

به نام خدا

تکلیف دوم از مایشگاه سیستم عامل

حدیث غفوری 9825413

سوال 1

```
hadis@whoami:~/Documents/university/term5/OsLab/homeworks/homework2/answers
hadis@whoami > ~/Documents/university/term5/OsLab/homeworks/homework2
/answers > ./soal1.sh dirTest txt 1 10
hadis@whoami > ~/Documents/university/term5/OsLab/homeworks/homework2
/answers > ls
dir1 dirTest      photos      soal2.sh   soal3.c
dir2 homework2.pdf soal1.sh    soal3
hadis@whoami > ~/Documents/university/term5/OsLab/homeworks/homework2
/answers > cd dirTest
hadis@whoami > ~/Documents/university/term5/OsLab/homeworks/homework2
/answers/dirTest > ls
10.txt 1.txt 2.txt 3.txt 4.txt 5.txt 6.txt 7.txt 8.txt 9.txt
hadis@whoami > ~/Documents/university/term5/OsLab/homeworks/homework2
/answers/dirTest > cd ..
hadis@whoami > ~/Documents/university/term5/OsLab/homeworks/homework2
/answers > cat soal1.sh
#!/bin/bash

mkdir $1
for (( c=$3; c<=$4; c++ ))
do
    touch $1/$c.$2
done
hadis@whoami > ~/Documents/university/term5/OsLab/homeworks/homework2
/answers > _
```



```
hadis@whoami: ~/Documents/university/term5/0sLab/homeworks/homework2/dir1
x hadis@whoami ~/Documents/university/term5/0sLab/homeworks/homework2$ ls
c-like-for.sh  file.sh  function.sh  'Lab2 (1).pdf'  ls.sh  readArguments.sh  soal1.sh  test  until.sh  while.sh
hadis@whoami ~/Documents/university/term5/0sLab/homeworks/homework2$ ./soal1.sh dir1 txt 1 10
hadis@whoami ~/Documents/university/term5/0sLab/homeworks/homework2$ ls
c-like-for.sh  dir1  file.sh  function.sh  'Lab2 (1).pdf'  ls.sh  readArguments.sh  soal1.sh  test  until.sh  while.sh
hadis@whoami ~/Documents/university/term5/0sLab/homeworks/homework2$ cd dir1
hadis@whoami ~/Documents/university/term5/0sLab/homeworks/homework2/dir1$ ls
10.txt 1.txt 2.txt 3.txt 4.txt 5.txt 6.txt 7.txt 8.txt 9.txt
hadis@whoami ~/Documents/university/term5/0sLab/homeworks/homework2/dir1$ _
```

```
hadis@whoami: ~/Documents/university/term5/0sLab/homeworks/homework2/answers...
hadis@whoami ~/Documents/university/term5/0sLab/homeworks/homework2/answers$ ./soal1.sh dirTest txt 1 10
hadis@whoami ~/Documents/university/term5/0sLab/homeworks/homework2/answers$ ls
dir1  dirTest  photos  soal2.sh  soal3.c
dir2  homework2.pdf  soal1.sh  soal3
hadis@whoami ~/Documents/university/term5/0sLab/homeworks/homework2/answers$ cd dirTest
hadis@whoami ~/Documents/university/term5/0sLab/homeworks/homework2/answers/dirTest$ ls
10.txt 1.txt 2.txt 3.txt 4.txt 5.txt 6.txt 7.txt 8.txt 9.txt
hadis@whoami ~/Documents/university/term5/0sLab/homeworks/homework2/answers/dirTest$ _
```

```
hadis@whoami:~/Documents/university/term5/OsLab/homeworks/homework2
hadis@whoami ~$ ls
dir1 dir2 exercises homework2.pdf photos soal1.sh soal2.sh test
hadis@whoami ~$ cd dir1
hadis@whoami ~/dir1$ ls
10.txt 1.txt 2.txt 3.txt 4.txt 5.txt 6.txt 7.txt 8.txt 9.txt
hadis@whoami ~/dir1$ ..
hadis@whoami ~$ ls
dir1 dir2 exercises homework2.pdf photos soal1.sh soal2.sh test
hadis@whoami ~$ cd dir2
hadis@whoami ~/dir2$ ls
hello.txt
hadis@whoami ~/dir2$ ..
hadis@whoami ~$ ls
dir1 dir2 exercises homework2.pdf photos soal1.sh soal2.sh test
hadis@whoami ~$ ./soal2.sh dir1 dir2 dir3_

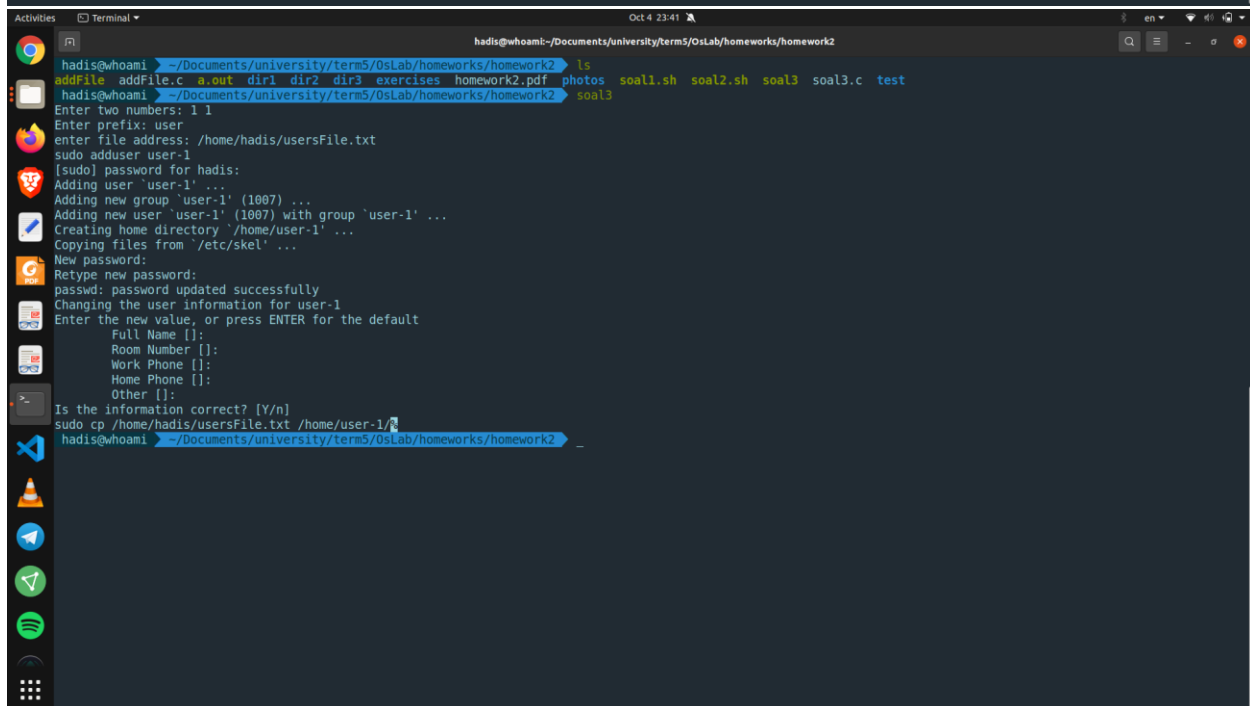
10.txt
1.txt
2.txt
3.txt
4.txt
5.txt
6.txt
7.txt
8.txt
9.txt
hello.txt
(END)
```

```
hadis@whoami:~/Documents/university/term5/0sLab/homeworks/homework2
hadis@whoami ~$ cd ~/Documents/university/term5/0sLab/homeworks/homework2
hadis@whoami ~$ ls
dir1 dir2 exercises homework2.pdf photos soal1.sh soal2.sh test
hadis@whoami ~$ cd dir1
hadis@whoami ~$ ls
10.txt 1.txt 2.txt 3.txt 4.txt 5.txt 6.txt 7.txt 8.txt 9.txt
hadis@whoami ~$ cd ..
hadis@whoami ~$ cd dir2
hadis@whoami ~$ ls
hello.txt
hadis@whoami ~$ cd ..
hadis@whoami ~$ cd dir2
hadis@whoami ~$ ls
dir1 dir2 exercises homework2.pdf photos soal1.sh soal2.sh test
hadis@whoami ~$ ./soal2.sh dir1 dir2 dir3
All dir1 files copied to dir3
All dir2 files copied to dir3
hadis@whoami ~$ cd ..
```

سوال 3

```
hadis@whoami:~/Documents/university/term5/0sLab/homeworks/homework2
hadis@whoami ~$ cd ~/Documents/university/term5/0sLab/homeworks/homework2
hadis@whoami ~$ ls
addFile addFile.c a.out dir1 dir2 dir3 exercises homework2.pdf photos soal1.sh soal2.sh soal3 soal3.c test
hadis@whoami ~$ cd ~/Documents/university/term5/0sLab/homeworks/homework2
hadis@whoami ~$ ./soal3
Enter two numbers: 1 1
Enter prefix: user
enter file address: /home/hadis/usersFile.txt
sudo adduser user-1
[sudo] password for hadis:
Adding user 'user-1' ...
Adding new group 'user-1' (1007) ...
Adding new user 'user-1' (1007) with group 'user-1' ...
Creating home directory '/home/user-1' ...
Copying files from '/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for user-1
Enter the new value, or press ENTER for the default
    Full Name []: _
```

```
hadis@whoami:~/Documents/university/term5/OsLab/homeworks/homework2
hadis@whoami ~$ ls
addFile.c  addFile.o  a.out  dir1  dir2  dir3  exercises  homework2.pdf  photos  soal1.sh  soal2.sh  soal3  soal3.c  test
hadis@whoami ~$ soal3
Enter two numbers: 1 1
Enter prefix: user
enter file address: /home/hadis/usersFile.txt
sudo adduser user-1
[sudo] password for hadis:
Adding user 'user-1' ...
Adding new group 'user-1' (1007) ...
Adding new user 'user-1' (1007) with group 'user-1' ...
Creating home directory '/home/user-1' ...
Copying files from '/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for user-1
Enter the new value, or press ENTER for the default
    Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [Y/n]
sudo cp /home/hadis/usersFile.txt /home/user-1/
hadis@whoami ~$
```

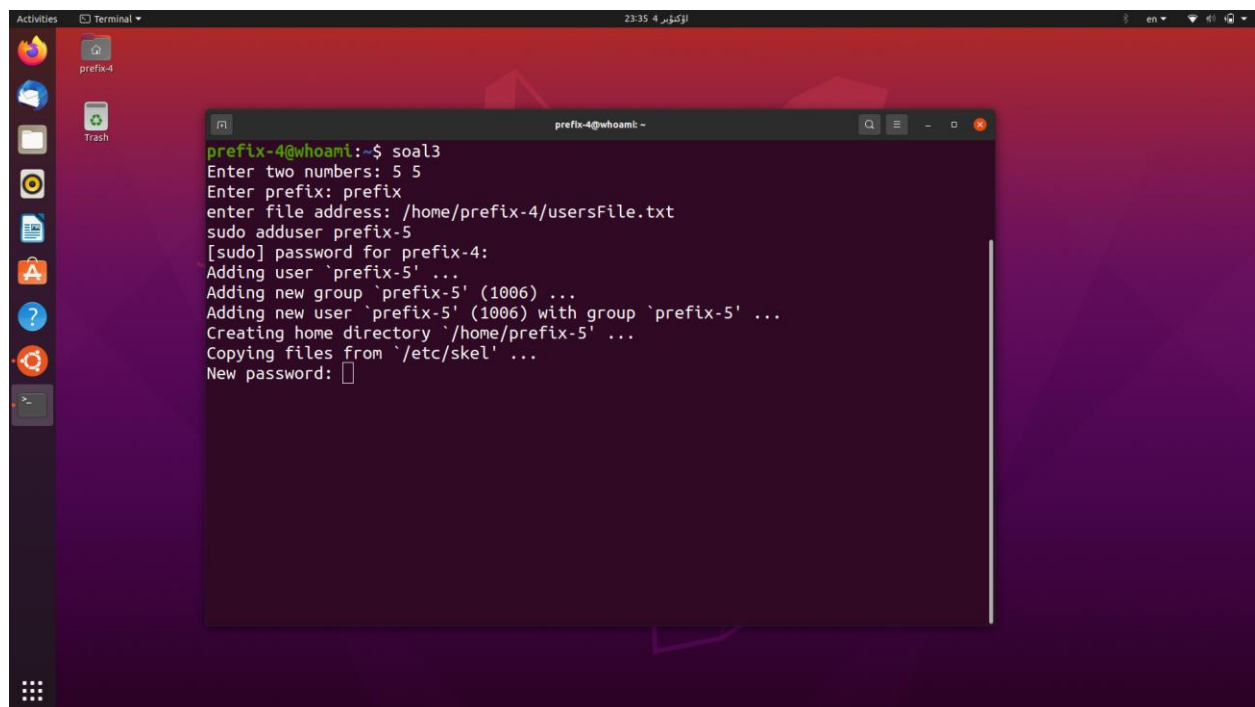


```
Activities Terminal Oct 4 23:42 hadis@whoami~
hadis@whoami ~$ soal3
Enter two numbers: 2 2
Enter prefix: user
enter file address: /home/hadis/usersFile.txt
sudo adduser user-2
[sudo] password for hadis:
Adding user 'user-2' ...
Adding new group 'user-2' (1008) ...
Adding new user 'user-2' (1008) with group 'user-2' ...
Creating home directory '/home/user-2' ...
Copying files from '/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for user-2
Enter the new value, or press ENTER for the default
    Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [Y/n]
sudo cp /home/hadis/usersFile.txt /home/user-2/
hadis@whoami ~$
```

```
hadis@whoami ~$ soal3
Enter two numbers: 2 2
Enter prefix: user
enter file address: /home/hadis/usersFile.txt
sudo adduser user-2
[sudo] password for hadis:
Adding user 'user-2' ...
Adding new group 'user-2' (1008) ...
Adding new user 'user-2' (1008) with group 'user-2' ...
Creating home directory '/home/user-2' ...
Copying files from '/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for user-2
Enter the new value, or press ENTER for the default
    Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [Y/n]
sudo cp /home/hadis/usersFile.txt /home/user-2/
hadis@whoami ~$
```

تست اجرای برنامه در محیط یوزر prefix-4

```
prefix-4@whoami: ~  
prefix-4@whoami:~$ soal3  
Enter two numbers: 5 5  
Enter prefix: prefix  
enter file address: /home/prefix-4/usersFile.txt  
sudo adduser prefix-5  
[sudo] password for prefix-4:  
Adding user `prefix-5' ...  
Adding new group `prefix-5' (1006) ...  
Adding new user `prefix-5' (1006) with group `prefix-5' ...  
Creating home directory `/home/prefix-5' ...  
Copying files from `/etc/skel' ...  
New password: 
```




```
Activities Terminal 23:37 4 اکتبر en
prefix-4@whoami:~$ soal3
Enter two numbers: 5 5
Enter prefix: prefix
enter file address: /home/prefix-4/usersFile.txt
sudo adduser prefix-5
[sudo] password for prefix-4:
Adding user `prefix-5' ...
Adding new group `prefix-5' (1006) ...
Adding new user `prefix-5' (1006) with group `prefix-5' ...
Creating home directory `/home/prefix-5' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for prefix-5
Enter the new value, or press ENTER for the default
Full Name []:
Room Number []:
Work Phone []:
Home Phone []:
Other []:
Is the information correct? [Y/n]
sudo cp /home/prefix-4/usersFile.txt /home/prefix-5/prefix-4@whoami:~$
```

```
prefix-4@whoami:~$ soal3
Enter two numbers: 5 5
Enter prefix: prefix
enter file address: /home/prefix-4/usersFile.txt
sudo adduser prefix-5
[sudo] password for prefix-4:
Adding user `prefix-5' ...
Adding new group `prefix-5' (1006) ...
Adding new user `prefix-5' (1006) with group `prefix-5' ...
Creating home directory `/home/prefix-5' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for prefix-5
Enter the new value, or press ENTER for the default
Full Name []:
Room Number []:
Work Phone []:
Home Phone []:
Other []:
Is the information correct? [Y/n]
sudo cp /home/prefix-4/usersFile.txt /home/prefix-5/prefix-4@whoami:~$
```

چگونه این برنامه برای همه ی یوزر ها قابل اجرا باشد؟

طبق دستور زیر با اضافه کردن یک PATH به فایل /etc/profile میتوانیم این برنامه را در محیط های یوزرهای دیگر اجرا کنیم.

همچنین چون در این برنامه باید یک یوزر جدید ساخته شود لازم است برای اجرای این برنامه یوزر جدید عضو گروه sudoers باشد.

طبق دستور بعدی هم میشود این کار را انجام داد.

```
hadis@whoami~  
hadis@whoami ➜ sudo sh -c "echo 'export PATH=\$PATH:/home/hadis/Documents/university/term5/0sLab/homeworks/homework2' >> /etc/profile"  
  
sudo usermod -aG sudo prefix-4_
```