오픈소스기초설계- Assignment#3 shell script 프로그래밍 실습 보고서

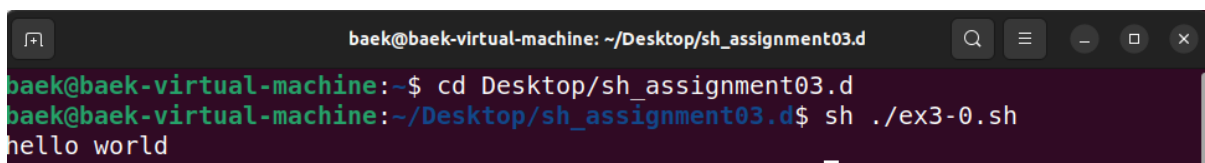## 20231769 백서연

ex3-0.sh

```sh
#! /bin/sh

echo "hello world"

exit 0
```


hello world 출력하였다.

ex3-1.sh
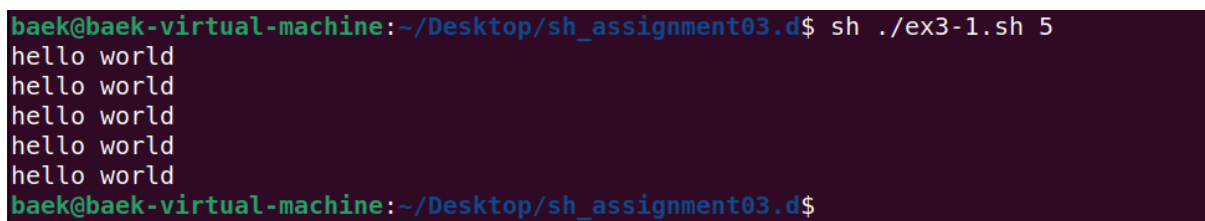
```sh
#! /bin/sh

for repeatnum in `seq 1 $1`
do
    echo "hello world"
done

exit 0
```


hello world를 5번 출력하였다.

ex3-2.sh

```sh
#! /bin/sh

ans=`expr $1 $2 $3`
echo "$ans"

exit 0
```

```
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$ sh ./ex3-2.sh 1 - 4
-3
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$ sh ./ex3-2.sh 5 + 3
8
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$
```

연산자를 입력받아 계산하였다.

ex3-3.sh

```bash
#!/bin/bash

weight=$1
height=$2

BMI=$(echo "scale=2; $weight / ($height * $height)" | bc)

if (( $(echo "$BMI < 18.5" | bc -l) )); then
    echo "저체중입니다."
elif (( $(echo "$BMI >= 23" | bc -l) )); then
    echo "과체중입니다."
else
    echo "정상체중입니다."
fi

exit 0
```

```
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$ sh ./ex3-3.sh 56 170
./ex3-3.sh: 8: 1: not found
./ex3-3.sh: 10: 0: not found
정상체중입니다.
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$
```

정상체중임이 출력되었다.

ex3-4.sh

```sh
#! /bin/sh

echo "리눅스가 재미있나요? (yes/no)"
read ans

case $ans in
    Y ¦ yes)
        echo "yes";;
    nonono ¦ no)
        echo "no";;
    *)
        echo "yes or no 로 입력해주세요.";;
esac

exit 0
```
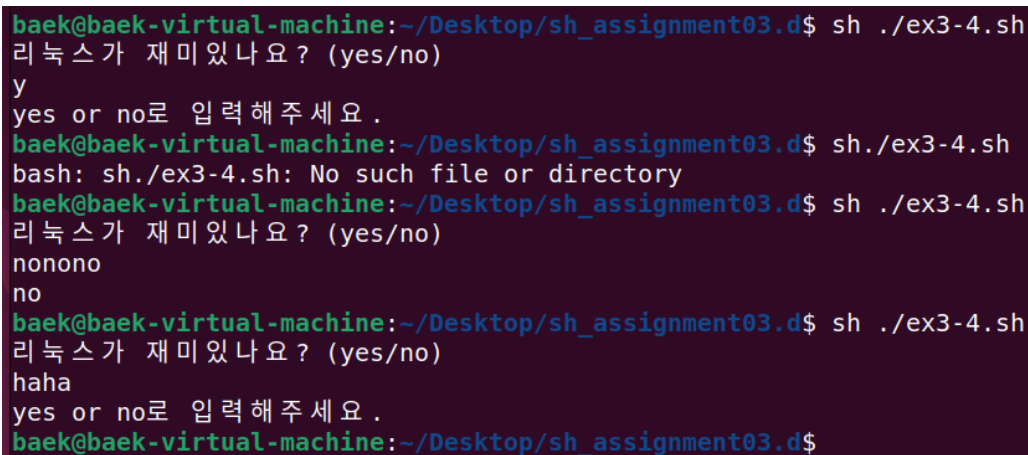
```
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$ sh ./ex3-4.sh
리눅스가 재미있나요? (yes/no)
y
yes or no로 입력해주세요.
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$ sh./ex3-4.sh
bash: sh./ex3-4.sh: No such file or directory
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$ sh ./ex3-4.sh
리눅스가 재미있나요? (yes/no)
nonono
no
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$ sh ./ex3-4.sh
리눅스가 재미있나요? (yes/no)
haha
yes or no로 입력해주세요.
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$
```

입력에 따른 방어코드가 출력되었다.

ex3-5.sh

```sh
#! /bin/sh

userfunction ( )
{
    echo "함수 안으로 들어 왔음"
    if [ -z "$1" ]; then
        files=$(ls)
```

```
        echo $files
        echo "프로그램을 종료합니다."
    elif [ "$1" = "-l" ]; then
        files=$(ls -l)
        echo $files
        echo "프로그램을 종료합니다."
    fi
}


echo "프로그램을 시작합니다."
userfunction $1
exit 0
```

```
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$ sh ./ex3-5.sh
프로그램을 시작합니다.
함수 안으로 들어 왔음
DB.txt ex3-0.sh ex3-1.sh ex3-2.sh ex3-2.sh~ ex3-3.sh ex3-3.sh~ ex3-3.sz~ ex3-4.s
h ex3-5.sh ex3-6.sh ex3-7.sh ex3-8.sh ex3-9.sh -l
프로그램을 종료합니다.
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$ sh ./ex3-5.sh -l
프로그램을 시작합니다.
함수 안으로 들어 왔음
total 60 -rw-rw-r-- 1 baek baek 37 Nov 10 20:29 DB.txt -rw-r--r-- 1 baek baek 39
 Nov 9 22:01 ex3-0.sh -rw-r--r-- 1 baek baek 76 Nov 9 22:16 ex3-1.sh -rw-r--r--
1 baek baek 58 Nov 9 22:51 ex3-2.sh -rw-r--r-- 1 baek baek 51 Nov 9 22:40 ex3-2.
sh~ -rwxrwxr-x 1 baek baek 287 Nov 10 21:11 ex3-3.sh -rw-r--r-- 1 baek baek 64 N
ov 9 23:01 ex3-3.sh~ -rw-r--r-- 1 baek baek 251 Nov 10 17:15 ex3-3.sz~ -rw-r--r-
- 1 baek baek 195 Nov 10 19:08 ex3-4.sh -rw-r--r-- 1 baek baek 333 Nov 10 21:05
ex3-5.sh -rw-r--r-- 1 baek baek 350 Nov 10 21:06 ex3-6.sh -rw-r--r-- 1 baek baek
 153 Nov 10 20:20 ex3-7.sh -rw-r--r-- 1 baek baek 178 Nov 10 20:28 ex3-8.sh -rw-
r--r-- 1 root root 61 Nov 10 20:33 ex3-9.sh drwxrwxr-x 3 baek baek 4096 Nov 10 2
1:14 -l
프로그램을 종료합니다.
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$
```

입력 인자를 내부 함수 내의 리눅스 명령어 옵션으로 전달하여 폴더 내 파일들을 출력하였다.

ex.3-6.sh

```sh
#! /bin/sh

if [ ! -d $HOME/Desktop/sh_assignment03.d/$1 ]; then
    mkdir $HOME/Desktop/sh_assignment03.d/$1
fi
for nums in `seq 0 4`
do
    touch $HOME/Desktop/sh_assignment03.d/$1/$1"$nums".txt
    zip $1"$nums".zip
done
mkdir $HOME/Desktop/sh_assignment03.d/$1/$1.tar
for nums in `seq 0 4`
do
    unzip $1"$nums".zip -d $HOME/Desktop/sh_assignment03.d/$1/$1.tar
done
```

```
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$ sh ./ex3-6.sh files

zip error: Nothing to do! (files0.zip)

zip error: Nothing to do! (files1.zip)

zip error: Nothing to do! (files2.zip)

zip error: Nothing to do! (files3.zip)

zip error: Nothing to do! (files4.zip)
unzip:  cannot find or open files0.zip, files0.zip.zip or files0.zip.ZIP.
unzip:  cannot find or open files1.zip, files1.zip.zip or files1.zip.ZIP.
unzip:  cannot find or open files2.zip, files2.zip.zip or files2.zip.ZIP.
unzip:  cannot find or open files3.zip, files3.zip.zip or files3.zip.ZIP.
unzip:  cannot find or open files4.zip, files4.zip.zip or files4.zip.ZIP.
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$ ls
DB.txt    ex3-1.sh  ex3-2.sh~  ex3-3.sh~  ex3-4.sh  ex3-6.sh  ex3-8.sh  files
ex3-0.sh  ex3-2.sh  ex3-3.sh   ex3-3.sz~  ex3-5.sh  ex3-7.sh  ex3-9.sh
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$ cd files
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d/files$ ls
files0.txt  files1.txt  files2.txt  files3.txt  files4.txt  files.tar
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d/files$
```

입력된 이름으로 폴더가 없어 생성되었고, 만들어진 5개의 파일을 압축하였다.

해제한 압축파일들을 files.tar라는 폴더를 생성하여 집어넣었다.

ex3-7.sh

```sh
#! /bin/sh

mkdir -p $HOME/Desktop/sh_assignment03.d/$1
for make in `seq 0 4`
do
    mkdir -p $HOME/Desktop/sh_assignment03.d/$1/$1"$make"
    cd $HOME/Desktop/sh_assignment03.d/$1/$1"$make"
    touch $1"$make".txt
done
```
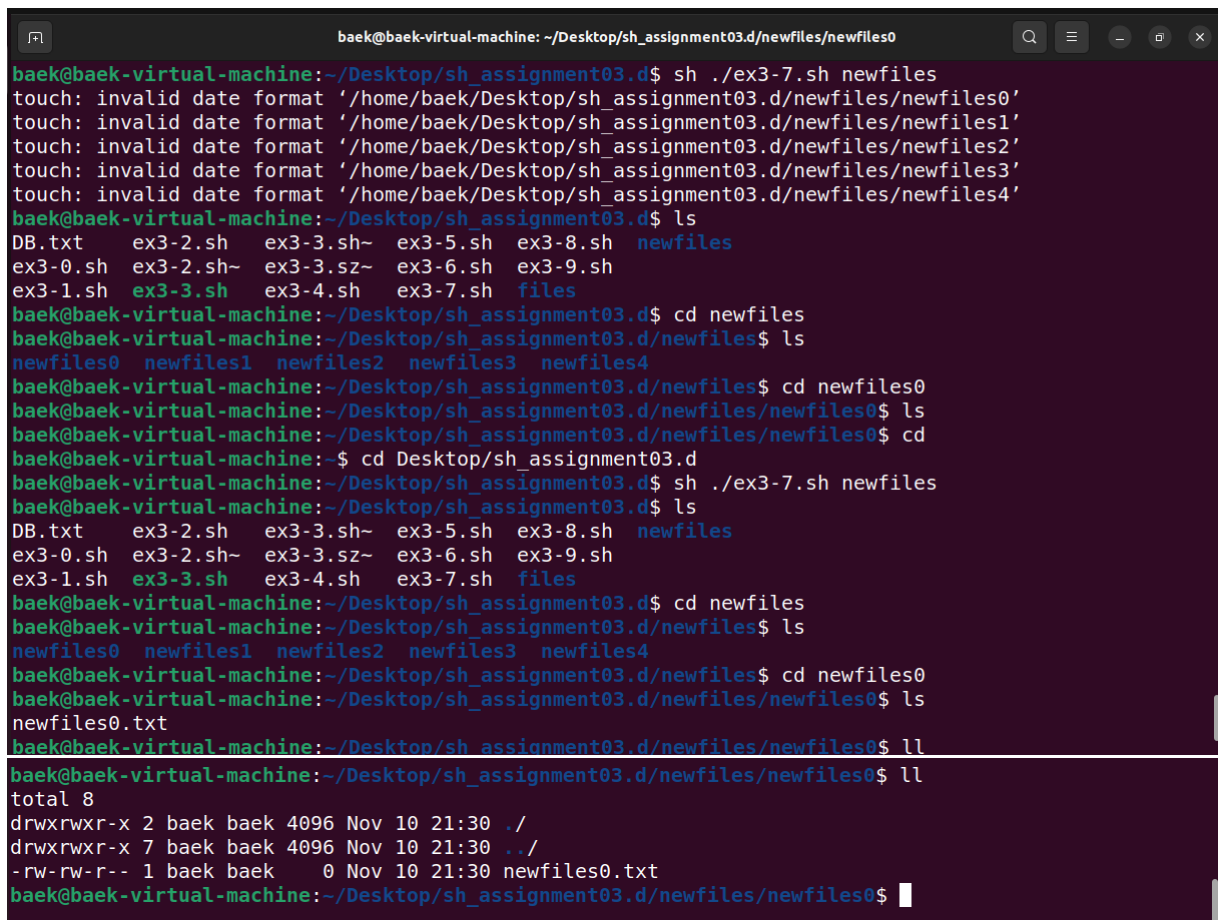

입력된 이름으로 폴더에 5개 파일을 만들었다.

파일 이름대로 하위 폴더들을 생성하고 각 폴더에 해당 파일이 들어있다.

ex3-8.sh

```sh
#! /bin/sh

if [ ! -e $HOME/Desktop/sh_assignment03.d/DB.txt ]; then
    touch $HOME/Desktop/sh_assignment03.d/DB.txt
fi

echo ""$1" "$2"" >> $HOME/Desktop/sh_assignment03.d/DB.txt
```

```
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$ sh ./ex3-8.sh Baek 010-4567-7891
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$ sh ./ex3-8.sh William 20040205
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$ sh ./ex3-8.sh Byun 20020205
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$ ls
DB.txt     ex3-2.sh    ex3-3.sh~  ex3-5.sh  ex3-8.sh  newfiles
ex3-0.sh  ex3-2.sh~   ex3-3.sz~  ex3-6.sh  ex3-9.sh
ex3-1.sh  ex3-3.sh    ex3-4.sh   ex3-7.sh  files
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$ cat DB.txt
Lee 010-0000-1234
Park 010-0000-1546
Baek 010-4567-7891
William 20040205
Byun 20020205
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$ echo "--my friends==" > DB.txt
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$ cat DB.txt
--my friends==
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$ sh ./ex3-8.sh Lee 19990909
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$ cat DB.txt
--my friends==
Lee 19990909
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$
```

팀원의 이름과 생일 또는 전화번호를 DB.txt에 기록하였다.

이름과 정보를 DB.txt에 계속 추가할 수 있거나 처음부터 다시 작성도 가능하다.

ex3-9.sh

```sh
#! /bin/sh

grep "$1" $HOME/Desktop/sh_assignment03.d/DB.txt
```

```
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$ sh ./ex3-9.sh Lee
Lee 19990909
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$ sh ./ex3-9.sh L
Lee 19990909
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$ sh ./ex3-9.sh 1999
Lee 19990909
baek@baek-virtual-machine:~/Desktop/sh_assignment03.d$
```

이름이나 생일로 파일 내에서 검색이 가능하다. (팀원의 정보를 확인 가능)

소스코드는 github페이지 src-ex3에 위치해있습니다.