Experiment 5

Develop and implement a shell script to automate file operations such as copying files, moving files, renaming files, and deleting files based on user input.

File Operations

1. Copying files ('cp'):

    cp source_file destination_file

2. Moving files ('mv'):

    mv source_file destination_file

3. Renaming files ('mv'):

    mv old_filename new_filename

4. Deleting files ('rm'):

    rm file_name

Algorithm

1. **Start**

2. **Display Main Menu**:

   • Print the following options:

   1. Copy File

   2. Move File

   3. Rename File

   4. Delete File

   5. Exit

3. **Read User Choice**:

   • Prompt the user to enter a choice (1-5).

   • Store the user's input in a variable (e.g., *choice*).

4. **Evaluate User Choice:**

   • If *choice* is 1:

     • Call the *copy_file* function.

   • If *choice* is 2:

     • Call the *move_file* function.

   • If *choice* is 3:

     • Call the *rename_file* function.

   • If *choice* is 4:

     • Call the *delete_file* function.

   • If *choice* is 5:

     • Print "Exiting program."

     • Exit the program.

   • If choice is invalid:

     • Print "Invalid choice. Please try again."

5. Copy File Function (*copy_file*):

- Prompt the user to enter the source file path.
- Read and store the input in a variable (*src*).
- Prompt the user to enter the destination file path.
- Read and store the input in a variable (*dest*).
- Execute the command *cp $src $dest*.
- If the command is successful, print "File copied from *src* to *dest*".
- If the command fails, print "Failed to copy file".

6. Move File Function (*move_file*):

- Prompt the user to enter the source file path.
- Read and store the input in a variable (*src*).
- Prompt the user to enter the destination file path.
- Read and store the input in a variable (*dest*).
- Execute the command *mv $src $dest*.
- If the command is successful, print "File moved from *src* to *dest*".
- If the command fails, print "Failed to move file".

7. Rename File Function (*rename_file*):

- Prompt the user to enter the current file name.

- Read and store the input in a variable (*src*).

- Prompt the user to enter the new file name.

- Read and store the input in a variable (*dest*).

- Execute the command *mv $src $dest*.

- If the command is successful, print "File renamed from *src* to *dest*".

- If the command fails, print "Failed to rename file".

8. Delete File Function (*delete_file*):

- Prompt the user to enter the file name to delete.

- Read and store the input in a variable (*file*).

- Execute the command *rm $file*.

- If the command is successful, print "File deleted".

- If the command fails, print "Failed to delete file".

9. **Repeat:**

- After executing the selected operation, return to step 2 to display the menu again.

- The loop continues until the user selects the "Exit" option.

10. **End**

Shell Script

```bash
#!/bin/bash

# Function to copy a file
copy_file()
{
    echo "Enter the source file path:"
    read src
    echo "Enter the destination file path:"
    read dest

    if cp "$src" "$dest"; then
        echo "File copied from $src to $dest"
    else
        echo "Failed to copy file"
    fi
}
```

```bash
# Function to move a file
move_file()
{
    echo "Enter the source file path:"
    read src
    echo "Enter the destination file path:"
    read dest

    if mv "$src" "$dest"; then
        echo "File moved from $src to $dest"
    else
        echo "Failed to move file"
    fi
}
```

```bash
# Function to rename a file
rename_file()
{
    echo "Enter the current file name:"
    read src
    echo "Enter the new file name :"
    read dest

    if mv "$src" "$dest"; then
        echo "File renamed from $src to $dest"
    else
        echo "Failed to rename file"
    fi

}
```

```bash
# Function to delete a file
delete_file()
{
    echo "Enter the file name to delete:"
    read file

    if rm "$file"; then
        echo "File $file deleted"
    else
        echo "Failed to delete file"
    fi
}
```

```bash
while true; do

    echo "File Operation Menu:"

    echo "1. Copy File"

    echo "2. Move File"

    echo "3. Rename File"

    echo "4. Delete File"

    echo "5. Exit"

    echo "Enter your choice:"

    read choice

            case $choice in
                1)
                    copy_file
                    ;;
                2)
                    move_file
                    ;;
                3)
                    rename_file
                    ;;
                4)
                    delete_file
                    ;;
                5)
                    echo "Exiting program."
                    exit 0
                    ;;
                *)
                    echo "Invalid choice. Please try again."
                    ;;
            esac
done
```