

# Task 3: Bash Script with Variables and If-Else Statement

Objective:

To understand the basics of Bash scripting by declaring variables and using an if-else conditional statement. This task demonstrates how string and integer variables are handled in a shell script.

## 1. Concept Overview

Bash scripting allows automation of tasks in Linux systems. Variables in Bash do not require explicit data types, and conditional statements like if-else are used to control the flow of execution based on conditions.

## 2. Bash Script Code

```
#!/bin/bash

# Declare variables
name="Souvik"
age=21

# If-else condition based on integer value
if [ $age -ge 18 ]; then
    echo "Hello $name, you are eligible to vote."
else
    echo "Hello $name, you are not eligible to vote yet."
fi
```

## 3. Script Explanation

1. '#!/bin/bash' specifies the script interpreter.
2. 'name' is a string variable and 'age' is an integer variable.
3. The if condition checks whether age is greater than or equal to 18.
4. '-ge' is a numeric comparison operator (greater than or equal).
5. Based on the condition, the appropriate message is printed.

## 4. Execution Steps

1. Save the script as task3.sh
2. Provide execute permission using chmod
3. Run the script from terminal

## 5. Sample Output

```
student@student-virtual-machine:~/25SUB4508_LSP/25SUB4508_56133/Assignments/day23$ nano task3.sh
student@student-virtual-machine:~/25SUB4508_LSP/25SUB4508_56133/Assignments/day23$ chmod +x task3.sh
student@student-virtual-machine:~/25SUB4508_LSP/25SUB4508_56133/Assignments/day23$ ./task3.sh
Hello Souvik, you are eligible to vote.
student@student-virtual-machine:~/25SUB4508_LSP/25SUB4508_56133/Assignments/day23$ █
```

## 6. Observations

- Bash variables do not use data type keywords.
- Spaces are mandatory inside [ ] in if conditions.
- if-else improves decision making in scripts.

## 7. Conclusion

This task demonstrates the use of variables and conditional logic in a Bash script. Such constructs are fundamental for writing effective shell scripts used in automation and system administration.