Q1: Using **crontab**, create a schedule that runs a command to add the output of the **uptime** command to a file named **uptime.txt**every 2 hours. The **uptime.txt** file should be located in the user's home directory. The output of the **uptime** command should be appended to the **uptime.txt** file.

```
cd /home
touch uptime.txt
crontab -e
```

```
ubuntu $ ls
ubuntu  uptime.txt
ubuntu $ crontab -e
no crontab for root - using an empty one

Select an editor.  To change later, run 'select-editor'.
  1. /bin/nano        <---- easiest
  2. /usr/bin/vim.basic
  3. /usr/bin/vim.tiny
  4. /bin/ed

Choose 1-4 [1]: 2
```

Blocked * */2 * * * (uptime >> /home/uptime.txt)
Completed 0 */2 * * * (uptime >> /home/uptime.txt)

```
# m h  dom mon dow   command
* */2 * * * (uptime >> /home/uptime.txt)
~
~
~
~
~
~
~
~
~
~
~
:wq
```

Q2: How do you list the existing cronjobs ?

```
crontab -l
```

```
Choose 1-4 [1]: 2
crontab: installing new crontab
ubuntu $ crontab -l
# Edit this file to introduce tasks to be run by cron.
#
# Each task to run has to be defined through a single line
# indicating with different fields when the task will be run
# and what command to run for the task
#
# To define the time you can provide concrete values for
# minute (m), hour (h), day of month (dom), month (mon),
# and day of week (dow) or use '*' in these fields (for 'any'
```

Q3: Use the **touch** command to create an empty file named "students":

Use the `echo` command and `>>` redirection operator to add 20 random names to the "students" file. You can use ChatGPT to provide you with the names, for example:

```
echo "Emma Johnson" >> students
echo "Liam Williams" >> students
echo "Olivia Brown" >> students
echo "Noah Davis" >> students
echo "Ava Garcia" >> students
echo "Logan Rodriguez" >> students
echo "Isabella Martinez" >> students
echo "Lucas Wilson" >> students
echo "Sophia Anderson" >> students
echo "Jackson Hernandez" >> students
echo "Mia Thompson" >> students
```

```
echo "Ethan Taylor" >> students
echo "Amelia Moore" >> students
echo "Jacob Jackson" >> students
echo "Harper Lee" >> students
echo "Michael Lee" >> students
echo "Abigail Turner" >> students
echo "Daniel Phillips" >> students
echo "Elizabeth Collins" >> students
echo "William Parker" >> students
```

Use sed command to replace Jacob Jackson with Akshay Suresh

```
sed 's/Jacob Jackson/Akshay Suresh/g' students
```

```
ubuntu $ sed 's/Jacob Jackson/Akshay Suresh/g' students
Emma Johnson
Liam Williams
Olivia Brown
Noah Davis
Ava Garcia
Logan Rodriguez
Isabella Martinez
Lucas Wilson
Sophia Anderson
Jackson Hernandez
Mia Thompson
Ethan Taylor
Amelia Moore
Akshay Suresh
Harper Lee
Michael Lee
Abigail Turner
Daniel Phillips
Elizabeth Collins
William Parker
ubuntu $
```

Blocked Use vim command to copy the last three lines and paste again in the same file

```
ubuntu $ cat students
Emma Johnson
Liam Williams
Olivia Brown
Noah Davis
Ava Garcia
Logan Rodriguez
Isabella Martinez
Lucas Wilson
Sophia Anderson
Jackson Hernandez
Mia Thompson
Ethan Taylor
Amelia Moore
Jacob Jackson
Harper Lee
Michael Lee
Abigail Turner
Daniel Phillips
Elizabeth Collins

Abigail Turner
Daniel Phillips
ubuntu $
```

Q4: Create a new alias “hi” for the command “lscpu” and make it permanent

```
alias hi='lscpu'
```

```
ubuntu $ alias hi='lscpu'
ubuntu $ hi
Architecture:                    x86_64
CPU op-mode(s):                  32-bit, 64-bit
Byte Order:                      Little Endian
Address sizes:                   46 bits physical, 48 bits vir
CPU(s):                          1
On-line CPU(s) list:             0
Thread(s) per core:              1
Core(s) per socket:              1
Socket(s):                       1
NUMA node(s):                    1
Vendor ID:                       GenuineIntel
CPU family:                      6
Model:                           42
Model name:                      Intel Xeon E312xx (Sandy Brid
Stepping:                        1
CPU MHz:                         2200.158
BogoMIPS:                        4400.31
Hypervisor vendor:               KVM
Virtualization type:             full
L1d cache:                       32 KiB
L1i cache:                       32 KiB
L2 cache:                        4 MiB
```

```
alias la='ls -A'
alias l='ls -CF'

# Alias definitions.
# You may want to put all your additions into a separate file
# ~/.bash_aliases, instead of adding them here directly.
# See /usr/share/doc/bash-doc/examples in the bash-doc package

if [ -f ~/.bash_aliases ]; then
    . ~/.bash_aliases
fi

# enable programmable completion features (you don't need to e
# this, if it's already enabled in /etc/bash.bashrc and /etc/p
# sources /etc/bash.bashrc).
#if [ -f /etc/bash_completion ] && ! shopt -oq posix; then
#    . /etc/bash_completion
#fi
PATH=$PATH:/usr/local/go/bin
alias python3=/usr/bin/python3.8
export PS1="\h $ "
PATH=$PATH:/snap/bin
alias hi='lscpu'
:wq
```

```
   11  history
ubuntu $ history | head -8 | tail -6
    3  alias hi='lscpu'
    4  hi
    5  clear
    6  alias -p
    7  cat .bashrc
    8  vim .bashrc
ubuntu $
```

Q5: How do you remove an alias ?

```
unalias hi
```

```
ubuntu $ alias -p
alias egrep='egrep --color=auto'
alias fgrep='fgrep --color=auto'
alias grep='grep --color=auto'
alias hi='lscpu'
alias l='ls -CF'
alias la='ls -A'
alias ll='ls -alF'
alias ls='ls --color=auto'
alias python3='/usr/bin/python3.8'
ubuntu $
```

```
ubuntu $ unalias hi
ubuntu $ alias -p
alias egrep='egrep --color=auto'
alias fgrep='fgrep --color=auto'
alias grep='grep --color=auto'
alias l='ls -CF'
alias la='ls -A'
alias ll='ls -alF'
alias ls='ls --color=auto'
alias python3='/usr/bin/python3.8'
ubuntu $
```

```
# this, if it's already enabled in /etc/bash.bashrc and /etc/p
# sources /etc/bash.bashrc).
#if [ -f /etc/bash_completion ] && ! shopt -oq posix; then
#    . /etc/bash_completion
#fi
PATH=$PATH:/usr/local/go/bin
alias python3=/usr/bin/python3.8
export PS1="\h $ "
PATH=$PATH:/snap/bin
~
:wq
```