Name: Section: Student No:

Closed Book, closed note exam. Show your work! we must follow your reasoning.
You are required to write down commands with necessary arguments and options. Give the best result that you can give!

EQW means **Each question worths** Each questin worths 10 points unless stated otherwise.

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Unless otherwise stated, assume that you are using the bash shell.

1. <GroupA>

- assume you are user gnu and located at /home/gnu/src We want to can copy everything in /home/gnu/src into /tmp/src Assume youhave hidden files and directories.

  How can you achive it

  a) using tar

  ```
  tar cf - .  | (cd /tmp/src; tar xf - )
  ```

  b) using copy (**without changing directory and using relative addressing**)

  ```
  cp -pR ../src  /tmp
  ```

- Assume you are user tasma, (**you are at home**) and /home/tasma has directories A B C D

  a) give command(s) to create a tar file /tmp/My.tar.bz2 containing A B C D and their contents;

  ```
  tar  cjf /tmp/My.tar.bz2  A B C D
  ```

  b) give commands to extract **directory D** and its contents

  ```
  tar xjf /tmp/My.tar.bz2  D
  ```

</GroupA>

<GroupB>

- give command to find all files whose size is zero: i) put the list in /tmp/myzero.list; ii) to delete them **EQW 5 pts**

  ```
  find . -type f -size 0
  ```
  finds all ordinary files of size 0

  ```
  find . -type f -size 0  -rint > /tmp/myzero.list
  ```
  puts names of all ordinary files of size 0 into `> /tmp/myzero.list`

  ```
  find . -type f -size 0  -delete
  ```
  deletes all such files

- give command(s) to find all files under /home/gnu and /home/tasma whose name is *.mpg3 and move them into /var/yedek/mpg3. Assume you have all permissions

  ```
  find /home/gnu /home/tasma -type f -name "*.mpg3" -print \
  -exec \mv '{}' /var/yedek/mpg3 \;
  ```

- find all files under the current directory which are newer than **file time.stamp** and whose name is of the form *.txt,; and place them in /tmp/mytxt.tar

```
 find . -newer time.stamp -name "*.txt" -print  \
-exec tar pf /tmp/mytxt.tar '{}' \;
```

</GroupB>

2. <GroupC> Given a text file X.txt, give commands to

   - find all lines containing word Internet, case sensitive and find number of such lines

     `grep -w Internet X.txt` **find all such lines in X.txt**
     `grep -w Internet X.txt > Y.txt` **puts all such lines into Y.txt**
     `grep -cw Internet X.txt` **counts all such lines** or wc Y.txt will give the same number

   - find all lines containing strings Net and FireFox and put into file /tmp/NetFox

     `grep Net X.txt | grep FireFox > /tmp/NetFox`

   - assume there are lots of *.txt files; find files containg string firefox case insensitive and put file names in /tmp/Fox.txt

     ```
     grep -li firefox *.txt > /tmp/Fox.txt
     ```

</GroupC>

3. <GroupD> **EQW 5 pts**

   - We want to execute MyRun today at 22:00, and 5 days later at 1.00am. How would you do it ?

     `at -f MyRun 22:00` or at -f Myrun 10 pm
     `at -f MyRun` 5 days 1am

   - We want to execute MyRun, every Monday, Wensday and Sunday at 1.00 in April, May and August. How would you do it ?

     cron: `0 1 * 4,5,8 1,3,7 MyRun`

</GroupD>