

Assignment No. 5

a) Write a shell script that receives any number of file names as arguments checks if every argument supplied is a file or a directory and reports accordingly. whenever the argument is a file or directory.

```
#!/bin/bash

for arg in "$@"; do
    if [ -f "$arg" ]; then
        echo "$arg is a file."
    elif [ -d "$arg" ]; then
        echo "$arg is a directory."
    else
        echo "$arg is neither a file nor a
directory."
    fi
done
```

```
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$ vim 5thassigna.sh
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$ chmod +x 5thassigna.sh
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$ ./5thassigna.sh e.awk employee.txt c_programs first.c
e.awk is a file.
employee.txt is a file.
c_programs is a directory.
first.c is a file.
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$
```

b) Write a shell script to input a number of random integers as arguments and print only the prime numbers.

```
#!/bin/bash

is_prime() {
    num=$1
    if [ "$num" -le 1 ]; then
        return 1
    fi
    for ((i = 2; i * i <= num; i++)); do
```

```

        if [ "$(num % i)" -eq 0 ]; then
            return 1
        fi
    done
    return 0
}

for num in "$@"; do
    if is_prime "$num"; then
        echo "$num is a prime number."
    fi
done

```

```

anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$ vim 5thassignb.sh
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$ chmod +x 5thassignb.sh
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$ ./5thassignb.sh 25 7 45 97 67 13 79
7 is a prime number.
97 is a prime number.
67 is a prime number.
13 is a prime number.
79 is a prime number.
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$

```

c) Write a shell script to input a file name and print the lines that contains numeric values in it.

```

#!/bin/bash

if [ "$#" -ne 1 ]; then
    echo "Usage: $0 <file_name>"
    exit 1
fi

file="$1"

if [ ! -f "$file" ]; then
    echo "File $file does not exist."
    exit 1
fi

grep -E '[0-9]+' "$file"

```

```
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$ vim 5thassignc.sh
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$ chmod +x 5thassignc.sh
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$ ./5thassignc.sh clerk.txt
7369 SMITH CLERK 7902 17-DEC-1980 800 20
7876 ADAMS CLERK 7788 12-JAN-1983 1100 20
7900 JAMES CLERK 7698 3-DEC-1981 950 30
7934 MILLER CLERK 7782 23-JAN-1982 1300 10
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$
```