

Lab 3 (IN LAB+Post Lab)

23K-0057

Q1.

```
student@student-OptiPlex-7000:~/Desktop/scripting$ gedit s1.sh
student@student-OptiPlex-7000:~/Desktop/scripting$ ./s1.sh
Enter num1: 4
Enter num2: 3
Num1: 4
Num2: 3
Multiplication is: 12
student@student-OptiPlex-7000:~/Desktop/scripting$
```

Q2.

```
student@student-OptiPlex-7000:~/Desktop/scripting$ gedit s2.sh
student@student-OptiPlex-7000:~/Desktop/scripting$ ./s2.sh
Enter sentence: maham mohsin
Vowel count: 4
student@student-OptiPlex-7000:~/Desktop/scripting$
```

```
1
2 read -p "Enter sentence: " sentence
3 vowels=0
4
5 for(( i=0; i<${#sentence}; i++));do
6   letters="${sentence:i:1}"
7
8   if [[ "$letters" =~ [aeiouAEIOU] ]];then
9     ((vowel++))
10  fi
11 done
12
13 echo "Vowel count: $vowel"
14
15
```

Q3.



```
1
2 read -p "Enter sentence: " sentence
3 vowels=0
4
5 for(( i=0; i<${#sentence}; i++));do
6     letters="${sentence:i:1}"
7
8     if [[ "$letters" =~ [aeiouAEIOU] ]];then
9         ((vowel++))
10    fi
11 done
12
13 echo "Vowel count: "$vowel
14
15
16
17
```

و 10:17:31 PKT ت 07 فروری 2025

```
student@student-OptiPlex-7000:~/Desktop/scripting$ ./23k-0594.sh
Enter file name: s1.sh
Date and time appended to s1.sh
student@student-OptiPlex-7000:~/Desktop/scripting$ ./23k-0594.sh
Enter file name: lab3
Error: File not found!
```

Q4.

```
student@student-OptiPlex-7000:~/Desktop/scripting$ ./23k-0594.sh
Enter File or Directory name: 23k-0594.sh
'23k-0594.sh' named file found!
student@student-OptiPlex-7000:~/Desktop/scripting$
```

```
1
2 read -p "Enter File or Directory name: " file
3
4 if [ -f "$file" ];then
5     echo "'$file' named file found!"
6
7 elif [ -d "$file" ];then
8     echo "'$file' named directory found!"
9
10 else
11     echo "'$file' not found!"
12 fi
```

Q5.

```
student@student-OptiPlex-7000:~/Desktop/scripting$ ./23k-0594.sh
Usage: ./23k-0594.sh <path_to_directory>
student@student-OptiPlex-7000:~/Desktop/scripting$
```

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23k-0594.sh
~/Desktop/scripting

```
1 #!/bin/bash
2
3 if [ -z "$1" ]; then
4     echo "Usage: $0 <path_to_directory>"
5     exit 1
6 fi
7
8 target_dir="$1"
9
10 if [ ! -d "$target_dir" ]; then
11     echo "Error: Directory '$target_dir' not found!"
12     exit 1
13 fi
14
15 destination="$HOME/saved_copies"
16
17 mkdir -p "$destination"
18
19 date=$(date +%Y-%m-%d)
20
21 backup="$destination/archive_$date"
22
23 mkdir -p "$backup"
24
25 rsync -a --progress "$target_dir/" "$backup/"
26
27 file_count=$(find "$backup" -type f | wc -l)
28 dir_count=$(find "$backup" -type d | wc -l)
29
30 echo "Backup completed successfully!"
31 echo "Total files: $file_count"
32 echo "Total directories: $dir_count"
33 echo "Saved at: $backup"
34
```