PUNJAB ENGINEERING COLLEGE
(DEEMED TO BE UNIVERSITY)
CHANDIGARH

Assignment 2

Submitted By :

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Branch : ECE

Date : 31st Jan, 2025

Q1. To write a program to identify whether the given number is positive or negative using shell programming.

```
#!/bin/bash

echo "--------------------------------------"
echo "   🔍 Number Checker by Sugam Arora   "
echo "--------------------------------------"

# Prompt user for input
read -p "Enter a number: " num

# Check conditions
if [ "$num" -gt 0 ]; then
    echo "✅ The number $num is **Positive**."
elif [ "$num" -lt 0 ]; then
    echo "⚠️The number $num is **Negative**."
else
    echo "➖ The number is **Zero** (Neutral)."
fi

echo "--------------------------------------"
```

```
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ls
Q10.sh  Q11.sh  Q12.sh  Q1.sh  Q2.sh  Q3.sh  Q4.sh  Q5.sh  Q6.sh  Q7.sh  Q8.sh  Q9.sh  README.md
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ chmod +x Q1.sh
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ls
Q10.sh  Q11.sh  Q12.sh  Q1.sh  Q2.sh  Q3.sh  Q4.sh  Q5.sh  Q6.sh  Q7.sh  Q8.sh  Q9.sh  README.md
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ./Q1.sh
--------------------------------------
   🔍 Number Checker by Sugam Arora
--------------------------------------
Enter a number: 42
✅ The number 42 is **Positive**.
--------------------------------------
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ./Q1.sh
--------------------------------------
   🔍 Number Checker by Sugam Arora
--------------------------------------
Enter a number: -108
⚠️The number -108 is **Negative**.
--------------------------------------
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$
```

Q2. To find the largest and smallest of three numbers using shell programming.

```
#!/bin/bash

echo "-------------------------------------"
echo " 🔢 Find Largest & Smallest - By Sugam Arora "
echo "-------------------------------------"

# Prompt user for three numbers
read -p "Enter first number: " num1
read -p "Enter second number: " num2
read -p "Enter third number: " num3

# Finding the largest number
if [ "$num1" -ge "$num2" ] && [ "$num1" -ge "$num3" ]; then
    largest=$num1
elif [ "$num2" -ge "$num1" ] && [ "$num2" -ge "$num3" ]; then
    largest=$num2
else
    largest=$num3
fi

# Finding the smallest number
if [ "$num1" -le "$num2" ] && [ "$num1" -le "$num3" ]; then
    smallest=$num1
elif [ "$num2" -le "$num1" ] && [ "$num2" -le "$num3" ]; then
    smallest=$num2
else
    smallest=$num3
fi

# Display the results
echo "-------------------------------------"
echo "📌 The **Largest** number is: $largest"
echo "📌 The **Smallest** number is: $smallest"
echo "-------------------------------------"
```

```
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ls
Q10.sh  Q11.sh  Q12.sh  Q1.sh  Q2.sh  Q3.sh  Q4.sh  Q5.sh  Q6.sh  Q7.sh  Q8.sh  Q9.sh  README.md
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ chmod +x Q2.sh
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ls
Q10.sh  Q11.sh  Q12.sh  Q1.sh  Q2.sh  Q3.sh  Q4.sh  Q5.sh  Q6.sh  Q7.sh  Q8.sh  Q9.sh  README.md
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ./Q2.sh
-------------------------------------
 🔢 Find Largest & Smallest - By Sugam Arora
-------------------------------------
Enter first number: 75
Enter second number: 22
Enter third number: 51
-------------------------------------
📌 The **Largest** number is: 75
📌 The **Smallest** number is: 22
-------------------------------------
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$
```

Q3. To find the sum and average of N numbers using shell programming.

```
#!/bin/bash

echo "--------------------------------------"
echo " 🔢 Sum & Average Calculator - By Sugam Arora "
echo "--------------------------------------"

# Read the number of values
read -p "Enter the count of numbers (N): " N

# Initialize sum to 0
sum=0

# Loop to read N numbers
for (( i=1; i<=N; i++ ))
do
    read -p "Enter number $i: " num
    sum=$((sum + num))
done

# Calculate average
average=$(echo "scale=2; $sum / $N" | bc)

# Display the results
echo "--------------------------------------"
echo "📌 The **Sum** of the numbers is: $sum"
echo "📌 The **Average** is: $average"
echo "--------------------------------------"
```

```
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ls
Q10.sh  Q11.sh  Q12.sh  Q1.sh  Q2.sh  Q3.sh  Q4.sh  Q5.sh  Q6.sh  Q7.sh  Q8.sh  Q9.sh  README.md
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ chmod +x Q3.sh
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ./Q3.sh
--------------------------------------
 🔢 Sum & Average Calculator - By Sugam Arora
--------------------------------------
Enter the count of numbers (N): 4
Enter number 1: 7
Enter number 2: 8
Enter number 3: 9
Enter number 4: 6
--------------------------------------
📌 The **Sum** of the numbers is: 30
📌 The **Average** is: 7.50
--------------------------------------
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$
```

Q4. To find the factorial of the given number using shell programming.

```
#!/bin/bash

echo "--------------------------------------"
echo " 🔢 Factorial Finder - By Sugam Arora "
echo "--------------------------------------"

# Read input from the user
read -p "Enter a number: " num

# Check if the number is negative
if [ "$num" -lt 0 ]; then
    echo "❌ Factorial is not defined for negative numbers!"
    exit 1
fi

# Initialize factorial to 1
fact=1

# Calculate factorial using a loop
for (( i=1; i<=num; i++ ))
do
    fact=$((fact * i))
done

# Display the result
echo "--------------------------------------"
echo "📌 The **Factorial** of $num is: $fact"
echo "--------------------------------------"
```

```
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ls
Q10.sh  Q11.sh  Q12.sh  Q1.sh  Q2.sh  Q3.sh  Q4.sh  Q5.sh  Q6.sh  Q7.sh  Q8.sh  Q9.sh  README.md
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ chmod +x Q4.sh
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ls
Q10.sh  Q11.sh  Q12.sh  Q1.sh  Q2.sh  Q3.sh  Q4.sh  Q5.sh  Q6.sh  Q7.sh  Q8.sh  Q9.sh  README.md
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ./Q4.sh
--------------------------------------
 🔢 Factorial Finder - By Sugam Arora
--------------------------------------
Enter a number: 5
--------------------------------------
📌 The **Factorial** of 5 is: 120
--------------------------------------
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$
```

Q5. To write a program to find the sequence of odd numbers present up to given n number.

```
#!/bin/bash

echo "--------------------------------------"
echo " 🔢 Odd Number Sequence - By Sugam Arora "
echo "--------------------------------------"

# Read input from the user
read -p "Enter a number (N): " N

echo "🟠 Odd numbers up to $N:"
for (( i=1; i<=N; i+=2 ))
do
    echo -n "$i "
done
echo
echo "--------------------------------------"
```

```
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ls
Q10.sh  Q11.sh  Q12.sh  Q1.sh  Q2.sh  Q3.sh  Q4.sh  Q5.sh  Q6.sh  Q7.sh  Q8.sh  Q9.sh  README.md
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ chmod +x Q5.sh
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ls
Q10.sh  Q11.sh  Q12.sh  Q1.sh  Q2.sh  Q3.sh  Q4.sh  Q5.sh  Q6.sh  Q7.sh  Q8.sh  Q9.sh  README.md
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ./Q5.sh
--------------------------------------
 🔢 Odd Number Sequence - By Sugam Arora
--------------------------------------
Enter a number (N): 11
🟠 Odd numbers up to 11:
1 3 5 7 9 11
--------------------------------------
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ./Q5.sh
--------------------------------------
 🔢 Odd Number Sequence - By Sugam Arora
--------------------------------------
Enter a number (N): 20
🟠 Odd numbers up to 20:
1 3 5 7 9 11 13 15 17 19
--------------------------------------
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$
```

Q6. To write a program to find the sum of series using shell programming.
S=12+22+32+...+n2

```
#!/bin/bash

echo "---------------------------------------"
echo " 🔢 Sum of Series (N²) - By Sugam Arora "
echo "---------------------------------------"

# Read input from the user
read -p "Enter the value of N: " N

sum=0
for (( i=1; i<=N; i++ ))
do
    sum=$((sum + (i * i)))
done

echo "📌 The sum of the series up to $N² is: $sum"
echo "---------------------------------------"
```

```
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ls
Q10.sh  Q11.sh  Q12.sh  Q1.sh  Q2.sh  Q3.sh  Q4.sh  Q5.sh  Q6.sh  Q7.sh  Q8.sh  Q9.sh  README.md
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ chmod +x Q6.sh
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ls
Q10.sh  Q11.sh  Q12.sh  Q1.sh  Q2.sh  Q3.sh  Q4.sh  Q5.sh  Q6.sh  Q7.sh  Q8.sh  Q9.sh  README.md
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ./Q6.sh
---------------------------------------
 🔢 Sum of Series (N²) - By Sugam Arora
---------------------------------------
Enter the value of N: 5
📌 The sum of the series up to 5² is: 55
---------------------------------------
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ./Q6.sh
---------------------------------------
 🔢 Sum of Series (N²) - By Sugam Arora
---------------------------------------
Enter the value of N: 8
📌 The sum of the series up to 8² is: 204
---------------------------------------
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$
```

Q7. To write a shell program to perform the arithmetic operation using switch case.

```
#!/bin/bash

echo "--------------------------------------"
echo " 🧮 Arithmetic Calculator - By Sugam Arora "
echo "--------------------------------------"

# Read inputs
read -p "Enter first number: " num1
read -p "Enter second number: " num2

echo "Choose an operation:"
echo "1. Addition (+)"
echo "2. Subtraction (-)"
echo "3. Multiplication (*)"
echo "4. Division (/)"
read -p "Enter your choice (1-4): " choice

case $choice in
    1) result=$((num1 + num2))
       echo "📌 Result: $num1 + $num2 = $result" ;;
    2) result=$((num1 - num2))
       echo "📌 Result: $num1 - $num2 = $result" ;;
    3) result=$((num1 * num2))
       echo "📌 Result: $num1 * $num2 = $result" ;;
    4) if [ "$num2" -ne 0 ]; then
           result=$(echo "scale=2; $num1 / $num2" | bc)
           echo "📌 Result: $num1 / $num2 = $result"
       else
           echo "❌ Error: Division by zero!"
       fi ;;
    *) echo "❌ Invalid choice!" ;;
esac

echo "--------------------------------------"
```

```
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ls
Q10.sh  Q11.sh  Q12.sh  Q1.sh  Q2.sh  Q3.sh  Q4.sh  Q5.sh  Q6.sh  Q7.sh  Q8.sh  Q9.sh  README.md
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ chmod +x Q7.sh
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ls
Q10.sh  Q11.sh  Q12.sh  Q1.sh  Q2.sh  Q3.sh  Q4.sh  Q5.sh  Q6.sh  Q7.sh  Q8.sh  Q9.sh  README.md
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ./Q7.sh
-------------------------------------
 🧮 Arithmetic Calculator - By Sugam Arora
-------------------------------------
Enter first number: 5
Enter second number: 6
Choose an operation:
1. Addition (+)
2. Subtraction (-)
3. Multiplication (*)
4. Division (/)
Enter your choice (1-4): 1
📌 Result: 5 + 6 = 11
-------------------------------------
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ./Q7.sh
-------------------------------------
 🧮 Arithmetic Calculator - By Sugam Arora
-------------------------------------
Enter first number: 5
Enter second number: 6
Choose an operation:
1. Addition (+)
2. Subtraction (-)
3. Multiplication (*)
4. Division (/)
Enter your choice (1-4): 2
📌 Result: 5 - 6 = -1
-------------------------------------
```

```
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ./Q7.sh
-------------------------------------
 🧮 Arithmetic Calculator - By Sugam Arora
-------------------------------------
Enter first number: 5
Enter second number: 6
Choose an operation:
1. Addition (+)
2. Subtraction (-)
3. Multiplication (*)
4. Division (/)
Enter your choice (1-4): 3
📌 Result: 5 * 6 = 30
-------------------------------------
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ./Q7.sh
-------------------------------------
 🧮 Arithmetic Calculator - By Sugam Arora
-------------------------------------
Enter first number: 5
Enter second number: 6
Choose an operation:
1. Addition (+)
2. Subtraction (-)
3. Multiplication (*)
4. Division (/)
Enter your choice (1-4): 4
📌 Result: 5 / 6 = .83
-------------------------------------
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$
```

Q8. To write a shell program to find the length of the string.

```
#!/bin/bash

echo "----------------------------------------"
echo " 🔡 String Length Finder - By Sugam Arora "
echo "----------------------------------------"

# Read input from user
read -p "Enter a string: " str

# Find length
length=${#str}

echo "📌 The length of the string \"$str\" is: $length"
echo "----------------------------------------"
```

```
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ls
Q10.sh  Q11.sh  Q12.sh  Q1.sh  Q2.sh  Q3.sh  Q4.sh  Q5.sh  Q6.sh  Q7.sh  Q8.sh  Q9.sh  README.md
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ chmod +x Q8.sh
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ls
Q10.sh  Q11.sh  Q12.sh  Q1.sh  Q2.sh  Q3.sh  Q4.sh  Q5.sh  Q6.sh  Q7.sh  Q8.sh  Q9.sh  README.md
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ./Q8.sh
----------------------------------------
 🔡 String Length Finder - By Sugam Arora
----------------------------------------
Enter a string: Sugam Arora
📌 The length of the string "Sugam Arora" is: 11
----------------------------------------
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$
```

Q9. To write a shell program to perform various pattern search using file.

```
#!/bin/bash

echo "--------------------------------------"
echo " 🔎 Pattern Search - By Sugam Arora "
echo "--------------------------------------"

# Read file name and pattern
read -p "Enter the filename: " filename
read -p "Enter the pattern to search: " pattern

# Perform search
if grep -q "$pattern" "$filename"; then
    echo "✅ Pattern \"$pattern\" found in $filename!"
    grep --color=auto "$pattern" "$filename"
else
    echo "❌ Pattern \"$pattern\" not found!"
fi

echo "--------------------------------------"
```

```
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ls
Q10.sh  Q11.sh  Q12.sh  Q1.sh  Q2.sh  Q3.sh  Q4.sh  Q5.sh  Q6.sh  Q7.sh  Q8.sh  Q9.sh  README.md
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ chmod +x Q9.sh
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ls
Q10.sh  Q11.sh  Q12.sh  Q1.sh  Q2.sh  Q3.sh  Q4.sh  Q5.sh  Q6.sh  Q7.sh  Q8.sh  Q9.sh  README.md
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ./Q9.sh
--------------------------------------
 🔎 Pattern Search - By Sugam Arora
--------------------------------------
Enter the filename: Q8.sh
Enter the pattern to search: echo
✅ Pattern "echo" found in Q8.sh!
echo "--------------------------------------"
echo " 🔡 String Length Finder - By Sugam Arora "
echo "--------------------------------------"
echo "📌 The length of the string \"$str\" is: $length"
echo "--------------------------------------"
--------------------------------------
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$
```

Q10. To write a shell program to perform sum of series using switch case.

```
#!/bin/bash

echo "----------------------------------------"
echo " 🔢 Sum of Series - By Sugam Arora "
echo "----------------------------------------"

# Read input from user
read -p "Enter N for series sum: " N

echo "Choose the series type:"
echo "1. S = 1 + 2 + 3 + ... + N"
echo "2. S = 1² + 2² + ... + N²"
read -p "Enter your choice (1-2): " choice

case $choice in
    1) sum=$(( N * (N + 1) / 2 )) ;;
    2) sum=0
       for (( i=1; i<=N; i++ ))
       do
           sum=$((sum + (i * i)))
       done ;;
    *) echo "❌ Invalid choice!"
       exit 1 ;;
esac

echo "📌 The sum of the series is: $sum"
echo "----------------------------------------"
```

```
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ls
Q10.sh  Q11.sh  Q12.sh  Q1.sh  Q2.sh  Q3.sh  Q4.sh  Q5.sh  Q6.sh  Q7.sh  Q8.sh  Q9.sh  README.md
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ chmod +x Q10.sh
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ls
Q10.sh  Q11.sh  Q12.sh  Q1.sh  Q2.sh  Q3.sh  Q4.sh  Q5.sh  Q6.sh  Q7.sh  Q8.sh  Q9.sh  README.md
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ./Q10.sh
----------------------------------------
 🔢 Sum of Series - By Sugam Arora
----------------------------------------
Enter N for series sum: 6
Choose the series type:
1. S = 1 + 2 + 3 + ... + N
2. S = 1² + 2² + ... + N²
Enter your choice (1-2): 2
📌 The sum of the series is: 91
----------------------------------------
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ./Q10.sh
----------------------------------------
 🔢 Sum of Series - By Sugam Arora
----------------------------------------
Enter N for series sum: 6
Choose the series type:
1. S = 1 + 2 + 3 + ... + N
2. S = 1² + 2² + ... + N²
Enter your choice (1-2): 1
📌 The sum of the series is: 21
----------------------------------------
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$
```

Q11. To write a shell program to check whether a given number is palindrome or not.

```
#!/bin/bash

echo "--------------------------------------"
echo " 🔄 Palindrome Checker - By Sugam Arora "
echo "--------------------------------------"

# Read number from user
read -p "Enter a number: " num

# Reverse the number
reverse=$(echo "$num" | rev)

if [ "$num" -eq "$reverse" ]; then
    echo "✅ The number $num is a **Palindrome**."
else
    echo "❌ The number $num is **Not a Palindrome**."
fi

echo "--------------------------------------"
```

```
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ls
Q10.sh  Q11.sh  Q12.sh  Q1.sh  Q2.sh  Q3.sh  Q4.sh  Q5.sh  Q6.sh  Q7.sh  Q8.sh  Q9.sh  README.md
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ chmod +x Q11.sh
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ls
Q10.sh  Q11.sh  Q12.sh  Q1.sh  Q2.sh  Q3.sh  Q4.sh  Q5.sh  Q6.sh  Q7.sh  Q8.sh  Q9.sh  README.md
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ./Q11.sh
--------------------------------------
 🔄 Palindrome Checker - By Sugam Arora
--------------------------------------
Enter a number: 12321
✅ The number 12321 is a **Palindrome**.
--------------------------------------
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ./Q11.sh
--------------------------------------
 🔄 Palindrome Checker - By Sugam Arora
--------------------------------------
Enter a number: 12334334321
❌ The number 12334334321 is **Not a Palindrome**.
--------------------------------------
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$
```

Q12. To write a program to check whether a login is connected or not.

```
#!/bin/bash

echo "--------------------------------------"
echo " 🔐 User Login Checker - By Sugam Arora "
echo "--------------------------------------"

# Read username
read -p "Enter the username to check: " user

# Check if the user is logged in
if who | grep -q "^$user "; then
    echo "✅ User \"$user\" is **currently logged in**."
else
    echo "❌ User \"$user\" is **not logged in**."
fi

echo "--------------------------------------"
```

```
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ls
Q10.sh  Q11.sh  Q12.sh  Q1.sh  Q2.sh  Q3.sh  Q4.sh  Q5.sh  Q6.sh  Q7.sh  Q8.sh  Q9.sh  README.md
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ chmod +x Q12.sh
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ls
Q10.sh  Q11.sh  Q12.sh  Q1.sh  Q2.sh  Q3.sh  Q4.sh  Q5.sh  Q6.sh  Q7.sh  Q8.sh  Q9.sh  README.md
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ./Q12.sh
--------------------------------------
 🔐 User Login Checker - By Sugam Arora
--------------------------------------
Enter the username to check: sugam
❌ User "sugam" is **not logged in**.
--------------------------------------
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ./Q12.sh
--------------------------------------
 🔐 User Login Checker - By Sugam Arora
--------------------------------------
Enter the username to check: Sugam Arora
❌ User "Sugam Arora" is **not logged in**.
--------------------------------------
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$ ./Q12.sh
--------------------------------------
 🔐 User Login Checker - By Sugam Arora
--------------------------------------
Enter the username to check: sugam-arora
✅ User "sugam-arora" is **currently logged in**.
--------------------------------------
sugam-arora@sugam-arora:~/Documents/GitHub/Operating-System/Assignment 2$
```