

Linux assessment H17Y34

Username: sdc10

Password: kingstone

Task 1

Source code:

(header file)

```
#!/bin/sh
echo
echo
echo "+++++"
echo `date`
echo " Jose Fernandes EC***7434"
echo "+++++"
echo
echo
```

(footer file)

```
#!/bin/sh
echo
echo
echo "===== "
echo "----- End of task -----"
echo "===== "
echo
echo
```

(jftask1 file)

```
#!/bin/sh
./header
./footer
```

Input:

```
./jftask1
```

Output:

```
+++++
Thu Mar 29 09:19:05 UTC 2018
Jose Fernandes EC***7434
+++++
=====
----- End of task -----
=====
```

Task 2

Source code:

```
#!/bin/sh
./header
echo "Calendar:"
cal
echo
echo "The users logged in:"
who
echo
echo
echo "The number of user logged in:"
who | wc -l
echo
echo
echo "List of all files in the directory:"
ls -l
./footer
```

Input:

```
./jftask2
```

Output:

```
+++++
Thu Mar 29 09:26:08 UTC 2018
  Jose Fernandes EC***7434
+++++
```

Calendar:

March 2018						
Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

The users logged in:

sdc09	pts/0	2018-03-29 07:25 (dummy.stevenson.ac.uk)
sdc11	pts/1	2018-03-29 08:22 (195.194.47.34)
sdc18	pts/2	2018-03-29 08:32 (31.185.52.93)
sdc10	pts/4	2018-03-29 08:53 (195.194.47.34)
sda20	pts/5	2018-03-29 09:00 (dummy.stevenson.ac.uk)
sdc11	pts/6	2018-03-29 09:03 (195.194.47.34)
sdc16	pts/7	2018-03-29 09:11 (195.194.47.34)
sdc20	pts/3	2018-03-29 08:46 (victor.stevenson.ac.uk)

The number of user logged in:

List of all files in the directory:

```
total 100
drwxr-xr-x 2 sdc10 sda 4096 Mar 23 15:14 backup
-rwxr--r-- 1 sdc10 sda 154 Mar 23 14:33 backupFileScript
-rw-r--r-- 1 sdc10 sda 24409 Mar 23 15:15 bigfile
-rw-r--r-- 1 sdc10 sda 1087 Mar 22 12:08 climatechange
-rw-r--r-- 1 sdc10 sda 604 Mar 22 12:08 darkmatter
-rwxr--r-- 1 sdc10 sda 135 Mar 22 12:08 footer
-rwxr--r-- 1 sdc10 sda 148 Mar 22 12:08 header
drwxr-xr-x 2 sdc10 sda 4096 Mar 22 09:26 jfdir1
drwxr-xr-x 2 sdc10 sda 4096 Mar 22 09:26 jfdir2
drwxr-xr-x 2 sdc10 sda 4096 Mar 22 09:26 jfdir3
drwxr-xr-x 2 sdc10 sda 4096 Mar 22 09:26 jfdir4
-rwxr--r-- 1 sdc10 sda 28 Mar 22 12:08 jftask1
-rwxr--r-- 1 sdc10 sda 204 Mar 22 12:08 jftask2
-rwxr--r-- 1 sdc10 sda 362 Mar 22 12:08 jftask3
-rwxr--r-- 1 sdc10 sda 442 Mar 22 12:08 jftask4
-rwxr--r-- 1 sdc10 sda 598 Mar 22 12:08 jftask5
-rwxr--r-- 1 sdc10 sda 601 Mar 23 15:10 jftask6
-rwxr--r-- 1 sdc10 sda 112 Mar 23 14:56 restoreFilesBackup
-rw-r--r-- 1 sdc10 sda 947 Mar 22 12:08 solarsystem
-rw-r--r-- 1 sdc10 sda 849 Mar 22 12:08 triassicperiod
```

=====

----- End of task -----

=====

Task 3

Source code:

```
#!/bin/sh
./header
if [ $# -eq 4 ]
then
mkdir $1
echo "directory created: $1"
echo
mkdir $1/$2
echo "directory created: $1/$2"
echo
mkdir $1/$3
echo "directory created: $1/$3"
echo
mkdir $1/$4
echo "directory created: $1/$4"
echo
ls -R $1
else
echo "Please insert 4 parameters: a folder and its 3 sub level
directories"
fi
./footer
```

Input:

```
./jftask3 top path door window
```

Output:

```
+++++
```

```
Thu Mar 29 09:38:20 UTC 2018
```

```
Jose Fernandes EC***7434
```

```
+++++
```

```
directory created: top
```

```
directory created: top/path
```

```
directory created: top/door
```

```
directory created: top/window
```

```
top:
```

```
door path window
```

```
top/door:
```

```
top/path:
```

```
top/window:
```

```
=====
```

```
----- End of task -----
```

```
=====
```

Input:

```
./jftask3 shape square circle triangle
```

Output:

```
+++++-----+-----+-----+-----+
```

```
Thu Mar 29 09:51:25 UTC 2018
```

```
Jose Fernandes EC***7434
```

```
+++++-----+-----+-----+-----+
```

```
directory created: shape
```

```
directory created: shape/square
```

```
directory created: shape/circle
```

```
directory created: shape/triangle
```

```
shape:
```

```
circle square triangle
```

```
shape/circle:
```

```
shape/square:
```

```
shape/triangle:
```

```
=====
```

```
----- End of task -----
```

EC1637434

Jose Fernandes

Edinburgh College

=====

Input:

```
./jftask3 shape square circle
```

Output:

```
+++++
```

```
Thu Mar 29 09:53:05 UTC 2018
```

```
Jose Fernandes EC***7434
```

```
+++++
```

```
Please insert 4 parameters: a folder and its 3 sub level directories
```

```
=====
```

```
----- End of task -----
```

```
=====
```

Task 4

Source code:

```
#!/bin/sh

./header

echo "Please enter a filename:"
read filename
echo
echo
if [ -e $filename ]
then
if [ -f $filename ]
then
if [ -s $filename ]
then
cp $filename $filename.bak
echo "$filename is a file"
echo
echo "A backup of $filename was created"
echo
else
echo "Empty file, no data"
fi
else
if [ -d $filename ]
then
echo "$filename is a directory"
else
echo "Error no such item found"
fi
fi
```

```
else
echo "Error no such item found"
fi

./footer
```

Input:

```
./jftask4
```

```
Please enter a filename:
```

```
Shgfhhsda
```

Output:

```
+++++
Thu Mar 29 09:56:50 UTC 2018
Jose Fernandes EC***7434
+++++
```

```
Please enter a filename:
```

```
shgfhhsda
```

```
Error no such item found
```

```
=====
----- End of task -----
=====
```

Input:

```
./jftask4
```

```
Please enter a filename:
```

```
climatechange
```

Output:

```
+++++
```

```
Thu Mar 29 10:08:21 UTC 2018
```

```
Jose Fernandes EC***7434
```

```
+++++
```

```
Please enter a filename:
```

```
climatechange
```

```
climatechange is a file
```

```
A backup of climatechange was created
```

```
=====
```

```
----- End of task -----
```

```
=====
```

Input:

```
./jftask4
```

```
Please enter a filename:
```

```
empfile
```

Output:

```
+++++
```

```
Thu Mar 29 10:10:47 UTC 2018
```

```
Jose Fernandes EC***7434
```

```
+++++
```

```
Please enter a filename:
```

```
empfile
```

```
Empty file, no data
```

```
=====
```

```
----- End of task -----
```

```
=====
```

Input:

```
./jftask4
```

```
Please enter a filename:
```

```
top
```

Output:

```
+++++
```

```
Thu Mar 29 10:11:52 UTC 2018
```

```
Jose Fernandes EC***7434
```

```
+++++
```

```
Please enter a filename:
```

```
top
```

```
top is a directory
```

```
=====
```

```
----- End of task -----
```

```
=====
```

Task 5

Source code:

```
#!/bin/sh
./header

dirn=0
filn=0

for item in *
do
    if [ -f $item ]
    then
        filn=`expr $filn + 1`
    fi
    if [ -d $item ]
    then
        dirn=`expr $dirn + 1`
    fi
done

total=`expr $dirn + $filn`

if [ $filn -gt $dirn ]
then
    echo "There are `expr $filn - $dirn` more files than directories.
$total items in total"
fi

if [ $filn -lt $dirn ]
then
```

```
echo "There are `expr $dirn - $filn` more directories than files.  
$total items in total"  
fi  
  
if [ $dirn -eq $filn ]  
then  
    echo "There is the same amount of files ($dirn files) as  
directories ($filn directories). $total items in total"  
fi  
  
. /footer
```

Input:

```
./jftask5
```

Output:

```
+++++
```

```
Thu Mar 29 10:13:31 UTC 2018
```

```
Jose Fernandes EC***7434
```

```
+++++
```

```
There are 9 more files than directories. 23 items in total
```

```
=====
```

```
----- End of task -----
```

```
=====
```

Task 6

Source code:

```
#!/bin/sh

./header

for item in *
do

    if [ ! -s $item ]
    then
        rm $item
        echo "$item file removed"
    fi

done

echo
echo
echo "Executable files list:"
echo
for item in *
do

    if [ -x $item -a ! -d $item ]
    then
        ls -l $item
    fi

done
```

```
echo  
echo  
echo "-----"  
echo "      Start Join"  
echo "-----"  
echo  
echo  
for item in *  
do  
  
if [ -s $item -a -r $item -a -w $item -a ! -x $item ]  
then  
    cat $item >> bigfile  
fi  
  
done  
echo  
echo  
echo "-----"  
echo "      End of Join"  
echo "-----"  
  
. ./footer
```

Input:

```
./jftask5  
./jftask6  
./jftask5
```

Output:

```
sdc10@ip-172-31-10-127:~/jftasks$ ./jftask5
```

```
+++++
```

Thu Mar 29 10:16:33 UTC 2018

Jose Fernandes EC***7434

```
+++++
```

There are 15 more files than directories. 29 items in total

```
=====
```

----- End of task -----

```
=====
```

```
sdc10@ip-172-31-10-127:~/jftasks$ ./jftask6
```

```
+++++
```

Thu Mar 29 10:17:26 UTC 2018

Jose Fernandes EC***7434

```
+++++
```

empfile file removed

jjhf file removed

o file removed

piopoip file removed

poiup file removed

sdf file removed

ui file removed

Executable files list:

```
-rwxr--r-- 1 sdc10 sda 154 Mar 23 14:33 backupFilesScript  
-rwxr--r-- 1 sdc10 sda 135 Mar 22 12:08 footer  
-rwxr--r-- 1 sdc10 sda 148 Mar 22 12:08 header  
-rwxr--r-- 1 sdc10 sda 28 Mar 22 12:08 jftask1  
-rwxr--r-- 1 sdc10 sda 204 Mar 22 12:08 jftask2  
-rwxr--r-- 1 sdc10 sda 362 Mar 22 12:08 jftask3  
-rwxr--r-- 1 sdc10 sda 544 Mar 29 10:07 jftask4  
-rwxr--r-- 1 sdc10 sda 598 Mar 22 12:08 jftask5  
-rwxr--r-- 1 sdc10 sda 601 Mar 23 15:10 jftask6  
-rwxr--r-- 1 sdc10 sda 112 Mar 23 14:56 restoreFilesBackup
```

Start Join

End of Join

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=====

----- End of task -----

=====

```
sdc10@ip-172-31-10-127:~/jftasks$ ./jftask5
```

+++++

Thu Mar 29 10:17:40 UTC 2018

Jose Fernandes EC***7434

+++++

There are 9 more files than directories. 23 items in total

=====

----- End of task -----

=====