

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:

8

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 backupFilesScript
-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 -----
```

=====

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
fi
```

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

```
./footer
```

Input:

```
./jftask4
```

```
Please enter a filename:
```

```
Shgfhsda
```

Output:

```
+++++
```

```
Thu Mar 29 09:56:50 UTC 2018
```

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

```
+++++
```

```
Please enter a filename:
```

```
shgfhsda
```

```
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

=====

----- 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 -----

=====