

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.