

**ASSIGNMENT 1**  
**DEVESH LABANA**  
**B23CS1015**

**TASK 1 :**

```
#!/bin/bash

echo -n "Enter first number: "
read a
echo -n "Enter operator (+, -, *, /): "
read op
echo -n "Enter second number: "
read b

case "$op" in
    +) result=$((a + b));;
    -) result=$((a - b));;
    \*) result=$((a * b));;
    /)
        if [ $b -eq 0 ]; then
            echo "Error: Division by zero"
            exit 1
        fi
        result=$((a / b))
        ;;
    *) echo "Invalid operator"; exit 1;;
esac

echo "Result: $a $op $b = $result"
```

**TASK 2 :**

```
#!/bin/bash

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

dir=$1
```

```
if [ ! -d "$dir" ]; then
    echo "Error: $dir is not a directory"
    exit 1
fi

num_files=$(find "$dir" -type f | wc -l)
num_dirs=$(find "$dir" -type d | wc -l)

echo "Directory: $dir"
echo "Files: $num_files"
echo "Directories: $num_dirs"
```

### TASK 3 :

```
#!/bin/bash

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

logfile=$1

if [ ! -f "$logfile" ]; then
    echo "Error: File not found!"
    exit 1
fi

grep "\[ERROR\]" "$logfile"
```

### TASK 4 :

```
#!/bin/bash

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

```
dir=$1
ext=$2

if [ ! -d "$dir" ]; then
    echo "Error: $dir is not a directory"
    exit 1
fi

find "$dir" -type f -name ".*$ext"
```