Shell Script 1

1) Create the startup script for an application start and stop

```bash
#!/bin/bash

app_name="Script1"
app_path="D:\Infobell Training"

start() {
        if pgrep -f "$app_name" > /dev/null; then
                echo "$app_nmae is already running"
        else
                cd "app_path"
                nohup ./run.sh > /dev/null 2>&1 &
                echo "Started $app_name"
        fi
}

stop() {
        if pgrep -f "$app_name" > /dev/null; then
                pkill -f "app_name"
                echo "Stopped $app_name"
        else
                echo "$app_name is not running"
        fi

}

case "$1" in
        start)
                start
                ;;
        stop)
                stop
                ;;
        restart)
                stop
                sleep 1
                start
                ;;
        *)
                echo "Usage : $0 {start|stop|restart}"
                exit 1
                ;;
esac

exit
```

.

2) **Write a shell script that consists of a function that displays the number of files in the present working directory. Name this function "file_count" and call it in your script. If you use variable in your function, remember to make it a local variable.**

```bash
#!/bin/bash

file_count () {
  local count=$(ls -1q | wc -l)
  echo "There are $count files in the current directory."
}

file_count
```

```
root@PRATIK:/home/pratik# vi Q2
root@PRATIK:/home/pratik# chmod +x Q2
root@PRATIK:/home/pratik# ./Q2
There are 12 files in the current directory.
root@PRATIK:/home/pratik# vi Q1
root@PRATIK:/home/pratik# vi Q2
root@PRATIK:/home/pratik#
```

3) For each directory in the $PATH, display the number of executable in that directory.

```bash
#!/bin/bash

# Split the PATH variable into an array of directories
IFS=':' read -ra directories <<< "$PATH"

# Loop over each directory and count the executables
for dir in "${directories[@]}"; do
  count=$(find "$dir" -maxdepth 1 -type f -executable | wc -l)
  echo "There are $count executables in $dir"
done
```

```
root@PRATIK:/home/pratik# vi Q3
root@PRATIK:/home/pratik# chmod +x Q3
root@PRATIK:/home/pratik# ./Q3
There are 0 executables in /usr/local/sbin
There are 0 executables in /usr/local/bin
There are 201 executables in /usr/sbin
There are 682 executables in /usr/bin
There are 0 executables in /sbin
There are 0 executables in /bin
There are 0 executables in /usr/games
There are 0 executables in /usr/local/games
There are 0 executables in /snap/bin
root@PRATIK:/home/pratik# vi Q3
root@PRATIK:/home/pratik#
```

· 4) Display the names of any file-system which have less than 10% free space available

```bash
#!/bin/bash

# Loop over all mounted file systems
df -h | tail -n +2 | while read -r filesystem size used avail percent mountpoint; do
  # Remove the % sign from the percent used value
  percent=${percent%\%}

  # Check if the percent used is greater than 90
  if [ "$percent" -gt 90 ]; then
    echo "$filesystem has less than 10% free space available"
  fi
done
~
~
~
~
```

```
root@PRATIK:/home/pratik# vi Q4
root@PRATIK:/home/pratik# ./Q4
tools has less than 10% free space available
drivers has less than 10% free space available
lib has less than 10% free space available
drvfs has less than 10% free space available
root@PRATIK:/home/pratik#
```

· 5) **Write a script that takes any number of directories as commandline arguments and then lists the contents of each of these directories**

```bash
root@PRATIK: /home/pratik
#!/bin/bash

# Loop over all command-line arguments (directories)
for dir in "$@"; do
  echo "Contents of directory $dir:"
  ls -al "$dir"
done
```

```
root@PRATIK: /home/pratik
root@PRATIK:/home/pratik# chmod +x Q5
root@PRATIK:/home/pratik# ./Q5 /home/
Contents of directory /home/:
total 44
drwxr-xr-x  4 root    root    4096 Apr 19 16:05 .
drwxr-xr-x 19 root    root    4096 Apr 20 13:39 ..
-rwxr-xr-x  1 root    root     132 Apr 19 15:50 for_loop.sh
-rwxr-xr-x  1 root    root      62 Apr 19 16:01 function.sh
drwxr-xr-x  3 root    root    4096 Apr  9 03:56 git_practice
-rwxr-xr-x  1 root    root     218 Apr 19 15:40 if_elif.sh
-rwxr-xr-x  1 root    root     149 Apr 19 15:33 if_else.sh
drwxr-x---  4 pratik pratik 4096 Apr 20 14:15 pratik
-rwxr-xr-x  1 root    root      55 Apr 19 15:22 pratik.sh
-rwxr-xr-x  1 root    root      74 Apr 19 15:26 read
-rwxr-xr-x  1 root    root      56 Apr 19 15:56 while.sh
root@PRATIK:/home/pratik#
```