Assignment No. 4

a) Write a shell script to input a filename via command line arguments and print the type of file (such as c prog, c++, text file, pdf file, doc file etc.)

```
#!/bin/bash

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

file="$1"

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

file_type=$(file "$file")

if [[ $file_type == *C\ source* ]]; then
    echo "$file is a C program."
elif [[ $file_type == *C++\ source* ]]; then
    echo "$file is a C++ program."
elif [[ $file_type == *text* ]]; then
    echo "$file is a text file."
elif [[ $file_type == *PDF* ]]; then
    echo "$file is a PDF file."
elif [[ $file_type == *Word* ]]; then
    echo "$file is a Word document."
else
    echo "File type for $file could not be
determined."
Fi
```

```
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$ vim 4thassigna.sh
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$ chmod +x 4thassigna.sh
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$ ./4thassigna.sh employee.txt
employee.txt is a text file.
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$
```

b) Write a shell script to input three numbers via command line arguments and print the largest among them.

```
#!/bin/bash

if [ "$#" -ne 3 ]; then
    echo "Usage: $0 <num1> <num2> <num3>"
    exit 1
fi

num1="$1"
num2="$2"
num3="$3"

largest="$num1"
if [ "$num2" -gt "$largest" ]; then
    largest="$num2"
fi
if [ "$num3" -gt "$largest" ]; then
    largest="$num3"
fi

echo "The largest number among $num1, $num2, and $num3 is $largest."
```

```
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$ vim 4thassignb.sh
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$ chmod +x 4thassignb.sh
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$ ./4thassignb.sh 125 111 754
The largest number among 125, 111, and 754 is 754.
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$
```

c) Write a shell script to input two filenames in the current directory as arguments and print whether both files has equal number of lines.

```
#!/bin/bash

if [ "$#" -ne 2 ]; then
    echo "Usage: $0 <file1> <file2>"
    exit 1
fi

file1="$1"
file2="$2"

if [ ! -f "$file1" ] || [ ! -f "$file2" ]; then
    echo "One or both input files do not exist."
    exit 1
fi

lines_file1=$(wc -l < "$file1")
lines_file2=$(wc -l < "$file2")

if [ "$lines_file1" -eq "$lines_file2" ]; then
    echo "Both $file1 and $file2 have equal number of
lines: $lines_file1"
else
    echo "$file1 has $lines_file1 lines and $file2
has $lines_file2 lines."
Fi
```

```
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$ vim 4thassignc.sh
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$ chmod +x 4thassignc.sh
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$ ./4thassignc.sh manager.txt newemp.txt
manager.txt has 3 lines and newemp.txt has 7 lines.
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$
```

d) Write a shell script to input the registration number (2021UGA011) of a student print its branch.

```
#!/bin/bash
read -p "Enter registration number: " reg_number

# Convert the input to lowercase
reg_number_lower=$(echo "$reg_number" | tr
'[:upper:]' '[:lower:]')

case "$reg_number_lower" in
    *ugcscs*)
        branch="Computer Science Engineering"
        ;;
    *pgcaca*)
        branch="MCA"
        ;;
    *pgcsca*)
        branch="MCA"
        ;;
    *ugcvcv*)
        branch="Civil Engineering"
        ;;
    *ugpipi*)
        branch="Production Engineering"
        ;;
    *ugmtmt*)
        branch="Metallurgy Engineering"
        ;;
    *)
        branch="Unknown"
        ;;
esac

echo "Branch: $branch"
```

```
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$ vim 4thassignd.sh
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$ chmod +x 4thassignd.sh
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$ ./4thassignd.sh
Enter registration number: 2021pgcaca089
Branch: MCA
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$ ./4thassignd.sh
Enter registration number: 2021UGCSCS089
Branch: Computer Science Engineering
anubhav@DESKTOP-9VIA8NE:~/anubhav_oslab$
```