

## Lab 3

**Gruppemedlemmer:** Khayam Nami og Heljar Korbi**To do liste:**

Ting å gjøre	Status
Installere SSH	Gjort
Åpnet porten for SSH trafikk	Gjort
Generering SSH keys	Gjort
Overføring av Nøkkel:	Gjort
Overføring av .txt fil(omae)	Gjort
Overføring av mappe(lab3)	Gjort
Lage skallprogrammet i Bash	Gjort

**Utstyr**

Operativsystem på server(khayam):	Ubuntu 64-bit
Operativsystem på klient(heljar):	Ubuntu 64-bit
Digitalt/fysiske maskiner?	Fysiske maskiner
Koblingsmetode mellom enheter	Fysisk
Koblingsutstyr	Cat5E ethernet

**Keygen:**

```

heljar@heljarpc: ~
The key fingerprint is:
SHA256:2TdvNLbUWLgPbsfjej8/hAsFIeIn8QlvIPXovX/3ckc heljar@heljarpc
The key's randomart image is:
+----[RSA 3072]-----+
|      .oo.      |
|      o.=o      |
|      . ..B.o    |
|      +.o.* =    |
|      S +.=.X    |
|      o O.BE    |
|      ..Oo+     |
|      ++=*      |
|      .o=&      |
+-----[SHA256]-----+
heljar@heljarpc:~$ scp id_rsa.pub khayam@158.39.190.218:./.ssh
khayam@158.39.190.218's password:
id_rsa.pub: No such file or directory
heljar@heljarpc:~$ scp id_rsa.pub khayam@158.39.190.218:~/.ssh
khayam@158.39.190.218's password:
id_rsa.pub: No such file or directory
heljar@heljarpc:~$ scp id_rsa.pub khayam@158.39.190.218:~/ssh
khayam@158.39.190.218's password:
id_rsa.pub: No such file or directory
heljar@heljarpc:~$

```

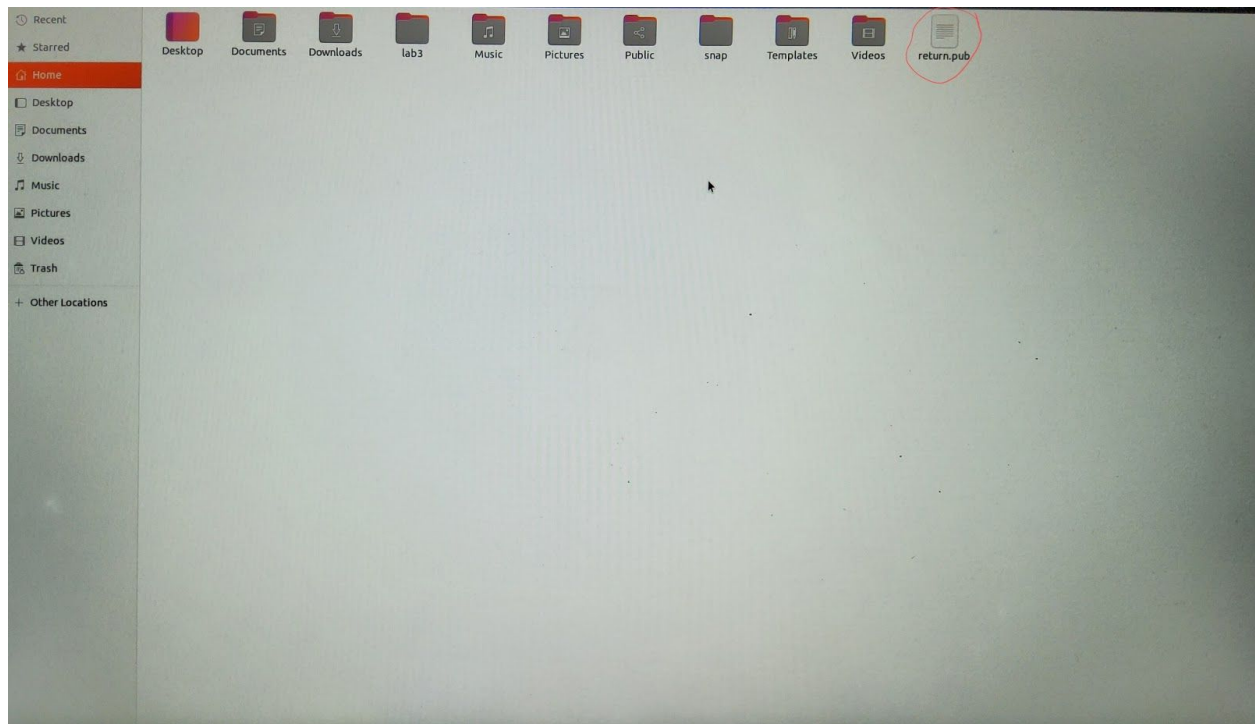
### Levering av fil(key):

```

heljar@heljarpc: ~
root@158.39.190.218's password:
Permission denied, please try again.
root@158.39.190.218's password:
Permission denied, please try again.
root@158.39.190.218's password:
root@158.39.190.218: Permission denied (publickey,password).
lost connection
heljar@heljarpc:~$ scp id_rsa.pub heljar@158.39.190.218:./.ssh
heljar@158.39.190.218's password:
Permission denied, please try again.
heljar@158.39.190.218's password:
heljar@heljarpc:~$ scp id_rsa.pub heljar@158.39.190.218:~/ssh
heljar@158.39.190.218's password:
Permission denied, please try again.
heljar@158.39.190.218's password:
Connection closed by 158.39.190.218 port 22
lost connection
heljar@heljarpc:~$ scp id_rsa.pub khayam@158.39.190.218:/home/khayam/
khayam@158.39.190.218's password:
id_rsa.pub: No such file or directory
heljar@heljarpc:~$ scp return.pub khayam@158.39.190.218:/home/khayam/
khayam@158.39.190.218's password:
return.pub
100% 569 135.8KB/s 00:00
heljar@heljarpc:~$

```

**Filen ligger nå på serveren:**



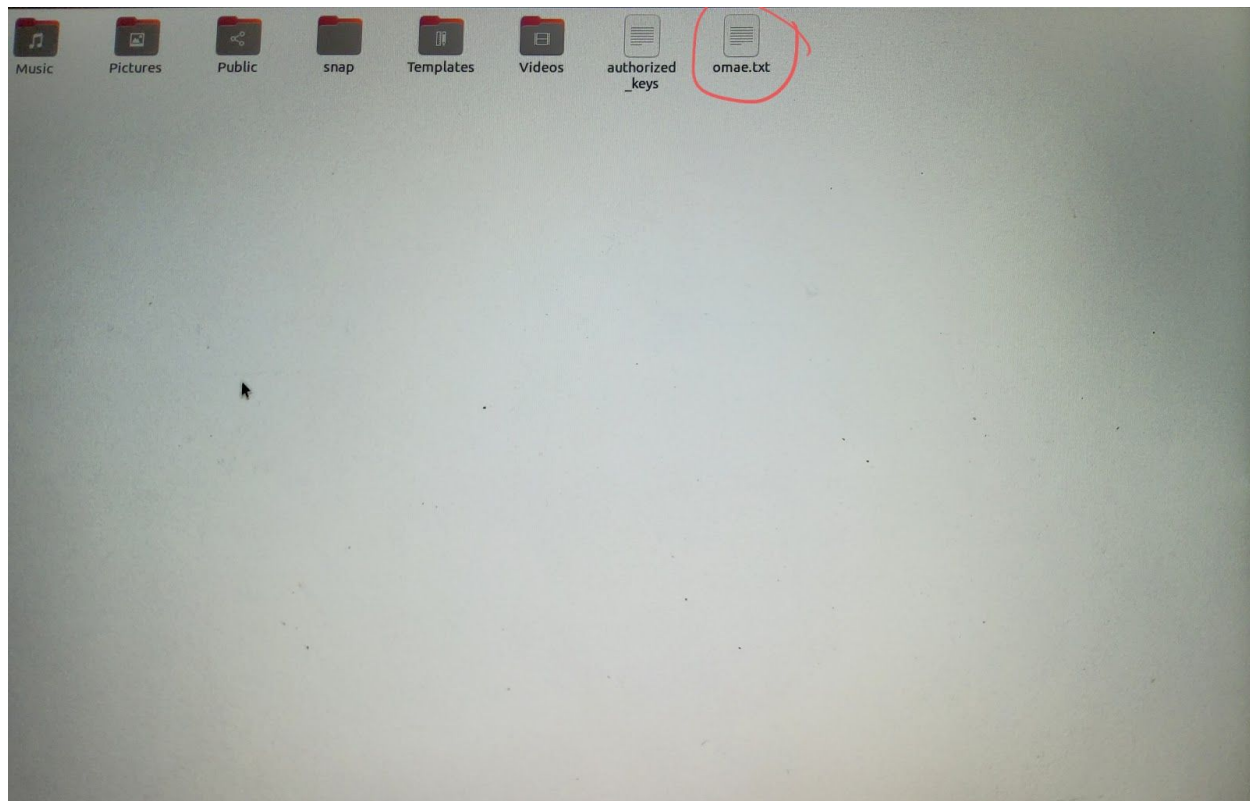
**Oppgave 1:**

Klient:



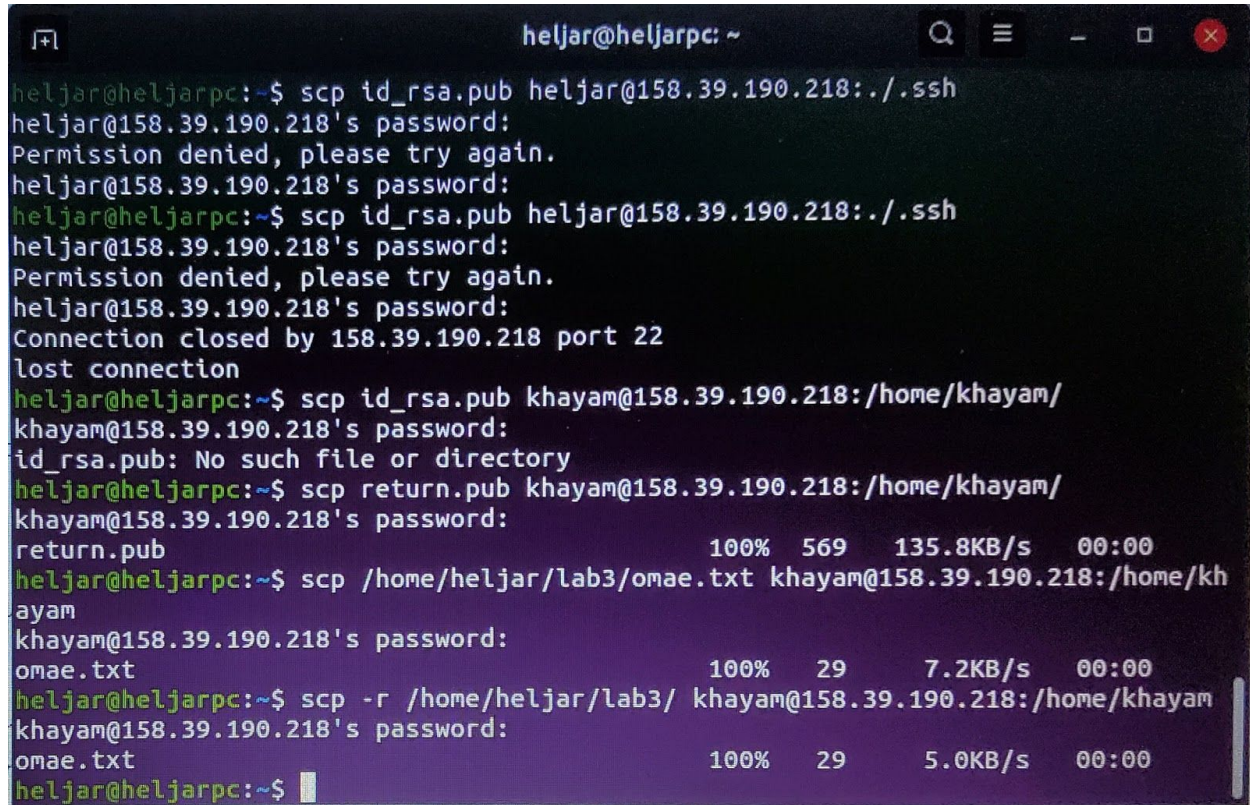
```
heljar@heljarpc: ~  
root@158.39.190.218's password:  
root@158.39.190.218: Permission denied (publickey,password).  
lost connection  
heljar@heljarpc:~$ scp id_rsa.pub heljar@158.39.190.218: ~/.ssh  
heljar@158.39.190.218's password:  
Permission denied, please try again.  
heljar@158.39.190.218's password:  
heljar@heljarpc:~$ scp id_rsa.pub heljar@158.39.190.218: ~/.ssh  
heljar@158.39.190.218's password:  
Permission denied, please try again.  
heljar@158.39.190.218's password:  
Connection closed by 158.39.190.218 port 22  
lost connection  
heljar@heljarpc:~$ scp id_rsa.pub khayam@158.39.190.218:/home/khayam/  
khayam@158.39.190.218's password:  
id_rsa.pub: No such file or directory  
heljar@heljarpc:~$ scp return.pub khayam@158.39.190.218:/home/khayam/  
khayam@158.39.190.218's password:  
return.pub 100% 569 135.8KB/s 00:00  
heljar@heljarpc:~$ scp /home/heljar/lab3/omae.txt khayam@158.39.190.218:/home/kh  
ayan  
khayam@158.39.190.218's password:  
omae.txt 100% 29 7.2KB/s 00:00  
heljar@heljarpc:~$
```

Serveren:



## Oppgave 2:

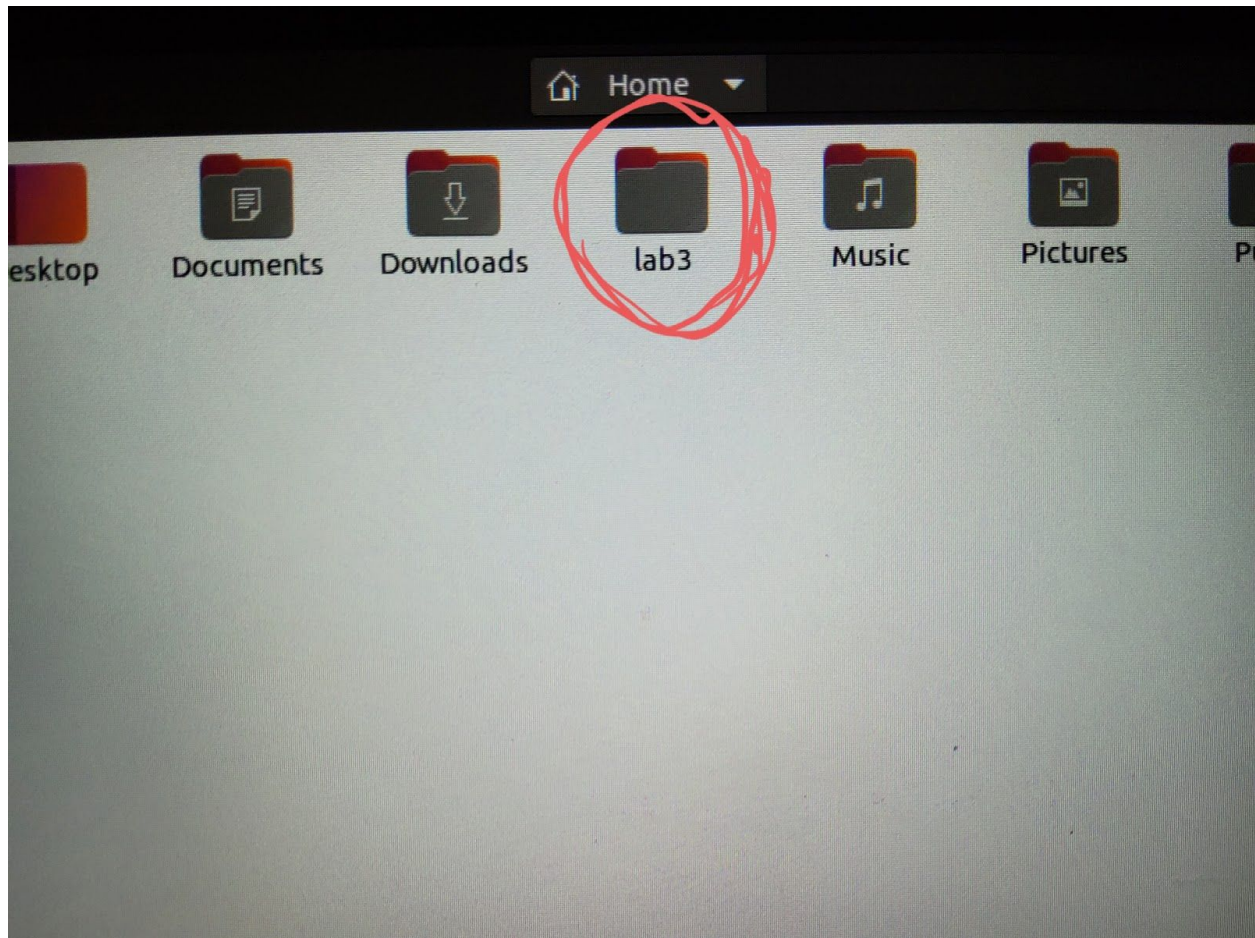
Klient::

A terminal window titled 'heljar@heljarpc: ~' with standard window controls. It shows a series of SCP commands and their outputs. The first two attempts to copy 'id\_rsa.pub' to 'heljar@158.39.190.218:./.ssh' fail with 'Permission denied'. The third attempt to copy 'id\_rsa.pub' to 'khayam@158.39.190.218:/home/khayam/' fails with 'No such file or directory'. The fourth attempt to copy 'return.pub' to 'khayam@158.39.190.218:/home/khayam/' succeeds, showing a progress bar at 100% with a transfer rate of 135.8KB/s. The fifth attempt to copy '/home/heljar/lab3/omae.txt' to 'khayam@158.39.190.218:/home/khayam' succeeds, showing a progress bar at 100% with a transfer rate of 7.2KB/s. The sixth attempt to copy 'omae.txt' to 'khayam@158.39.190.218:/home/khayam' succeeds, showing a progress bar at 100% with a transfer rate of 5.0KB/s. The terminal ends with a prompt 'heljar@heljarpc:~\$' and a cursor.

```
heljar@heljarpc:~$ scp id_rsa.pub heljar@158.39.190.218:./.ssh
heljar@158.39.190.218's password:
Permission denied, please try again.
heljar@158.39.190.218's password:
heljar@heljarpc:~$ scp id_rsa.pub heljar@158.39.190.218:./.ssh
heljar@158.39.190.218's password:
Permission denied, please try again.
heljar@158.39.190.218's password:
Connection closed by 158.39.190.218 port 22
lost connection
heljar@heljarpc:~$ scp id_rsa.pub khayam@158.39.190.218:/home/khayam/
khayam@158.39.190.218's password:
id_rsa.pub: No such file or directory
heljar@heljarpc:~$ scp return.pub khayam@158.39.190.218:/home/khayam/
khayam@158.39.190.218's password:
return.pub                                100% 569   135.8KB/s   00:00
heljar@heljarpc:~$ scp /home/heljar/lab3/omae.txt khayam@158.39.190.218:/home/kh
ayam
khayam@158.39.190.218's password:
omae.txt                                100% 29    7.2KB/s   00:00
heljar@heljarpc:~$ scp -r /home/heljar/lab3/ khayam@158.39.190.218:/home/khayam
khayam@158.39.190.218's password:
omae.txt                                100% 29    5.0KB/s   00:00
heljar@heljarpc:~$
```

Server:





I denne oppgaven så bruker vi Linux distroen Ubuntu(64-bit). Maskinen “khayam” er serveren i oppgaven og klienten er “heljar”.

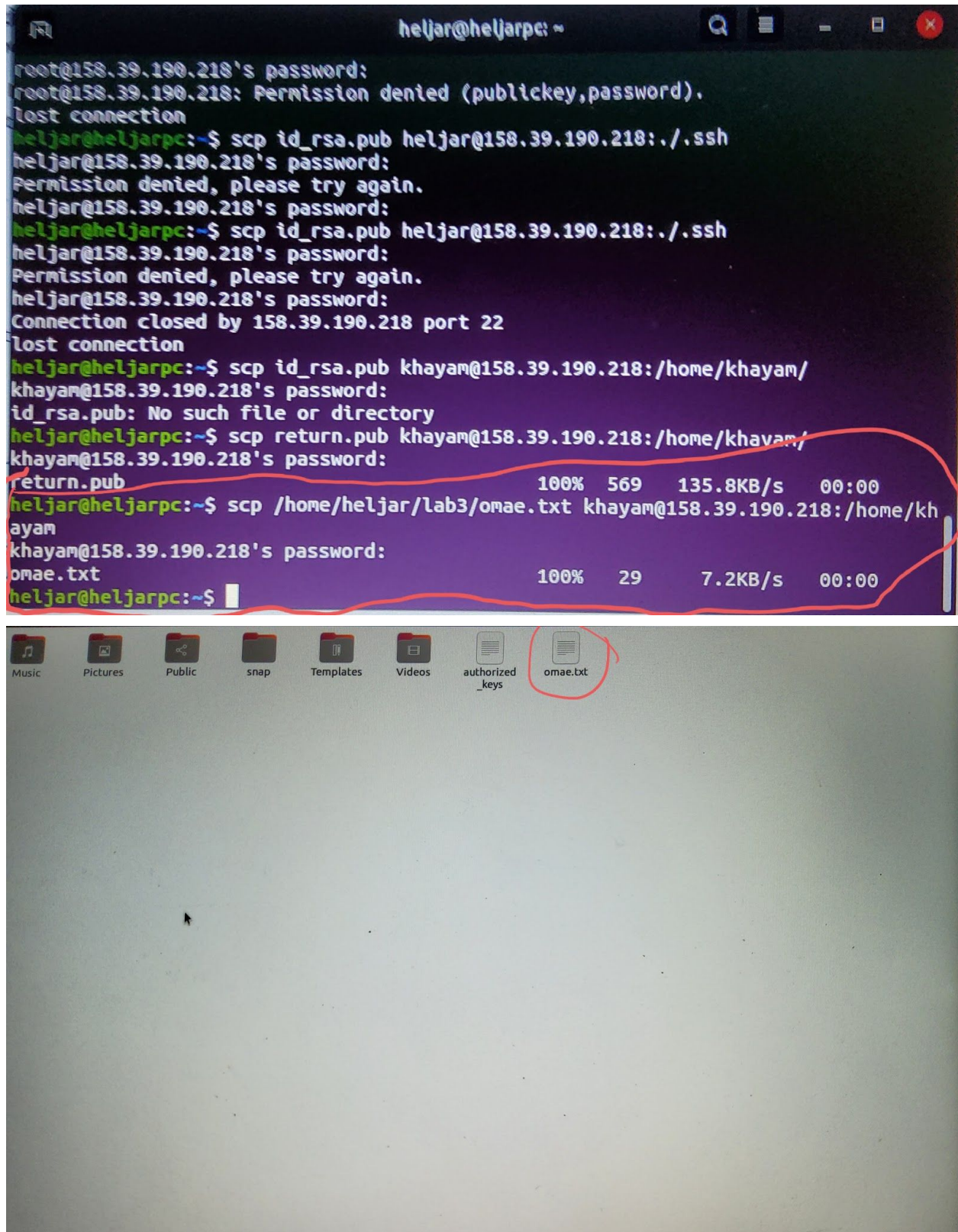
Vi kom borti et problem med overføring av nøkkelen fra klient(heljar) til serveren(khayam). Vi trodde at filen ville ha navnet som er brukt i oppgave teksten hvor vi ble informert om filnavnet på nøkkelen.

Skriv: `ssh-keygen -t rsa` Trykk `return` når du blir spurt om filnavn. Nå lages filene `id_rsa` og `id_rsa.pub`. Fila `id_rsa.pub` skal du sende over til katalog `.ssh` på serveren. Du kan bruke `scp` til det. Skriv `scp id_rsa.pub dittbrukernavn@ipadresse (evt.navn):katalog`. (Legg merke til tegnet : mellom maskin og katalog/fil). F.eks `scp id_rsa.pub eps@erling.hiof.no:./ssh`  
Du vil denne gang bli spurt om passord, før fila sendes over.

Fant ut etter en stund at filnavnet var noe annet enn oppgaveteksten så det skulle være. Filnavnet på vår var “return.pub” og “return”

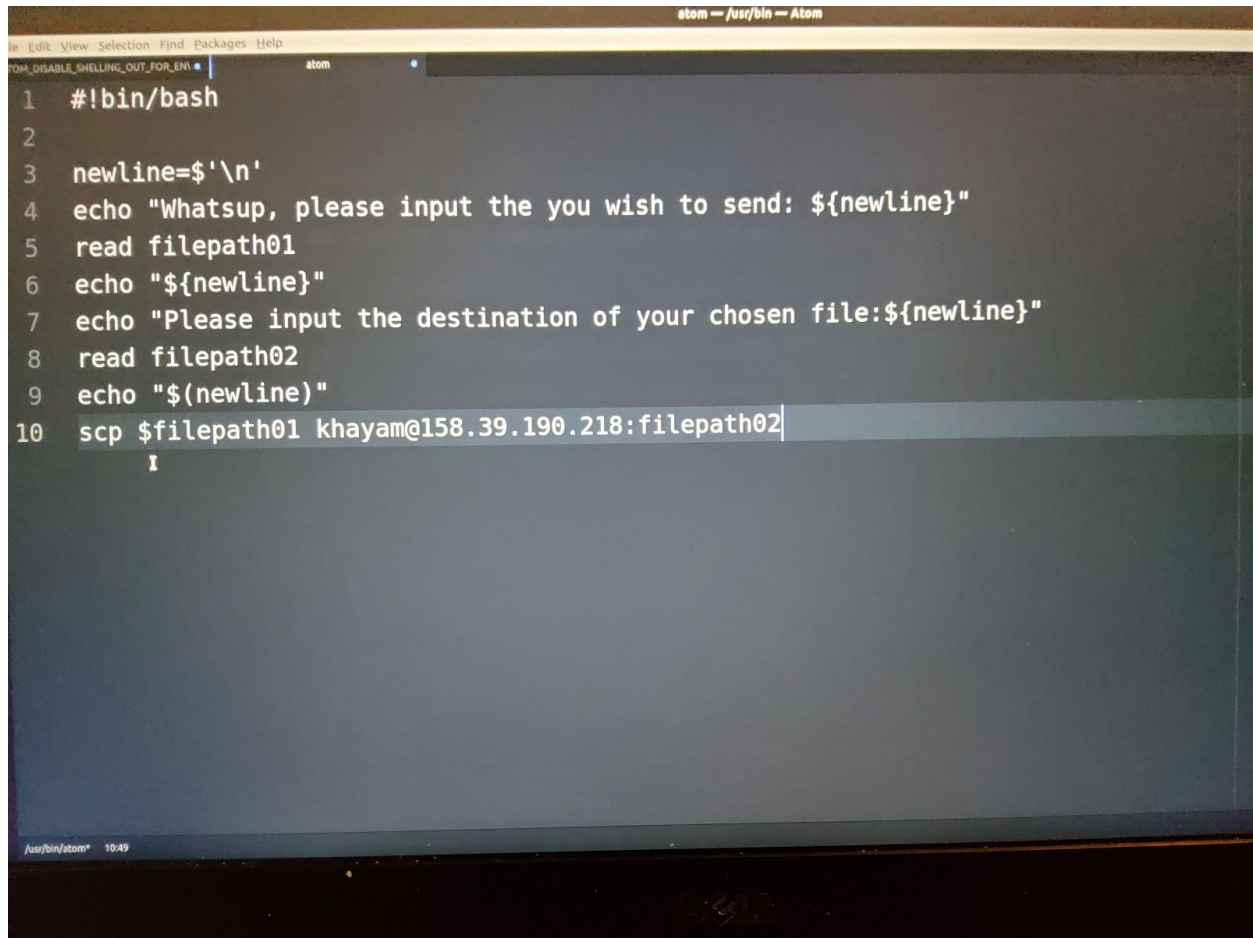
Oppgave 1.

Først så opprettet vi en mappe og en .txt fil som het omae.txt. Så overførte vi .txt filen via scp.



Skallprogrammet (Bash):



A screenshot of the Atom text editor interface. The title bar at the top says "atom - /usr/bin - Atom". The menu bar includes "File", "Edit", "View", "Selection", "Find", "Packages", and "Help". The main text area contains a shell script with line numbers 1 through 10 on the left. The script is as follows:

```
1  #!/bin/bash
2
3  newline=$'\n'
4  echo "Whatsup, please input the you wish to send: ${newline}"
5  read filepath01
6  echo "${newline}"
7  echo "Please input the destination of your chosen file:${newline}"
8  read filepath02
9  echo "${newline}"
10 scp $filepath01 khayam@158.39.190.218:filepath02
```

The cursor is positioned at the end of line 10. The status bar at the bottom left shows "/usr/bin/atom" and "10:49".

### Oppgave 2:

I denne oppgaven så brukte vi også scp for overføringen av mappen bare for å se om det fungerer å overføre mappen. Eneste endringen var å ha "scp -r" istedenfor bare "scp".



```
heljar@heljarpc: ~  
heljar@heljarpc:~$ scp id_rsa.pub heljar@158.39.190.218:./.ssh  
heljar@158.39.190.218's password:  
Permission denied, please try again.  
heljar@158.39.190.218's password:  
heljar@heljarpc:~$ scp id_rsa.pub heljar@158.39.190.218:./.ssh  
heljar@158.39.190.218's password:  
Permission denied, please try again.  
heljar@158.39.190.218's password:  
Connection closed by 158.39.190.218 port 22  
lost connection  
heljar@heljarpc:~$ scp id_rsa.pub khayam@158.39.190.218:/home/khayam/  
khayam@158.39.190.218's password:  
id_rsa.pub: No such file or directory  
heljar@heljarpc:~$ scp return.pub khayam@158.39.190.218:/home/khayam/  
khayam@158.39.190.218's password:  
return.pub 100% 569 135.8KB/s 00:00  
heljar@heljarpc:~$ scp /home/heljar/lab3/omae.txt khayam@158.39.190.218:/home/kh  
ayam  
khayam@158.39.190.218's password:  
omae.txt 100% 29 7.2KB/s 00:00  
heljar@heljarpc:~$ scp -r /home/heljar/lab3/ khayam@158.39.190.218:/home/khayam  
khayam@158.39.190.218's password:  
omae.txt 100% 29 5.0KB/s 00:00  
heljar@heljarpc:~$
```