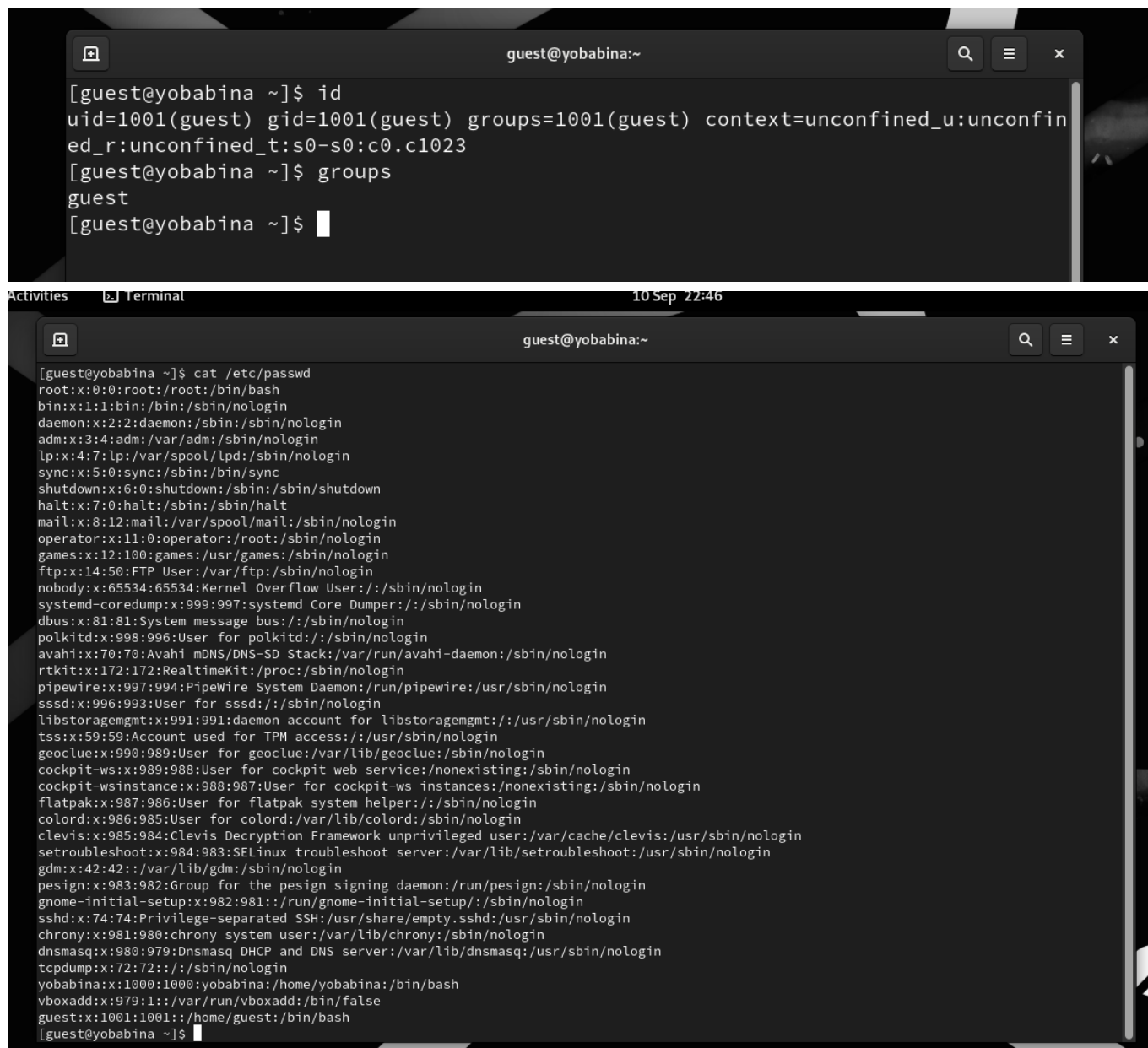


Просмотр информации о домашней директории

```
guest@yobabina:~  
[guest@yobabina ~]$ pwd  
/home/guest  
[guest@yobabina ~]$
```

```
guest@yobabina:~  
[guest@yobabina ~]$ whoami  
guest  
[guest@yobabina ~]$
```

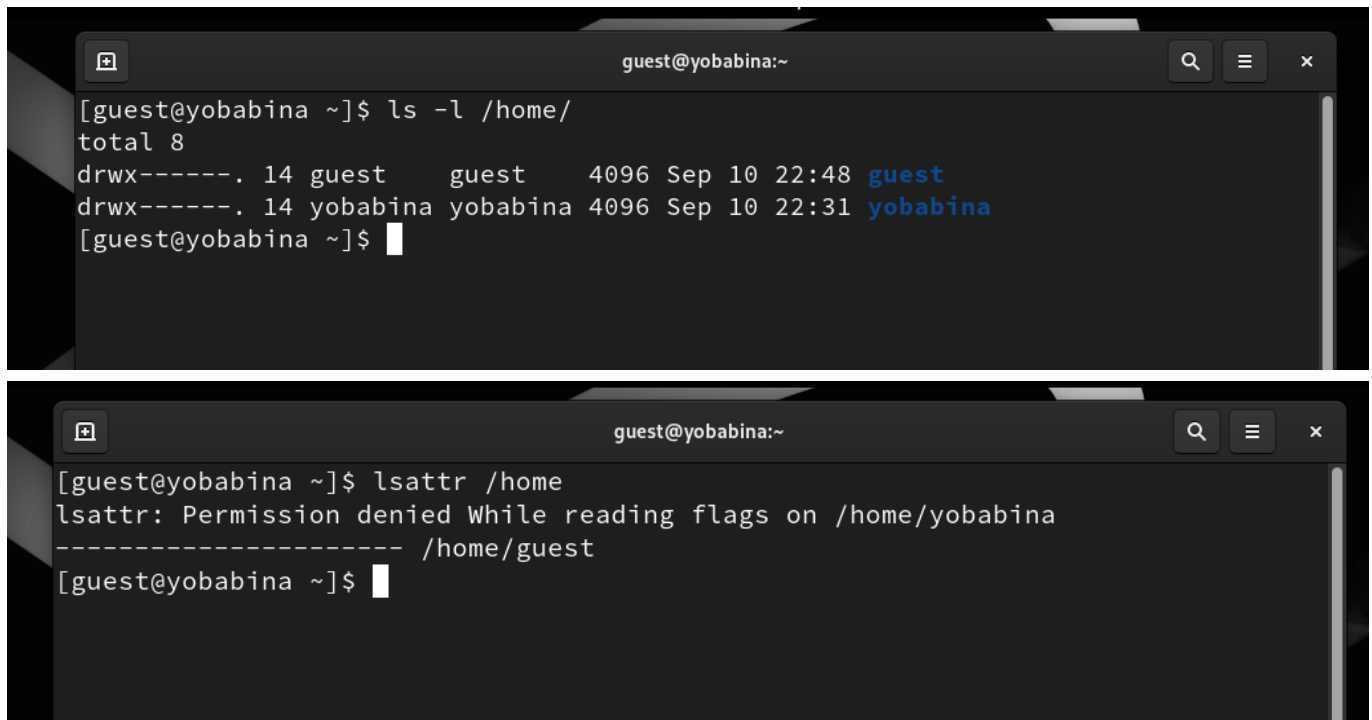
Просмотр информации о пользователе



The image displays two terminal windows from a Linux system. The top window shows the output of the 'id' and 'groups' commands for the 'guest' user. The bottom window shows the output of the 'cat /etc/passwd' command, listing system and regular users.

```
guest@yobabina:~  
[guest@yobabina ~]$ id  
uid=1001(guest) gid=1001(guest) groups=1001(guest) context=unconfined_u:unconfined_r:unconfined_t:s0-s0:c0.c1023  
[guest@yobabina ~]$ groups  
guest  
[guest@yobabina ~]$  
  
[guest@yobabina ~]$ cat /etc/passwd  
root:x:0:0:root:/root:/bin/bash  
bin:x:1:1:bin:/bin:/sbin/nologin  
daemon:x:2:2:daemon:/sbin:/sbin/nologin  
adm:x:3:4:adm:/var/adm:/sbin/nologin  
lp:x:4:7:lp:/var/spool/lpd:/sbin/nologin  
sync:x:5:0:sync:/sbin:/bin/sync  
shutdown:x:6:0:shutdown:/sbin:/sbin/shutdown  
halt:x:7:0:halt:/sbin:/sbin/halt  
mail:x:8:12:mail:/var/spool/mail:/sbin/nologin  
operator:x:11:0:operator:/root:/sbin/nologin  
games:x:12:100:games:/usr/games:/sbin/nologin  
ftp:x:14:50:FTP User:/var/ftp:/sbin/nologin  
nobody:x:65534:65534:Kernel Overflow User:/sbin/nologin  
systemd-coredump:x:999:997:systemd Core Dumper:/sbin/nologin  
dbus:x:81:81:System message bus:/sbin/nologin  
polkitd:x:998:996:User for polkitd:/sbin/nologin  
avahi:x:70:70:Avahi mDNS/DNS-SD Stack:/var/run/avahi-daemon:/sbin/nologin  
rtkit:x:172:172:RealtimeKit:/proc:/sbin/nologin  
pipewire:x:997:994:PipeWire System Daemon:/run/pipewire:/usr/sbin/nologin  
sssd:x:996:993:User for sssd:/sbin/nologin  
libstoragemgmt:x:991:991:daemon account for libstoragemgmt:/usr/sbin/nologin  
tss:x:59:59:Account used for TPM access:/usr/sbin/nologin  
geoclue:x:990:989:User for geoclue:/var/lib/geoclue:/sbin/nologin  
cockpit-ws:x:989:988:User for cockpit web service:/nonexisting:/sbin/nologin  
cockpit-wsinstance:x:988:987:User for cockpit-ws instances:/nonexisting:/sbin/nologin  
flatpak:x:987:986:User for flatpak system helper:/sbin/nologin  
colord:x:986:985:User for colord:/var/lib/colord:/sbin/nologin  
clevis:x:985:984:Clevis Decryption Framework unprivileged user:/var/cache/clevis:/usr/sbin/nologin  
setroubleshoot:x:984:983:SELinux troubleshoot server:/var/lib/setroubleshoot:/usr/sbin/nologin  
gdm:x:42:42:/var/lib/gdm:/sbin/nologin  
pesign:x:983:982:Group for the pesign signing daemon:/run/pesign:/sbin/nologin  
gnome-initial-setup:x:982:981:/run/gnome-initial-setup:/sbin/nologin  
sshd:x:74:74:Privilege-separated SSH:/usr/share/empty.sshd:/usr/sbin/nologin  
chrony:x:981:980:chrony system user:/var/lib/chrony:/sbin/nologin  
dnsmasq:x:980:979:Dnsmasq DHCP and DNS server:/var/lib/dnsmasq:/usr/sbin/nologin  
tcpdump:x:72:72:/sbin/nologin  
yobabina:x:1000:1000:yobabina:/home/yobabina:/bin/bash  
vboxadd:x:979:1:/var/run/vboxadd:/bin/false  
guest:x:1001:1001:/home/guest:/bin/bash  
[guest@yobabina ~]$
```

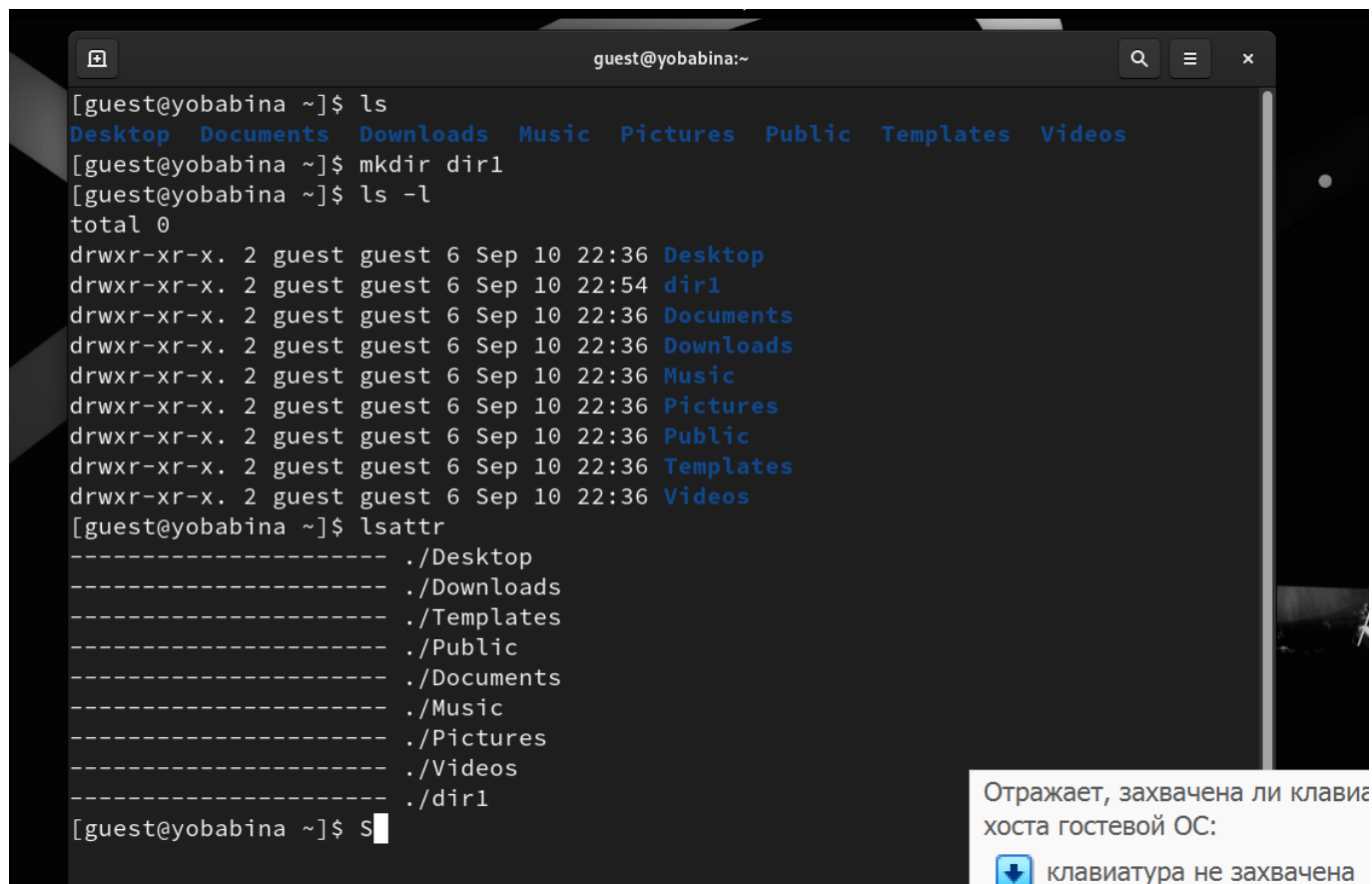
Просмотр существующих директорий



The image consists of two screenshots of a terminal window. The top screenshot shows the command `ls -l /home/` being executed, displaying the permissions and ownership of the `guest` and `yobabina` directories. The bottom screenshot shows the command `lsattr /home` being executed, which results in a permission denied error.

```
guest@yobabina:~  
[guest@yobabina ~]$ ls -l /home/  
total 8  
drwx-----. 14 guest      guest      4096 Sep 10 22:48 guest  
drwx-----. 14 yobabina  yobabina  4096 Sep 10 22:31 yobabina  
[guest@yobabina ~]$  
  
guest@yobabina:~  
[guest@yobabina ~]$ lsattr /home  
lsattr: Permission denied While reading flags on /home/yobabina  
----- /home/guest  
[guest@yobabina ~]$
```

Права доступа к созданной папке (по умолчанию и при изменении прав доступа)

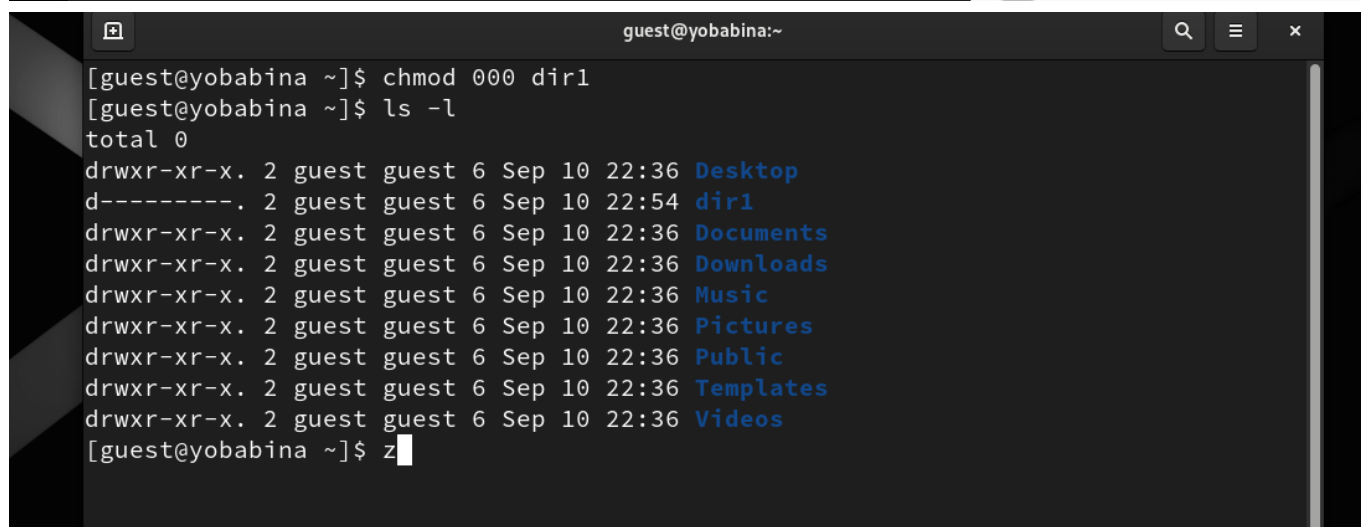


A terminal window titled 'guest@yobabina:~' showing the following commands and output:

```
[guest@yobabina ~]$ ls
Desktop Documents Downloads Music Pictures Public Templates Videos
[guest@yobabina ~]$ mkdir dir1
[guest@yobabina ~]$ ls -l
total 0
drwxr-xr-x. 2 guest guest 6 Sep 10 22:36 Desktop
drwxr-xr-x. 2 guest guest 6 Sep 10 22:54 dir1
drwxr-xr-x. 2 guest guest 6 Sep 10 22:36 Documents
drwxr-xr-x. 2 guest guest 6 Sep 10 22:36 Downloads
drwxr-xr-x. 2 guest guest 6 Sep 10 22:36 Music
drwxr-xr-x. 2 guest guest 6 Sep 10 22:36 Pictures
drwxr-xr-x. 2 guest guest 6 Sep 10 22:36 Public
drwxr-xr-x. 2 guest guest 6 Sep 10 22:36 Templates
drwxr-xr-x. 2 guest guest 6 Sep 10 22:36 Videos
[guest@yobabina ~]$ lsattr
----- ./Desktop
----- ./Downloads
----- ./Templates
----- ./Public
----- ./Documents
----- ./Music
----- ./Pictures
----- ./Videos
----- ./dir1
[guest@yobabina ~]$ S
```

Отражает, захвачена ли клавиатура хоста гостевой ОС:

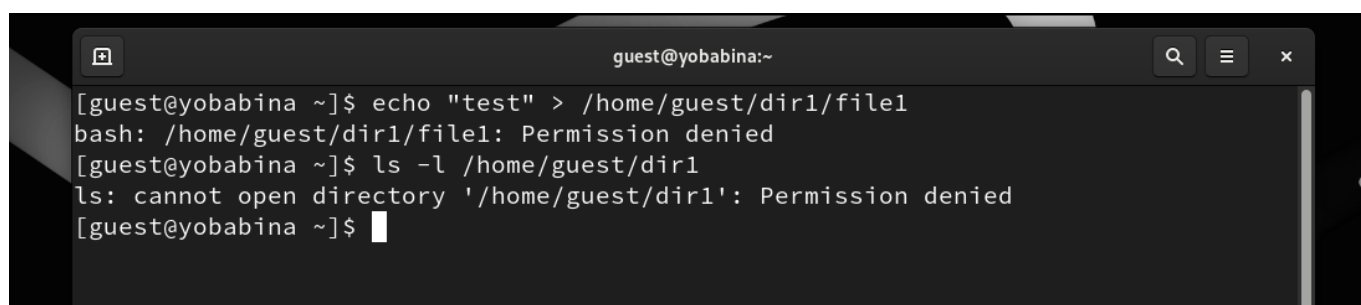
↓ клавиатура не захвачена



A terminal window titled 'guest@yobabina:~' showing the following commands and output:

```
[guest@yobabina ~]$ chmod 000 dir1
[guest@yobabina ~]$ ls -l
total 0
drwxr-xr-x. 2 guest guest 6 Sep 10 22:36 Desktop
d----- . 2 guest guest 6 Sep 10 22:54 dir1
drwxr-xr-x. 2 guest guest 6 Sep 10 22:36 Documents
drwxr-xr-x. 2 guest guest 6 Sep 10 22:36 Downloads
drwxr-xr-x. 2 guest guest 6 Sep 10 22:36 Music
drwxr-xr-x. 2 guest guest 6 Sep 10 22:36 Pictures
drwxr-xr-x. 2 guest guest 6 Sep 10 22:36 Public
drwxr-xr-x. 2 guest guest 6 Sep 10 22:36 Templates
drwxr-xr-x. 2 guest guest 6 Sep 10 22:36 Videos
[guest@yobabina ~]$ z
```


Попытка записи в файл в директории



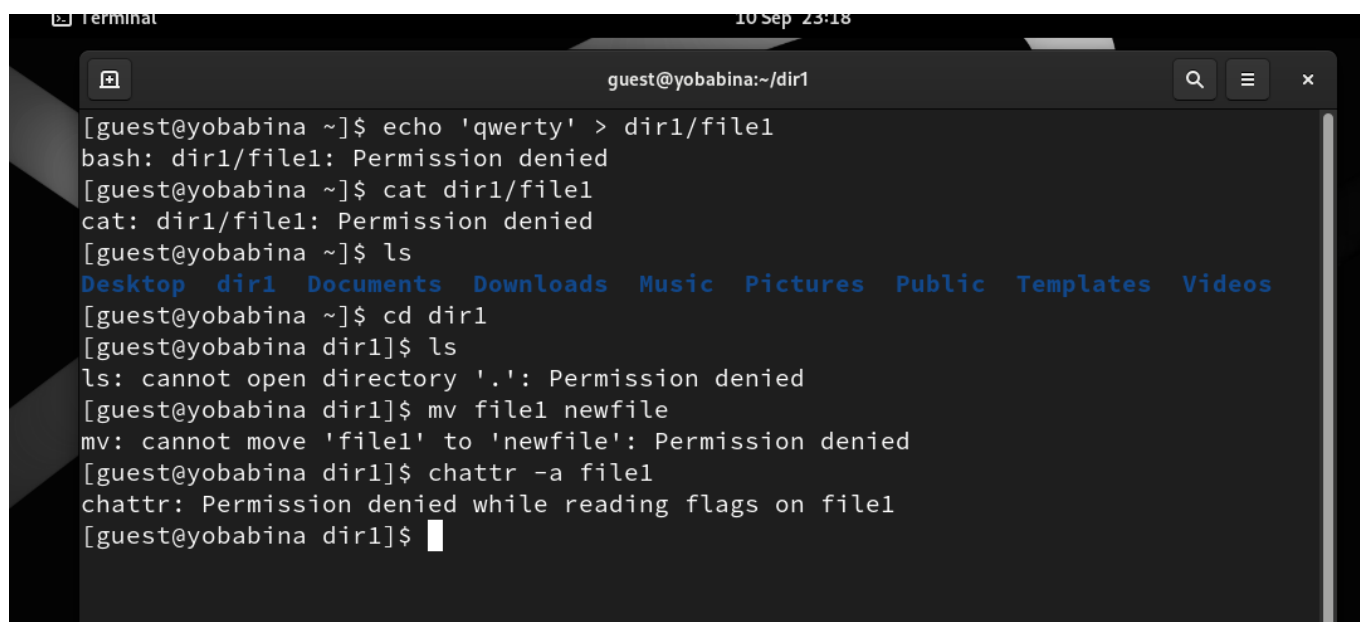
A terminal window titled 'guest@yobabina:~' showing the following commands and output:

```
[guest@yobabina ~]$ echo "test" > /home/guest/dir1/file1
bash: /home/guest/dir1/file1: Permission denied
[guest@yobabina ~]$ ls -l /home/guest/dir1
ls: cannot open directory '/home/guest/dir1': Permission denied
[guest@yobabina ~]$
```

Заполнение таблиц



```
guest@yobabina:~  
[guest@yobabina ~]$ ls -l dir1  
total 0  
-rw-r--r--. 1 guest guest 0 Sep 10 23:05 file1  
[guest@yobabina ~]$ chmod 100 dir1  
[guest@yobabina ~]$ chmod 000 dir1/file1  
[guest@yobabina ~]$ touch dir1/file2  
touch: cannot touch 'dir1/file2': Permission denied  
[guest@yobabina ~]$ rm dir1/file1  
rm: remove write-protected regular empty file 'dir1/file1'? ^Z  
[1]+  Stopped                  rm dir1/file1  
[guest@yobabina ~]$ rm dir1/file1  
rm: remove write-protected regular empty file 'dir1/file1'?  
[guest@yobabina ~]$ ls -l dir1  
ls: cannot open directory 'dir1': Permission denied  
[guest@yobabina ~]$
```



```
10 Sep 23:18  
guest@yobabina:~/dir1  
[guest@yobabina ~]$ echo 'qwerty' > dir1/file1  
bash: dir1/file1: Permission denied  
[guest@yobabina ~]$ cat dir1/file1  
cat: dir1/file1: Permission denied  
[guest@yobabina ~]$ ls  
Desktop  dir1  Documents  Downloads  Music  Pictures  Public  Templates  Videos  
[guest@yobabina ~]$ cd dir1  
[guest@yobabina dir1]$ ls  
ls: cannot open directory '.': Permission denied  
[guest@yobabina dir1]$ mv file1 newfile  
mv: cannot move 'file1' to 'newfile': Permission denied  
[guest@yobabina dir1]$ chattr -a file1  
chattr: Permission denied while reading flags on file1  
[guest@yobabina dir1]$
```

Вывод

В рамках выполнения данной лабораторной работы я получила практические навыки работы в консоли с атрибутами файлов, закрепление теоретических основ дискреционного разграничения доступа в современных системах с открытым кодом на базе ОС Linux.