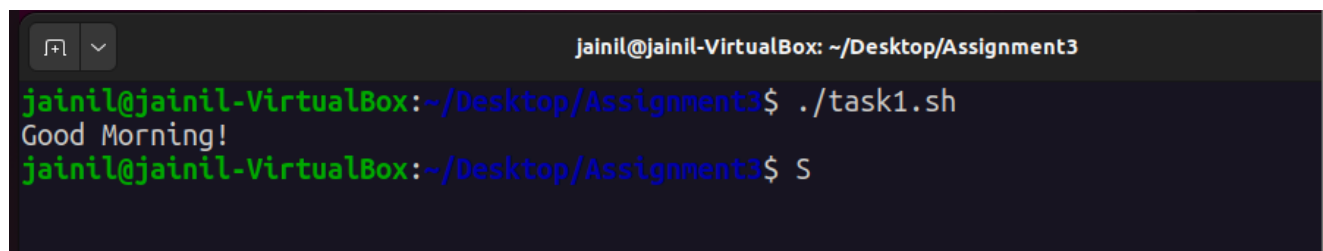# Assignment 3

Tasks:

1: Basic Functions

Objective: Write a shell script that uses a function to print a greeting.

```bash
#!/bin/bash

greet() {
        echo "Good Morning!"
}
greet
```

```
jainil@jainil-VirtualBox: ~/Desktop/Assignment3
jainil@jainil-VirtualBox:~/Desktop/Assignment3$ ./task1.sh
Good Morning!
jainil@jainil-VirtualBox:~/Desktop/Assignment3$ S
```

2: Debugging Scripts

Objective: Write a buggy shell script and use debugging to identify and fix the issue.

```bash
#!/bin/bash

add() {
        local a=$1
        echo $(expr 1 + $a)
}
echo $(add 'a')
```

```
bash -x ./task2.sh
```

fixed script:

```bash
#!/bin/bash

add() {
        local a=$1
        echo $(expr 1 + $a)
}
echo $(add 15)
```

3: Using Functions for Repetitive Tasks

Objective: Write a shell script that uses a function to create multiple directories.

```bash
#!/bin/bash

createDir() {
        for i in "$@"
        do
                mkdir -p "$i"
                echo "directory $i created"
        done
}
read dirs
createDir $dirs
```

4: Script with All Learned Concepts

Objective: Write a shell script that uses variables, conditionals, loops, and functions to interact with the file system.

Script:

```bash
#!/bin/bash

createDirs() {
        for i in "$@"
        do
                mkdir -p "$i"
                echo "directory $i created"
        done
}
createFiles() {
        for i in "$@"
        do
                touch "$i"
                echo "file $i created"
        done
}
removeDirs() {
        for i in "$@"
        do
                rm -r "$i"
                echo "$i removed"
        done
}
readFile() {
        cat $1
}

while true
do
        echo "Select one of the following:"
        echo "1. Create files"
        echo "2. Create Dirs"
        echo "3. Read file"
        echo "4. Remove files/dirs"
        echo "5. Quit"

        read -p "Enter your choice: " choice
        case $choice in
        1)
                read -p "Enter file names to create: " fileNames
                createFiles $fileNames
                ;;
        2)
```

```bash
            read -p "Enter dir names to create: " dirNames
            createDirs $dirNames
            ;;
        3)
            read -p "Enter a file name to read: " fileNameToRead
            readFile $fileNameToRead
            ;;
        4)
            read -p "Enter a files/dirs to remove: " fileDirNames
            removeFiles fileDirNames
            ;;
        5)
            echo "Quitting..."
            break
            ;;
        *)
            echo "Invalid choice"
            ;;
    esac
done
```