

# Homework #5

1.permission denied  
권한 거부 즉,  
명령어의 종료 코드중  
하나이다.

2.

```
jonahyun@jonahyun-virtual-machine:~$ man -f passwd
passwd (1) - change user password
passwd (1ssl) - OpenSSL application commands
passwd (5) - the password file
jonahyun@jonahyun-virtual-machine:~$ whatis passwd
passwd (1) - change user password
passwd (1ssl) - OpenSSL application commands
passwd (5) - the password file
jonahyun@jonahyun-virtual-machine:~$ man -k passwd
chpasswd (8) - update group passwords in batch mode
chpasswd (8) - update passwords in batch mode
passwd (1) - administer /etc/group and /etc/gshadow
grub-mkpasswd-pbkdf2 (1) - generate hashed password for GRUB
openssl-passwd (1ssl) - compute password hashes
pam_localuser (8) - require users to be listed in /etc/passwd
passwd (1) - change user password
passwd (1ssl) - OpenSSL application commands
passwd (5) - the password file
update-passwd (8) - safely update /etc/passwd, /etc/shadow and /etc/group
jonahyun@jonahyun-virtual-machine:~$ apropos passwd
chpasswd (8) - update group passwords in batch mode
chpasswd (8) - update passwords in batch mode
passwd (1) - administer /etc/group and /etc/gshadow
grub-mkpasswd-pbkdf2 (1) - generate hashed password for GRUB
openssl-passwd (1ssl) - compute password hashes
pam_localuser (8) - require users to be listed in /etc/passwd
passwd (1) - change user password
passwd (1ssl) - OpenSSL application commands
passwd (5) - the password file
update-passwd (8) - safely update /etc/passwd, /etc/shadow and /etc/group
```

=> -f 옵션은 명령어에 대한 설명이고, -k 옵션은 특정 키워드가 있는 페이지를 찾는 명령어 이다.

# Homework #5

3.

man 1 passwd:passwd 명령어에 대한 정보 제공

man 5 passwd:/etc/passwd 파일에  
대한 정보 제공

man -a passwd : passwd 키워드가 담긴 페이지를 모두 보여준다.

4.

```

jonahyun@jonahyun-virtual-machine:~$ man -k zip
bunzip2 (1)      - a block-sorting file compressor, v1.0.8
bzipcmp (1)      - compare bzip2 compressed files
bzdifff (1)      - compare bzip2 compressed files
bzegrep (1)      - search possibly bzip2 compressed files for a regular ...
bzfgrep (1)      - search possibly bzip2 compressed files for a regular ...
bzgrep (1)       - search possibly bzip2 compressed files for a regular ...
bzip2 (1)        - a block-sorting file compressor, v1.0.8
bzip2recover (1) - recovers data from damaged bzip2 files
bzless (1)       - file perusal filter for crt viewing of bzip2 compress...
bzmore (1)       - file perusal filter for crt viewing of bzip2 compress...
funzip (1)       - filter for extracting from a ZIP archive in a pipe
pgp-zip (1)      - encrypt or sign files into an archive
gunzip (1)       - compress or expand files
gzcat (1)        - compress or expand files
gzcp (1)         - prefix delta compressor for Aspell
preunzip (1)     - prefix delta compressor for Aspell
prezip (1)       - prefix zip delta word list compressor/decompressor
prezip-bin (1)   - create a zip file from stdin
streamzip (1)    - list, test and extract compressed files in a ZIP archive
unzip (1)        - self-extracting stub for prepending to ZIP archives
unzipsfx (1)     - force a '.gz' extension on all gzip files
zforce (1)       - package and compress (archive) files
zip (1)          - encrypt entries in a zipfile
zipcloak (1)     - display the internal structure of zip files
zipdetails (1)   - search files in a ZIP archive for lines matching a pa...
zipgrep (1)      - list detailed information about a ZIP archive
zipinfo (1)      - write the comments in zipfile to stdout, edit comment...
zipnote (1)      - split a zipfile into smaller zipfiles
zipsplit (1)
jonahyun@jonahyun-virtual-machine:~$ man -k zip | wc
      28      275     1858

jonahyun@jonahyun-virtual-machine:~$ man -k gzip
gzip (1)      - compress or expand files
zforce (1)    - force a '.gz' extension on all gzip files
jonahyun@jonahyun-virtual-machine:~$ man -k gzip|wc
      2      18      113

```

# Homework #5

5.

gzip, gunzip, zcat - compress or expand files

```
jonahyun@jonahyun-virtual-machine:~$ man -aw passwd
/usr/share/man/man1/passwd.1.gz
/usr/share/man/man1/openssl.cmds.1ssl.gz
/usr/share/man/man5/passwd.5.gz
jonahyun@jonahyun-virtual-machine:~$ man gzip
jonahyun@jonahyun-virtual-machine:~$ man -aw gzip
/usr/share/man/man1/gzip.1.gz
jonahyun@jonahyun-virtual-machine:~$ man -aw zcat
/usr/share/man/man1/gzip.1.gz
jonahyun@jonahyun-virtual-machine:~$ man -aw gunzip
/usr/share/man/man1/gzip.1.gz
jonahyun@jonahyun-virtual-machine:~$ ls -al /usr/share/man/man1/gzip.1.gz
-rw-r--r-- 1 root root 6300 9월 5 2022 /usr/share/man/man1/gzip.1.gz
jonahyun@jonahyun-virtual-machine:~$ ls -al /usr/share/man/man1/gunzip.1.gz
lrwxrwxrwx 1 root root 9 3월 14 19:21 /usr/share/man/man1/gunzip.1.gz -> gzip.1.gz
jonahyun@jonahyun-virtual-machine:~$ ls -al /usr/share/man/man1/zcat.1.gz
lrwxrwxrwx 1 root root 9 3월 14 19:21 /usr/share/man/man1/zcat.1.gz -> gzip.1.gz
```

# Homework #5

6.

```
jonahyun@jonahyun-virtual-machine:~$ dpkg -l
Desired=Unknown/Install/Remove/Purge/Hold
| Status=Not/Inst/Conf-files/Unpacked/half-hinst/Half-Inst/not/Trig-pend
| Err?=(none)/Reinst-required (Status,Err: uppercase=bad)
++ Name Version
-----
ii accountsservice 22.07.5-2ubuntu1.3
ii acl 2.3.1-1
ii acpi-support 0.144
ii acpid 1:2.0.33-1ubuntu1
ii adduser 3.110ubuntu5
ii adwaita-icon-theme 41.0-1ubuntu1
ii aisleriot 1:3.22.22-1
ii alsa-base 1.0.25+dfsg-0ubuntu7
ii alsa-topology-conf 1.2.5-1-2
ii alsa-ucm-conf 1.2.6.3-1ubuntu1.4
ii alsa-utils 1.2.6-1ubuntu1
ii anacron 2.3-31ubuntu2
ii app 2.2.3.dfsg.1-5build2
ii apparmor 3.0.4-2ubuntu2.1
ii appport 2.20.11-0ubuntu82.3
ii appport-gtk 2.20.11-0ubuntu82.3
ii appport-symbols 0.24
ii appstream 0.15.2-2
ii apt 2.4.8
ii apt-config-icons 0.15.2-2
ii apt-config-icons-hidpi 0.15.2-2
ii apt-utils 2.4.8
ii aptdaemon 1.1.1+bzr982-0ubuntu39
ii aptdaemon-data 1.1.1+bzr982-0ubuntu39
ii apturl 0.5.2ubuntu22
ii apturl-common 0.5.2ubuntu22
ii aspell 0.60.8-4build1
ii aspell-en 2018.04.16-0-1
ii at-spi2-core 2.44.0-3
ii avahi-autoipd 0.8-5ubuntu5
ii avahi-daemon 0.8-5ubuntu5
ii avahi-utils 0.8-5ubuntu5
ii baobab 41.0-2
ii base-files 12ubuntu4.3
ii base-passwd 3.5.52build1
ii bash 5.1-0ubuntu1
ii bash-completion 1:2.11-5ubuntu1
ii bc 1.07.1-3build1
ii bind9-dnscat 1:9.18.1-1ubuntu1.3
ii bind9-host 1:9.18.1-1ubuntu1.3
ii bind9-libs:amd64 1:9.18.1-1ubuntu1.3
```

```
jonahyun@jonahyun-virtual-machine:~$ dpkg -l | grep ssh
ii libssh-4:amd64 0.9.6-2build1
ii openssh-client 1:8.9p1-3ubuntu0.1
ii python3-paramiko 2.9.3-0ubuntu1
ii python3-ssh 0.0.0-1
ii python3-ssh-v2 0.0.0-1
jonahyun@jonahyun-virtual-machine:~$ man -k ssh
EVP_KDF-SSHKDF (7ssl) - The SSHKDF EVP_KDF implementation
rcp (1) - OpenSSH secure file copy
rlogin (1) - OpenSSH remote login client
rsync (1) - a script to setup restricted rsync users via ssh logins
rsh (1) - OpenSSH remote login client
scp (1) - OpenSSH secure file copy
sftp (1) - OpenSSH secure file transfer
slogin (1) - OpenSSH remote login client
ssh (1) - OpenSSH remote login client
ssh-add (1) - adds private key identities to the OpenSSH authentica...
ssh-agent (1) - OpenSSH authentication agent
ssh-argv0 (1) - replaces the old ssh command-name as hostname handling
ssh-copy-id (1) - use locally available keys to authorise logins on a r...
ssh-keygen (1) - OpenSSH authentication key utility
ssh-keyscan (1) - gather SSH public keys from servers
ssh-keysign (8) - OpenSSH helper for host-based authentication
ssh-pkcs11-helper (8) - OpenSSH helper for PKCS#11 support
ssh-sk-helper (8) - OpenSSH helper for FIDO authenticator support
ssh_config (5) - OpenSSH client configuration file
```

# Homework #5

7.

```
2023-04-04 14:24:02 startup archives unpack
2023-04-04 14:24:02 upgrade xserver-common:all 2:21.1.3-2ubuntu2.7 2:21.1.3-2ubuntu2.9
2023-04-04 14:24:02 status half-configured xserver-common:all 2:21.1.3-2ubuntu2.7
2023-04-04 14:24:02 status unpacked xserver-common:all 2:21.1.3-2ubuntu2.7
2023-04-04 14:24:02 status half-installed xserver-common:all 2:21.1.3-2ubuntu2.7
2023-04-04 14:24:02 status triggers-pending man-db:amd64 2.10.2-1
2023-04-04 14:24:03 status unpacked xserver-common:all 2:21.1.3-2ubuntu2.9
2023-04-04 14:24:03 upgrade xserver-xorg-legacy:amd64 2:21.1.3-2ubuntu2.7 2:21.1.3-2ubuntu2.9
2023-04-04 14:24:03 status half-configured xserver-xorg-legacy:amd64 2:21.1.3-2ubuntu2.7
2023-04-04 14:24:03 status unpacked xserver-xorg-legacy:amd64 2:21.1.3-2ubuntu2.7
2023-04-04 14:24:03 status half-installed xserver-xorg-legacy:amd64 2:21.1.3-2ubuntu2.7
2023-04-04 14:24:03 status unpacked xserver-xorg-legacy:amd64 2:21.1.3-2ubuntu2.9
2023-04-04 14:24:03 startup packages configure
2023-04-04 14:24:03 configure xserver-common:all 2:21.1.3-2ubuntu2.9 <none>
2023-04-04 14:24:03 status unpacked xserver-common:all 2:21.1.3-2ubuntu2.9
2023-04-04 14:24:03 status half-configured xserver-common:all 2:21.1.3-2ubuntu2.9
2023-04-04 14:24:03 status installed xserver-common:all 2:21.1.3-2ubuntu2.9
2023-04-04 14:24:03 configure xserver-xorg-legacy:amd64 2:21.1.3-2ubuntu2.9 <none>
E486: Pattern not found: openssh-client
```

->/ssh라는 명령어를 치면 ssh관련 문서들은 나오지만

/openssh-client를 치면 아무것도 나오지 않아서

openssh-client라는 것은 없다는 것을 보여주는 캡쳐본이다.

# Homework #5

8.

```
jonahyun@jonahyun-virtual-machine:~$ ls /var/log
alternatives.log      dmesg.2.gz      syslog.3.gz
alternatives.log.1    dmesg.3.gz      syslog.4.gz
apt                   dmesg.4.gz      ubuntu-advantage.log
auth.log              dpkg.log         ubuntu-advantage.log.1
auth.log.1            dpkg.log.1       ubuntu-advantage-timer.log
auth.log.2.gz         faillog          ubuntu-advantage-timer.log.1
auth.log.3.gz         fontconfig.log   unattended-upgrades
auth.log.4.gz         gdm3             vmware-network.1.log
boot.log              gpu-manager.log  vmware-network.2.log
boot.log.1            hp               vmware-network.3.log
boot.log.2            installer        vmware-network.4.log
boot.log.3            journal          vmware-network.5.log
boot.log.4            kern.log          vmware-network.6.log
boot.log.5            kern.log.1        vmware-network.7.log
boot.log.6            kern.log.2.gz     vmware-network.8.log
boot.log.7            kern.log.3.gz     vmware-network.9.log
bootstrap.log         kern.log.4.gz     vmware-network.log
btmtp                 lastlog           vmware-vmtoolsd-root.1.log
btmtp.1               openvpn           vmware-vmtoolsd-root.2.log
cups                  private           vmware-vmtoolsd-root.3.log
d1st-upgrade          speech-dispatcher vmware-vmtoolsd-root.log
dmesg                 syslog            vmware-vmtoolsd-root.log
dmesg.0               syslog.1          wtmp
dmesg.1.gz            syslog.2.gz
```

9.

```
jonahyun@jonahyun-virtual-machine:~$ cat /etc/logrotate.d/rsyslog
/var/log/syslog
/var/log/mail.info
/var/log/mail.warn
/var/log/mail.err
/var/log/mail.log
/var/log/daemon.log
/var/log/kern.log
/var/log/auth.log
/var/log/user.log
/var/log/lpr.log
/var/log/cron.log
/var/log/debug
/var/log/messages
{
    rotate 4
    weekly
    missingok
    notifempty
    compress
    delaycompress
    sharedscripts
    postrotate
        /usr/lib/rsyslog/rsyslog-rotate
    endscript
}
```

=> 이 명령어는 cat (concatenate) 명령어를 사용하여 /etc/logrotate.d 디렉토리에 있는 rsyslog 파일의 내용을 출력하는 것입니다.

=> rotate의 값은 4이다.

## Homework #5

10.

- /etc/passwd는 리눅스와 유닉스 시스템에서 사용자 계정 정보를 저장하는 파일이다.

-이 파일은 각 사용자의 계정 정보를 콜론(:)으로 구분하여 7개의 목록으로 저장한다.

1. 사용자 이름
2. 사용자 비밀번호
3. 사용자 ID(UID)
4. 사용자가 속한 그룹의 ID(GID)
5. 사용자의 이름 또는 기타 정보
6. 사용자 홈 디렉토리 경로
7. 사용자 셸 경로