

UNIVERSITI SAINS ISLAM MALAYSIA

جَامِعَةُ الْعُلُومِ الْإِسْلَامِيَّةِ الْمَالِيزِيَّةِ

ISLAMIC SCIENCE UNIVERSITY OF MALAYSIA

**FACULTY OF SCIENCE & TECHNOLOGY
SEMESTER I 2020/2021**

**SKJ3161
UNIX/LINUX**

TITLE:
SHELL GROUP PROJECT
(HOUSE RENTAL SYSTEM AND FILE ENCRYPTION USING SHC)

GROUP:
KSC

GROUP MEMBERS:

| NAME | MATRIC NUMBER |
|---------------------------------------|----------------------|
| Muhammad Afiq bin Mustaffa | 1180447 |
| Nurul Hanis binti Mohd Hashim | 1180457 |
| Nik Zuhayrah Amalin binti Zahari | 1180472 |
| Muhammad Farhan bin Abdul Rahman | 1180479 |
| Nur Munaya Insyirah binti Mohd Yahaya | 1180495 |

STEPS AND COMMANDS

1. Install and configure SHC for encryption

```
kali@kali: ~
kali - File Manager

File Actions Edit View Help

kali@kali:~$ sudo su
[sudo] password for kali:
root@kali:/home/kali# wget http://www.datsi.fi.upm.es/~frosal/sources/shc-3.8.7.tgz
--2021-02-01 08:58:59-- http://www.datsi.fi.upm.es/~frosal/sources/shc-3.8.7.tgz
Resolving www.datsi.fi.upm.es (www.datsi.fi.upm.es)... 138.100.9.22
Connecting to www.datsi.fi.upm.es (www.datsi.fi.upm.es)|138.100.9.22|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 20498 (20K) [application/x-gzip]
Saving to: 'shc-3.8.7.tgz'

shc-3.8.7.tgz          100%[=====>]  20.02K  26.7KB/s   in 0.8s

2021-02-01 08:59:02 (26.7 KB/s) - 'shc-3.8.7.tgz' saved [20498/20498]

root@kali:/home/kali# tar xvfz shc-3.8.7.tgz
shc-3.8.7/CHANGES
shc-3.8.7/Copying
shc-3.8.7/Makefile
shc-3.8.7/match
shc-3.8.7/pru.sh
shc-3.8.7/shc-3.8.7.c
shc-3.8.7/shc.1
shc-3.8.7/shc.README
shc-3.8.7/shc.c
shc-3.8.7/shc.html
shc-3.8.7/test.bash
shc-3.8.7/test.csh
shc-3.8.7/test.ksh
root@kali:/home/kali# cd shc-3.8.7
root@kali:/home/kali/shc-3.8.7# make
cc -Wall -O6 shc.c -o shc
*** Do you want to probe shc with a test script?
*** Please try... make test
root@kali:/home/kali/shc-3.8.7# ./shc -v
shc parse(-f): No source file specified

shc Usage: shc [-e date] [-m addr] [-i iopt] [-x cmdnd] [-l lopt] [-rvDTCAh] -f script
```

2. House Rental System commands in “hrs.sh”

vi hrs.sh

```
#!/bin/sh

# Title: House Rental System
# Group Member:-
# Muhammad Afiq bin Mustaffa (1180447)
# Nurul Hanis binti Mohd Hashim (1180457)
# Nik Zuhayrah Amalin binti Zahari (1180472)
# Muhammad Farhan bin Abdul Rahman (1180479)
# Nur Munaya Insyirah binti Mohd Yahaya (1180495)

exit=0
houserental="db.txt"
while [ $exit -ne 1 ]
```

```
do
printf "
    MENU
1. Add House Details
2. View House List
3. Delete House
4. Update
5. Exit "
printf "\nChoose Operation : \n"
read input

if [ "$input" -eq 1 ]
then

echo "Enter House's Location : "
read location
echo "Enter Rental Price: "
read rentalprice
echo "$location: $rentalprice" >> $houserental

elif [ "$input" -eq 2 ]
then
printf "
1. View All House\n
2. Enter location or rental price\n"
printf "Choose option: \n"
read option
if [ "$option" -eq 1 ]
then
echo "House List"
cat $houserental
else
echo "Enter location or rental price : "
read option
grep $option $houserental
fi

elif [ "$input" -eq 3 ]
then
printf "
1. Delete all houses\n
2. Delete a house\n"
printf "Choose option: \n"
read ip
if [ "$ip" -eq 1 ]
then

echo "Delete all houses"
```

```

    > $houserental
else
    echo "Enter house's location to delete: "
    read location
    sed -i "$location/d" $houserental
fi

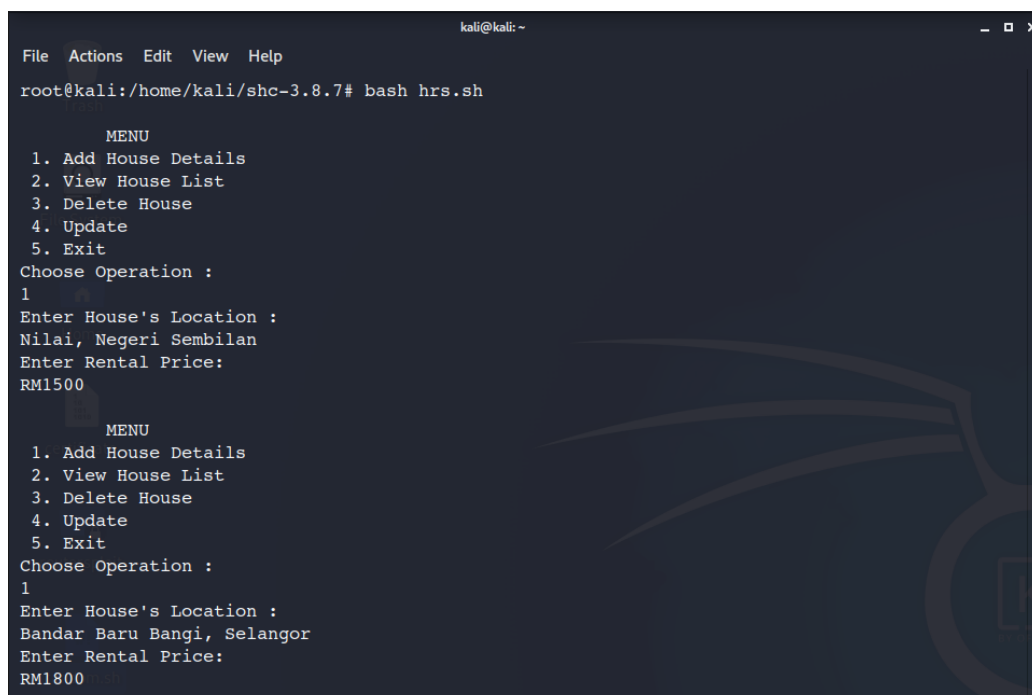
elif [ "$input" -eq 4 ]
then

    echo "Enter house's location to update"
    read location
    sed -i "$location/d" $houserental
    echo "Enter new house's location:"
    read location
    echo "Enter new rental price:"
    read rentalprice
    echo " $location: $rentalprice" >> $houserental
elif [ "$input" -eq 5 ]
then
    exit=1
else
    echo "error"
fi
done

```

3. Outputs for “bash hrs.sh”

a) Operation 1: Add House Details



```

kali@kali: ~
File Actions Edit View Help
root@kali:/home/kali/shc-3.8.7# bash hrs.sh

    MENU
    1. Add House Details
    2. View House List
    3. Delete House
    4. Update
    5. Exit
Choose Operation :
1
Enter House's Location :
Nilai, Negeri Sembilan
Enter Rental Price:
RM1500

    MENU
    1. Add House Details
    2. View House List
    3. Delete House
    4. Update
    5. Exit
Choose Operation :
1
Enter House's Location :
Bandar Baru Bangi, Selangor
Enter Rental Price:
RM1800

```

b) Operation 2: View House List

```
kali@kali: ~  
File Actions Edit View Help  
MENU  
1. Add House Details  
2. View House List  
3. Delete House  
4. Update  
5. Exit  
Choose Operation :  
2  
  
1. View All House  
  
2. Enter location or rental price  
Choose option:  
1  
House List  
Nilai, Negeri Sembilan: RM1500  
Bandar Baru Bangi, Selangor: RM1800  
  
MENU  
1. Add House Details  
2. View House List  
3. Delete House  
4. Update  
5. Exit  
Choose Operation :  
2  
  
1. View All House  
  
2. Enter location or rental price  
Choose option:  
2  
Enter location or rental price :  
Nilai  
Nilai, Negeri Sembilan: RM1500
```

c) Operation 3: Delete House

```
kali@kali: ~  
File Actions Edit View Help  
MENU  
1. Add House Details  
2. View House List  
3. Delete House  
4. Update  
5. Exit  
Choose Operation :  
3  
  
1. Delete all houses  
  
2. Delete a house  
Choose option:  
2  
Enter house's location to delete:  
Bandar Baru Bangi, Selangor  
  
MENU  
1. Add House Details  
2. View House List  
3. Delete House  
4. Update  
5. Exit  
Choose Operation :  
2  
  
1. View All House  
  
2. Enter location or rental price  
Choose option:  
1  
House List  
Nilai, Negeri Sembilan: RM1500
```

d) Operation 4: Update Menu

```
File  Actions  Edit  View  Help

MENU
1. Add House Details
2. View House List
3. Delete House
4. Update
5. Exit
Choose Operation :
4
Enter house's location to update
Nilai, Negeri Sembilan
Enter new house's location:
Seremban, Negeri Sembilan
Enter new rental price:
RM2000

MENU
1. Add House Details
2. View House List
3. Delete House
4. Update
5. Exit
Choose Operation :
2

1. View All House

2. Enter location or rental price
Choose option:
1
House List
Seremban, Negeri Sembilan: RM2000
```

e) Operation 5: Exit

```
MENU
1. Add House Details
2. View House List
3. Delete House
4. Update
5. Exit
Choose Operation :
5
root@kali:/home/kali/shc-3.8.7#
```

4. Encrypt file “hrs.sh” command

```
root@kali:/home/kali/shc-3.8.7# ./shc -f hrs.sh
root@kali:/home/kali/shc-3.8.7# ls -l hrs.sh*
-rw-r--r-- 1 root root 1875 Feb  1 09:41 hrs.sh
-rwx--x--x 1 root root 17784 Feb  1 09:42 hrs.sh.x
-rw-r--r-- 1 root root 20297 Feb  1 09:42 hrs.sh.x.c
root@kali:/home/kali/shc-3.8.7# file hrs.sh
hrs.sh: POSIX shell script, ASCII text executable
root@kali:/home/kali/shc-3.8.7# file hrs.sh.x
hrs.sh.x: ELF 64-bit LSB shared object, x86-64, version 1 (SYSV), dynamically linked, interpreter /lib64/ld-linux-x86-64.so.2, BuildID[sha1]=82db7f957865ad9b65eed7ele09d5343b3846ed9, for GNU/Linux 3.2.0, stripped
root@kali:/home/kali/shc-3.8.7# file hrs.sh.x.c
hrs.sh.x.c: ASCII text
```

5. Encrypted file “hrs.sh.x”

[illegible]