St. Francis Institute of Technology, Mumbai-400 103.

Department of Information Technology

A.Y. 2023-2024

Class: SE-ITA/B, Semester: IV

Subject: **UNIX LAB**

Experiment – 11: Mini project.

1. **Aim:** To implement mini project using shell scripting language.

2. **Objectives:**
   - To implement shell programs to solve real life problems.

3. **Outcomes:** After study of this experiment, the student will be able to
   - Develop shell scripts to solve real life problems.

4. **Prerequisite:** Unix commands, Shell scripts.

5. **Requirements:** Personal Computer, Ubuntu OS, Text Editor, LibreOffice.

6. **Pre-Experiment Exercise:**
   Theory:
   (Some theory about your project)

7. **Laboratory Exercise**
   A. **Procedure**
   (Steps to code and execute your project)

   B. **Result/Program code Screenshots**

8. **Post-Experiments Exercise**
   A. **Extended Theory:**
   Nil
   B. **Questions:**
   Nil
   C. **Conclusion:**
      1. Write what was performed in the experiment.
      2. Mention few applications of what was studied.
      3. Write the significance of the topic studied in the experiment.
   D. **References:**
      1. Yashwant Kanetkar, UNIX Shell Programming, BPB Publications.
      2. Sumitabha Das, UNIX Concepts and Applications, 3rd Ed., Tata McGraw Hill.

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EXPERIMENT 11: MINI PROJECT

6. Pre-Experiment Exercise:

Theory:

The Bash script creates a clock display in the terminal by continually updating the time every second. Here's how it works:

1. **Color Setup**: It sets up a violet variable containing an ANSI escape sequence "\033[0;35m" for changing the text color to violet.

2. **Infinite Loop**: The script enters an infinite while true loop to continually update the clock display.

3. **Clear Screen**: Before updating the time, it clears the terminal screen using the clear command.

4. **Time Display**: It then uses the date +%T command to fetch the current time in HH:MM:SS format and displays it in violet color using echo $violet.

5. **Delay**: After displaying the time, the script sleeps for 1 second using sleep 1s before the next iteration of the loop.

6. **Repeat**: This process repeats indefinitely, creating a clock that updates every second.

Functionality: The script provides a simple, terminal-based clock that can be used for basic timekeeping or as a visual element in a script or program. It demonstrates basic Bash scripting concepts such as variable assignment, loops, command execution, and ANSI escape sequences for color formatting.

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7. Laboratory Exercise:

A. Procedure:

Steps in creating a Shell Script:

1. Create a file using a gedit editor (or any Other editor).
2. Name the script file with extension Sh
3. Start the script with #! /bin/sh
4. Write clock code given below.
5. Save the script file as filename.sh
6. Give the shell permission to execute it.
7. For executing the script type bash filename.sh

B. Results/Program Code Screenshots