

### Question

Move files from one folder to the respective folders.

E.g current folder have files abc.txt, def.txt, ghi.txt, jkl.txt

You have to move these files to the folder like abc.txt => abc/ , def.txt => def/ ...

Expected outcome -

```
abc/abc.txt
def/def.txt
ghi/ghi.txt
jkl/jkl.txt
```

- a) Create files in current directory or any temporary directory - abc.txt, def.txt, ghi.txt, jkl.txt
- b) Print list of files to move.
- c) Segregate basename and extension of a file.
- d) Create folder using basename.
- e) Move file to newly created folder.
- f) Iterate above steps for all files.

### Answer

```
for f in ls *.txt;
do
folderName=`echo $f | awk -F. '{print $1}'`;
mkdir $folderName
cp $f $folderName
Done
```

### Question

Check if a folder exists or not. If it's not present, create it

- a) Test if particular folder exists in current directory or not
- b) If its doesn't exists then create it else print "folder already exists.."

### Answer:

```
if [[ -f abc ]]
then
    echo 'File exist'
else
    mkdir abc
fi
```

### Question

Execute command "hello" and "ls" and check its execution status and print whether command executed successful or not.

- a) Execute "hello" command at command prompt
- b) Check execution status of "hello" command
- c) Execute "ls" command at command prompt
- d) Check execution status of "ls" command

### Answer

```
echo 'hello'
if [ $? -eq 0 ]
then
echo "execution successful"
else
echo "execution failed"
```

```

fi

ls
if [ $? -eq 0 ]
then
    echo "execution successful"
else
    echo "execution failed"
fi

```

### Question:

#### Data analysis / manipulation (Awk)

Id	Employee Name	Job Title	Base Pay	Overtime Pay	Other Pay	Total Pay	TotalPayBenefits
1	NATHANIEL	GM	167411	0	400184	567595	567595
2	GARY	CAPTAIN	155966	245131	137811	538909	538909
3	ALBERT	CAPTAIN	212739	106088	16452	335279	335279
4	CHRISTOPHER	MECHANIC	77916	56120	198306	332343	32343
5	PATRICK	DEPUTY CHIEF	134401	9737	182234	326373	326373
6	DAVID	ASST DEPUTY	118602	8601	189082	316285	316285
7	ALSON	BATTALION CHIEF	92492	89062	134426	315981	315981
8	DAVID	DEPUTY DIRECTOR	256576	0	51322	307899	307899
10	JOANNE	CHIEF	285262	0	17115	302377	302377
12	PATRICIA	CAPTAIN	99722	87082	110804	297608	297608
13	EDWARD	EXECUTIVE	294580	0	0	294580	294580

i) Print EmployeeName and TotalPay who has BasePay greater than 10000

- Read data file 'data.csv' from command line and extract rows which have BasePay > 10000
- Print only EmployeeName and TotalPay

ii) What is the aggregate TotalPay of employees whose jobtitle is 'CAPTAIN'

- Read data file 'data.csv' from command line and extract rows which have 'CAPTAIN' in the column 'jobtitle'
- Extract TotalPay and calculate sum. Print the result on terminal.

iii) Print JobTitle and Overtimepay who has Overtimepay is between 7000 and 10000

- Read data file 'data.csv' from command line and extract jobtitle and overtimepay for column value range between 7000-10000
- Print the result on terminal.

iv) Print average BasePay

- Read data file 'data.csv' from command line and extract BasePay values and calculate its average
- Print the result on terminal.

### Answer:

- `cat data.csv | awk '$4 > 100000 {print $4}'`
- `cat data.csv | grep CAPTAIN | awk '{sum+=$7} END{print sum/NR}'`
- `cat data.csv | awk '$5 > 7000 && $5 < 10000 {print $3 , $5}'`
- `cat data.csv | awk '{sum+=$4}END{print sum/NR}'`

**Question:**

Find the difference between original file and the updated file.  
Apply changes to the original file.

- a) Create two directories as "original" and "updated"
- b) Copy given file 'original-file.sh' to the folder "original" and "updated-file.sh" to the folder "updated"
- c) Find the difference between these directories using linux command
- d) Make copy of folder "original" to some other directory as "original-backup" and apply changes to 'original-file.sh' file
- e) Verify that both folders "updated" and "original-backup" have no difference.

---

**Answer:**

```
mkdir original updated
cd original
touch original.sh
cd ..
cd updated
touch updated.sh
diff -qr original/ updated/
cd..
mkdir original-backup
cp -r original original-backup
```