Assignment

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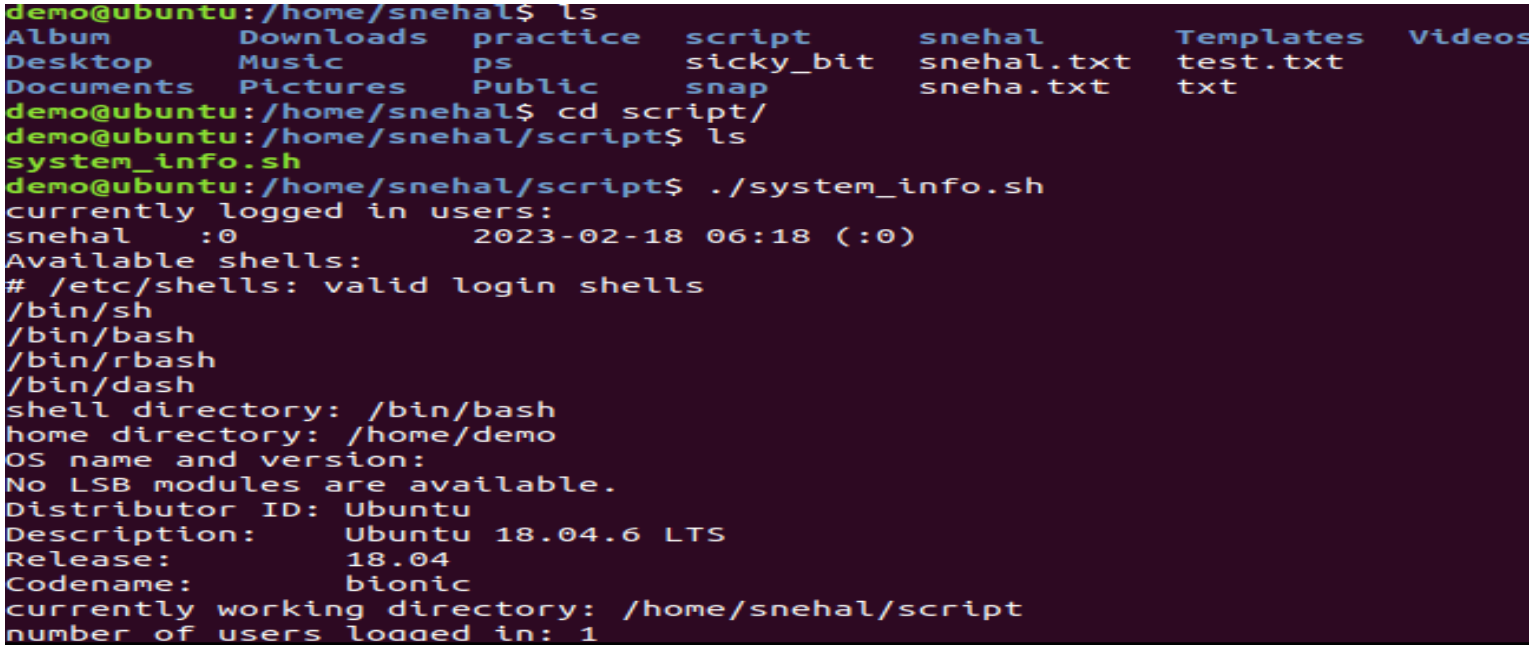
1) Write a shell script to print the following sytem information :

File Edit View Search Terminal Help

```
#!/bin/bash
echo "currently logged in users:"
who
echo "Available shells:"
cat /etc/shells
echo "shell directory: $SHELL"
echo "home directory: $HOME"
echo "OS name and version:"
lsb_release -a
echo "currently working directory: $PWD"
echo "number of users logged in: $(who | wc -l)"
echo "hard disk information:"
df -h
echo "CPU information:"
lscpu
echo "Memory information:"
free -h
echo "Currently running process:"
ps aux
```

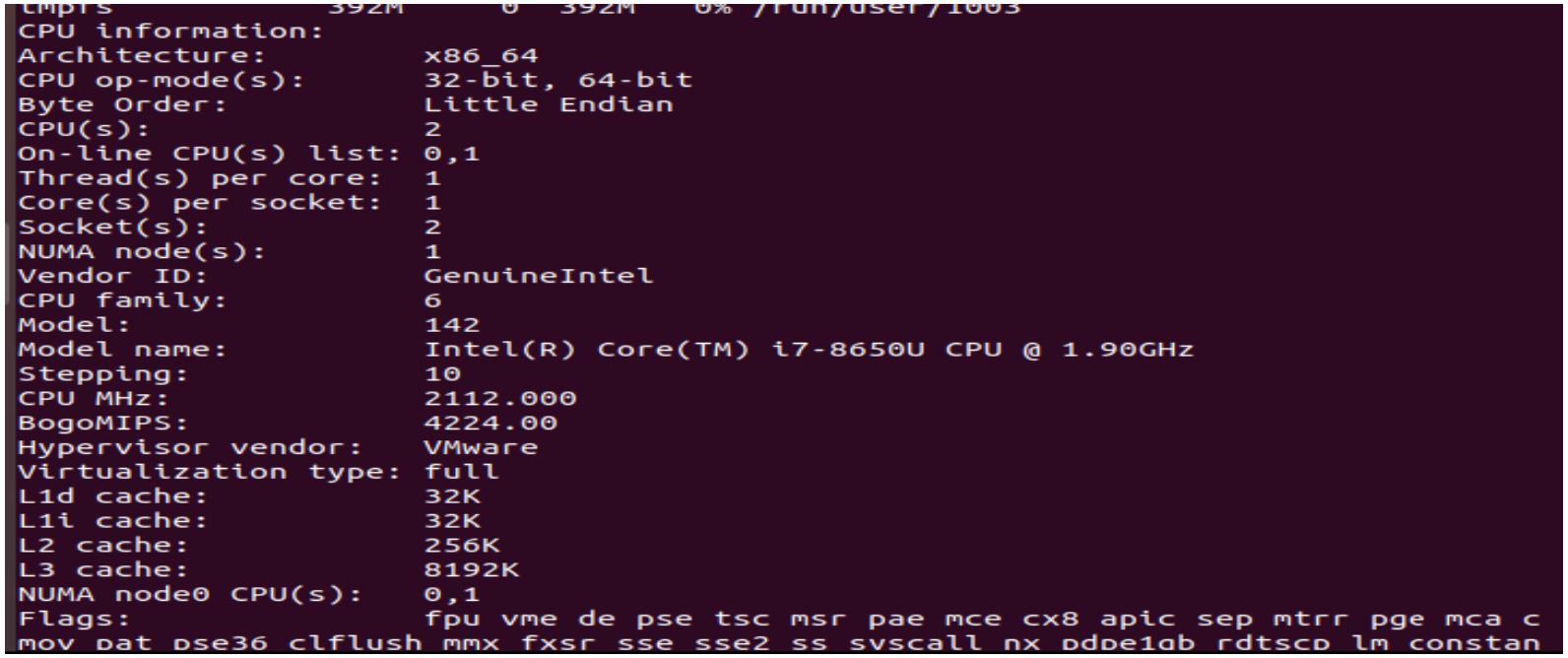
Currently logged users ,Your shell directory, OS name & version, Current working directory ,Home directory



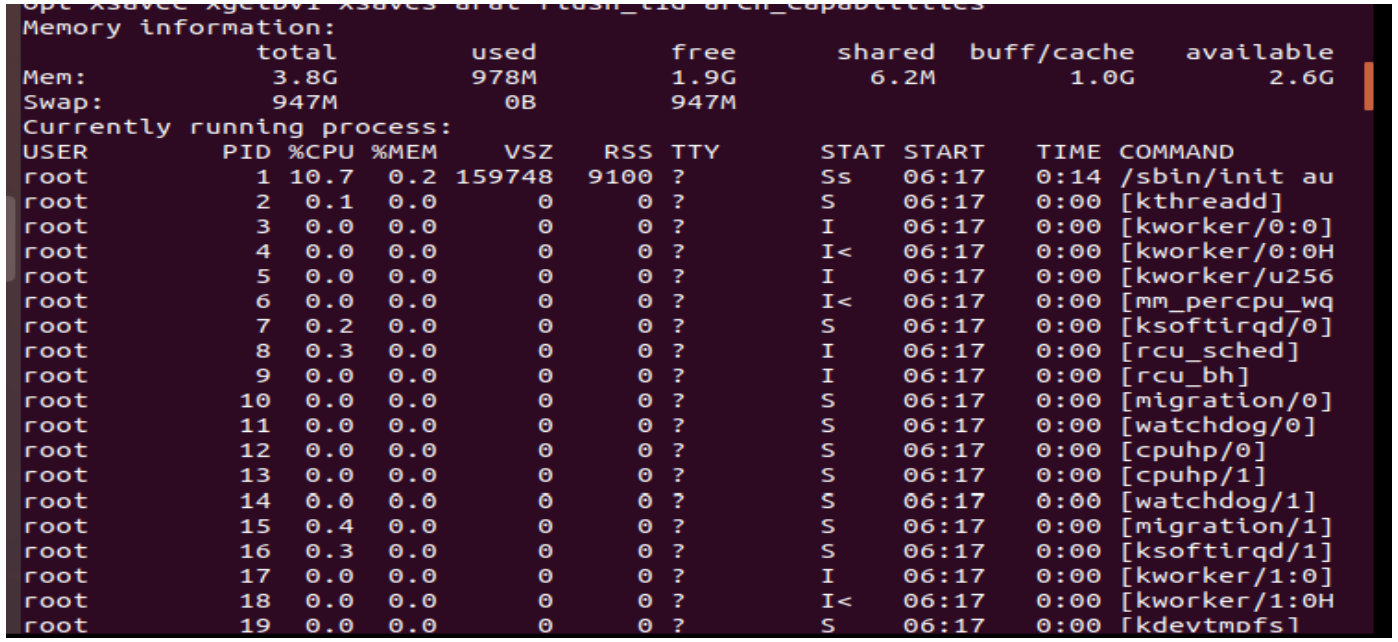
Hard Disk Info:

```
number of users logged in: 1
hard disk information:
Filesystem      Size  Used Avail Use% Mounted on
udev            1.9G     0  1.9G   0% /dev
tmpfs           392M  2.1M  390M   1% /run
/dev/sda1        20G  8.4G   11G  46% /
tmpfs           2.0G     0  2.0G   0% /dev/shm
tmpfs           5.0M  4.0K  5.0M   1% /run/lock
tmpfs           2.0G     0  2.0G   0% /sys/fs/cgroup
/dev/loop0       21M   21M     0 100% /snap/gnome-logs/25
/dev/loop1      117M  117M     0 100% /snap/core/14784
/dev/loop2       13M   13M     0 100% /snap/gnome-characters/69
/dev/loop3      512K  512K     0 100% /snap/gnome-characters/781
/dev/loop4      2.7M  2.7M     0 100% /snap/gnome-calculator/920
/dev/loop5      1.5M  1.5M     0 100% /snap/gnome-system-monitor/181
/dev/loop6      117M  117M     0 100% /snap/core/14447
/dev/loop7      768K  768K     0 100% /snap/gnome-logs/115
/dev/loop8      453M  453M     0 100% /snap/gnome-42-2204/56
/dev/loop9      1.7M  1.7M     0 100% /snap/gnome-calculator/154
/dev/loop10      73M   73M     0 100% /snap/core22/504
/dev/loop11      73M   73M     0 100% /snap/core22/509
/dev/loop12     141M  141M     0 100% /snap/gnome-3-26-1604/104
/dev/loop13     3.4M  3.4M     0 100% /snap/gnome-system-monitor/36
/dev/loop14     347M  347M     0 100% /snap/gnome-3-38-2004/119
/dev/loop15      64M   64M     0 100% /snap/core20/1778
/dev/loop16      92M   92M     0 100% /snap/gtk-common-themes/1535
/dev/loop17      64M   64M     0 100% /snap/core20/1822
/dev/loop18     128K  128K     0 100% /snap/bare/5
```

CPU Info:

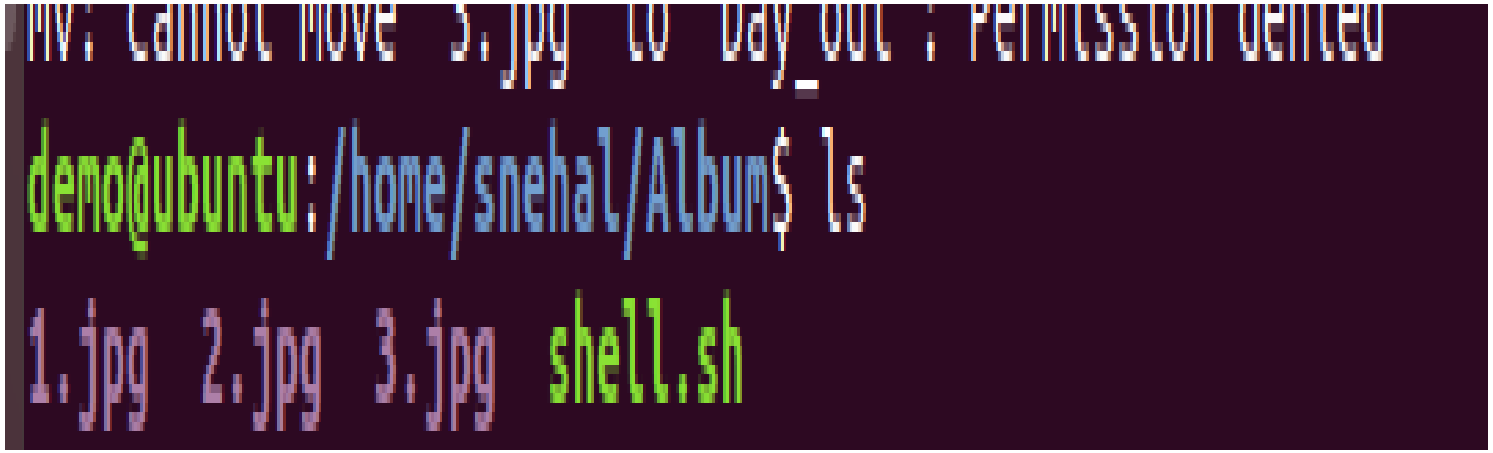

tmpfs 392M 0 392M 0% /run/user/1003
CPU information:
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
CPU(s): 2
On-line CPU(s) list: 0,1
Thread(s) per core: 1
Core(s) per socket: 1
Socket(s): 2
NUMA node(s): 1
Vendor ID: GenuineIntel
CPU family: 6
Model: 142
Model name: Intel(R) Core(TM) i7-8650U CPU @ 1.90GHz
Stepping: 10
CPU MHz: 2112.000
BogoMIPS: 4224.00
Hypervisor vendor: VMware
Virtualization type: full
L1d cache: 32K
L1i cache: 32K
L2 cache: 256K
L3 cache: 8192K
NUMA node0 CPU(s): 0,1
Flags: fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca c
mov pat pse36 clflush mmx fxsr sse sse2 ss syscall nx pdpe1gb rdtscp lm constan

Currently Running Process:

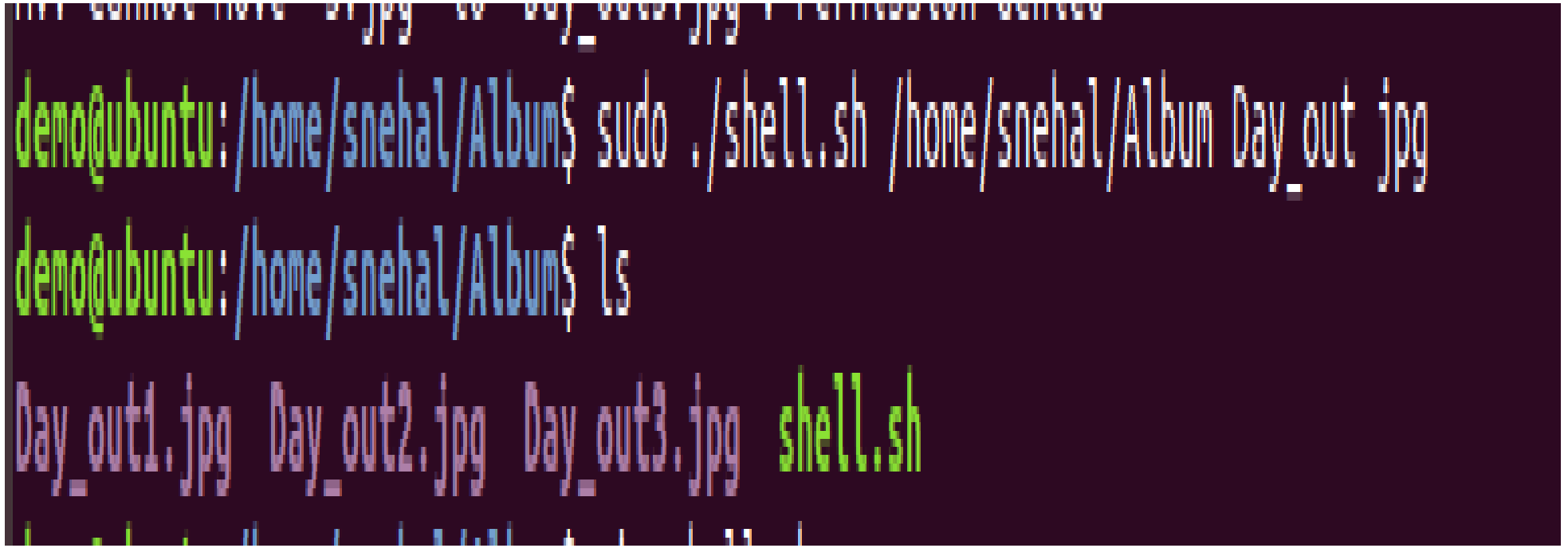


```
Memory information:
              total        used        free      shared  buff/cache   available
Mem:           3.8G        978M        1.9G        6.2M        1.0G        2.6G
Swap:          947M          0B        947M
Currently running process:
USER         PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root           1 10.7  0.2 159748  9100 ?        Ss   06:17   0:14 /sbin/init au
root           2  0.1  0.0      0     0 ?        S    06:17   0:00 [kthreadd]
root           3  0.0  0.0      0     0 ?        I    06:17   0:00 [kworker/0:0]
root           4  0.0  0.0      0     0 ?        I<   06:17   0:00 [kworker/0:0H
root           5  0.0  0.0      0     0 ?        I    06:17   0:00 [kworker/u256
root           6  0.0  0.0      0     0 ?        I<   06:17   0:00 [mm_percpu_wq
root           7  0.2  0.0      0     0 ?        S    06:17   0:00 [ksoftirqd/0]
root           8  0.3  0.0      0     0 ?        I    06:17   0:00 [rcu_sched]
root           9  0.0  0.0      0     0 ?        I    06:17   0:00 [rcu_bh]
root          10  0.0  0.0      0     0 ?        S    06:17   0:00 [migration/0]
root          11  0.0  0.0      0     0 ?        S    06:17   0:00 [watchdog/0]
root          12  0.0  0.0      0     0 ?        S    06:17   0:00 [cpuhp/0]
root          13  0.0  0.0      0     0 ?        S    06:17   0:00 [cpuhp/1]
root          14  0.0  0.0      0     0 ?        S    06:17   0:00 [watchdog/1]
root          15  0.4  0.0      0     0 ?        S    06:17   0:00 [migration/1]
root          16  0.3  0.0      0     0 ?        S    06:17   0:00 [ksoftirqd/1]
root          17  0.0  0.0      0     0 ?        I    06:17   0:00 [kworker/1:0]
root          18  0.0  0.0      0     0 ?        I<   06:17   0:00 [kworker/1:0H
root          19  0.0  0.0      0     0 ?        S    06:17   0:00 [kdevtmpfs]
```

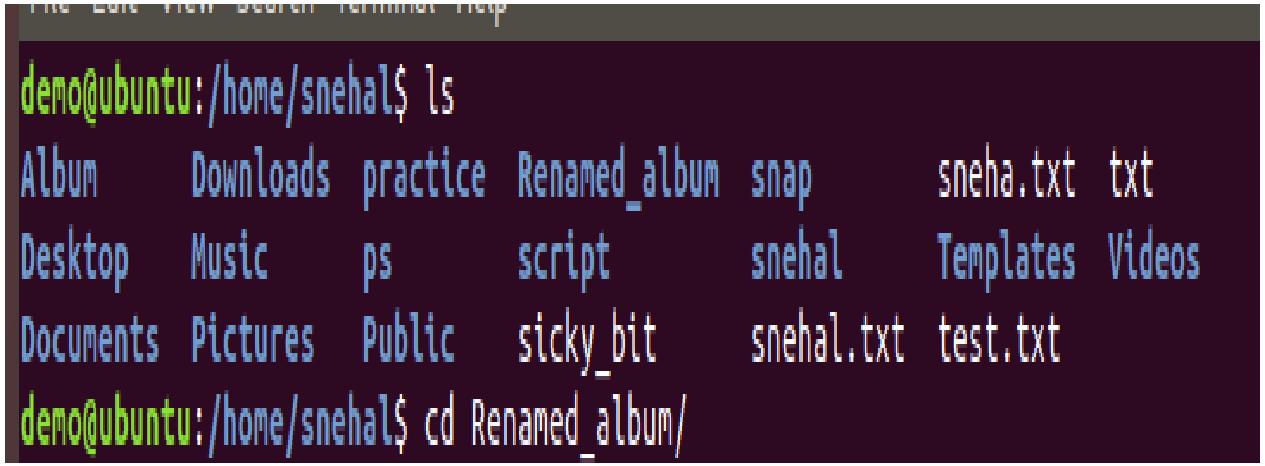
2)Given album and dir create a script to name files properly by inserting index numbers

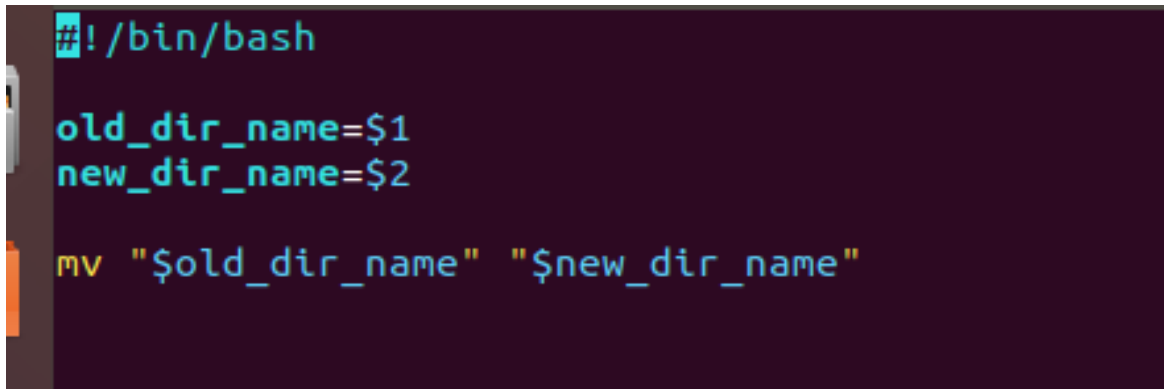


```
#!/bin/bash

# check if three command-line arguments were provided
if [ $# -ne 3 ]
then
  echo "Usage: $0 <directory> <prefix> <extension>"
  exit 1
fi

# navigate to the directory containing the files to be renamed
#cd "$1"

# loop through all the files in the directory with the specified extension
for file in *."$3"
do
  # check if the file is a regular file (not a directory)
  if [ -f "$file" ]
  then
    # rename the file by adding the specified prefix
    mv "$file" "$2$file"
  fi
done

~
```


demo@ubuntu:/home/sneha1/Album$ sudo ./shell.sh /home/sneha1/Album Day_out jpg
demo@ubuntu:/home/sneha1/Album$ ls
Day_out1.jpg Day_out2.jpg Day_out3.jpg shell.sh

3)Write a script to rename a dir with a given name




#!/bin/bash
old_dir_name=$1
new_dir_name=$2
mv "$old_dir_name" "$new_dir_name"

Renamed_album renewed in new_album