

Experiment No.2

Aim:

To write simple Shell Programs by using conditional, branching and looping statements.

Programs: 1. Shell script to check given number even or odd

Enter a title...

Bash

Run

Save

```
1 #!/bin/bash
2
3 echo "Enter a number:"
4 read number
5
6
7 if [ $(($number % 2)) -eq 0 ]; then
8     echo "$number is even."
9 else
10    echo "$number is odd."
11 fi
12
13
```

12

Output

Enter a number:
12 is even.

[Execution complete with exit code 0]

Program 2. Shell Script to check given year leap year or not.

Enter a title...

Bash

Run

Save

```
1 #!/bin/bash
2
3 echo "Enter a year:"
4 read year
5
6
7 if [ $(($year % 4)) -eq 0 ] && [ $(($year % 100)) -ne 0 ] || [ $(($year % 400)) -eq 0 ]; then
8     echo "$year is a leap year."
9 else
10    echo "$year is not a leap year."
11 fi
12
13
```

2023

Output

Enter a year:
2023 is not a leap year.

[Execution complete with exit code 0]

Enter a title...

Bash

Run

Save

```
1 #!/bin/bash
2
3 echo "Enter a year:"
4 read year
5
6
7 if [ $(($year % 4)) -eq 0 ] && [ $(($year % 100)) -ne 0 ] || [ $(($year % 400)) -eq 0 ]; then
8     echo "$year is a leap year."
9 else
10    echo "$year is not a leap year."
11 fi
12
13
```

2024

Output

Enter a year:
2024 is a leap year.

[Execution complete with exit code 0]

Program 3. Shell Script to calculate factorial of given number.

Enter a title...

Bash

Run

Save

```
1 #!/bin/bash
2
3 echo "Enter a number:"
4 read number
5
6 factorial=1
7
8
9 for (( i=1; i<=number; i++ ))
10 do
11     factorial=$((factorial * i))
12 done
13
14 echo "Factorial of $number is: $factorial"
15
16
```

12

Output

Enter a number:
Factorial of 12 is: 479001600

[Execution complete with exit code 0]

Program 4. Shell Script to swap two integers.

Enter a title...

Bash

Run

Save

```
1 #!/bin/bash
2
3 echo "Enter the first number:"
4 read num1
5
6 echo "Enter the second number:"
7 read num2
8
9 echo "Before swapping: num1 = $num1, num2 = $num2"
10 temp=$num1
11 num1=$num2
12 num2=$temp
13
14 echo "After swapping: num1 = $num1, num2 = $num2"
15
16
```

10
20

Output

Enter the first number:
Enter the second number:
Before swapping: num1 = 10, num2 = 20
After swapping: num1 = 20, num2 = 10

[Execution complete with exit code 0]

Conclusion:

Thus, we have successfully studied and executed shell script.

Practical Performance (4)	Write up and oral (4)	Attendance (2)	Total (10)