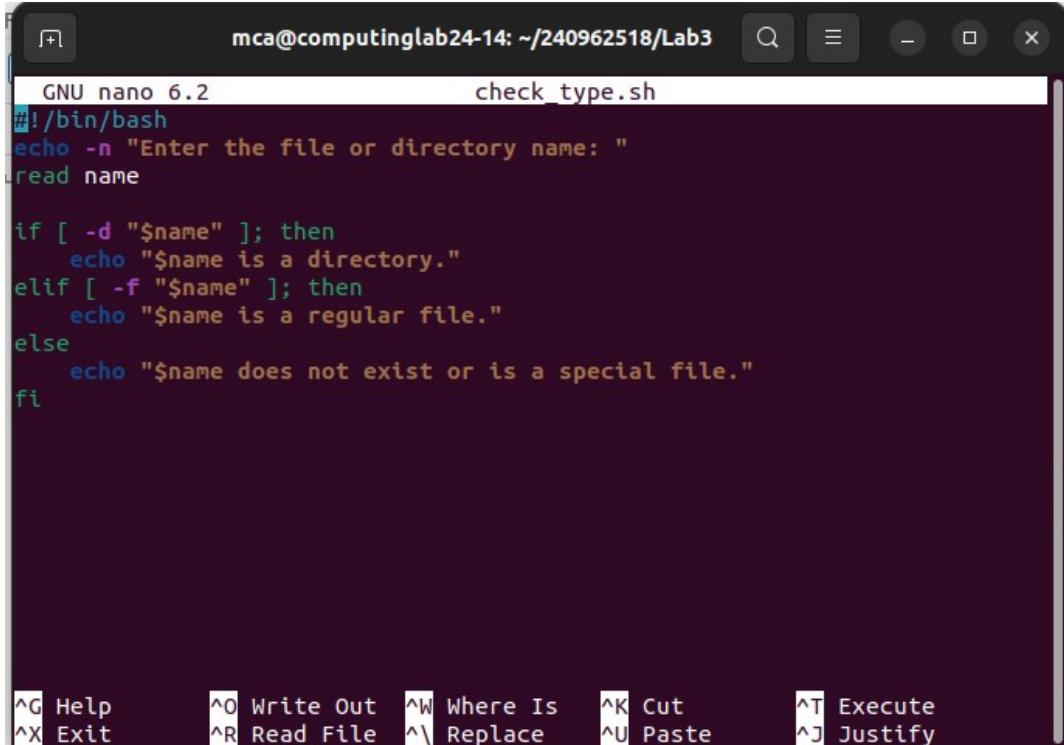


NAME : ADARSH P NAYAK
CLASS : AIML B
DATE : JAN 19 2026
ROLL NO : 44
REGISTRATION NUMBER : 240962518

LAB 3

1. Write a shell script to find whether a given file is the directory or regular file.
CODE:



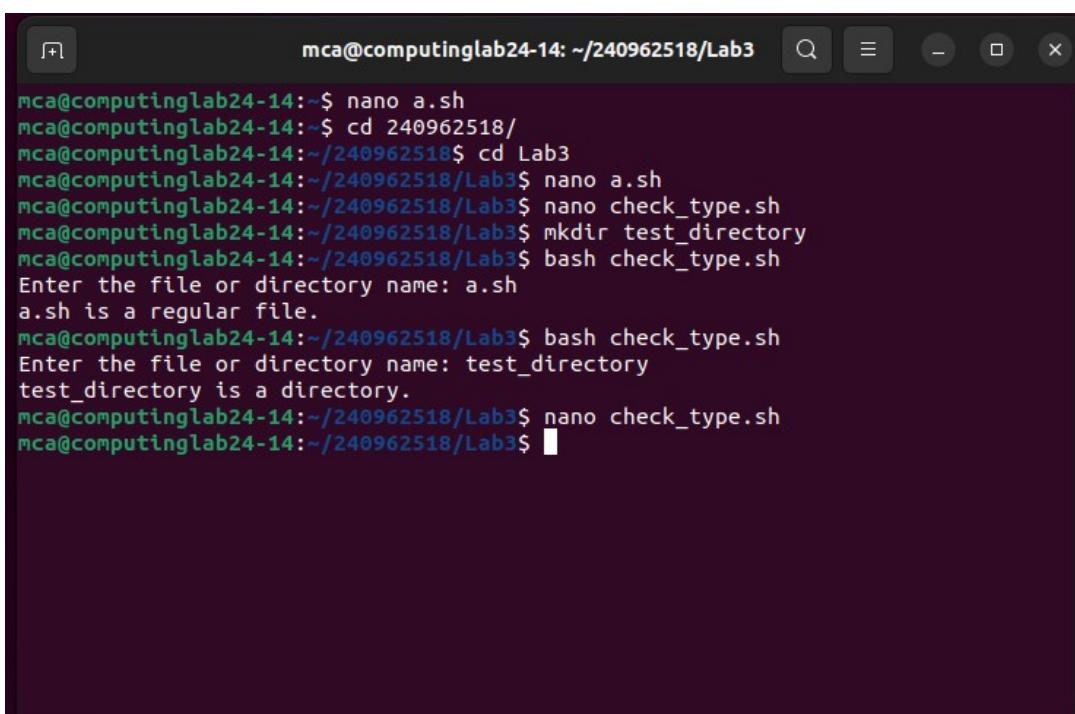
The screenshot shows a terminal window titled "check_type.sh" with the following content:

```
GNU nano 6.2
mca@computinglab24-14: ~/240962518/Lab3
#!/bin/bash
echo -n "Enter the file or directory name: "
read name

if [ -d "$name" ]; then
    echo "$name is a directory."
elif [ -f "$name" ]; then
    echo "$name is a regular file."
else
    echo "$name does not exist or is a special file."
fi
```

The terminal window has a dark background and light-colored text. The bottom bar contains various keyboard shortcuts for nano editor functions.

OUTPUT:



The screenshot shows a terminal window with the following session:

```
mca@computinglab24-14:~$ nano a.sh
mca@computinglab24-14:~$ cd 240962518/
mca@computinglab24-14:~/240962518$ cd Lab3
mca@computinglab24-14:~/240962518/Lab3$ nano a.sh
mca@computinglab24-14:~/240962518/Lab3$ nano check_type.sh
mca@computinglab24-14:~/240962518/Lab3$ mkdir test_directory
mca@computinglab24-14:~/240962518/Lab3$ bash check_type.sh
Enter the file or directory name: a.sh
a.sh is a regular file.
mca@computinglab24-14:~/240962518/Lab3$ bash check_type.sh
Enter the file or directory name: test_directory
test_directory is a directory.
mca@computinglab24-14:~/240962518/Lab3$ nano check_type.sh
mca@computinglab24-14:~/240962518/Lab3$
```

2. Write a shell script to list all files (only file names) containing the input pattern (string) in the folder entered by the user.

CODE:

The screenshot shows a terminal window titled "mca@computinglab24-14: ~/240962518/Lab3". The window contains a nano text editor displaying the following shell script:

```
GNU nano 6.2          check_pattern.sh
#!/bin/bash
echo -n "Enter the folder path: "
read folder
echo -n "Enter the string pattern to search: "
read pattern
grep -l "$pattern" "$folder"/*
```

At the bottom of the terminal window, there is a status bar with various keyboard shortcuts:

- ^G Help
- ^O Write Out
- ^W Where Is
- ^K Cut
- ^T Execute
- ^X Exit
- ^R Read File
- ^\\ Replace
- ^U Paste
- ^J Justify

[Read 6 lines]

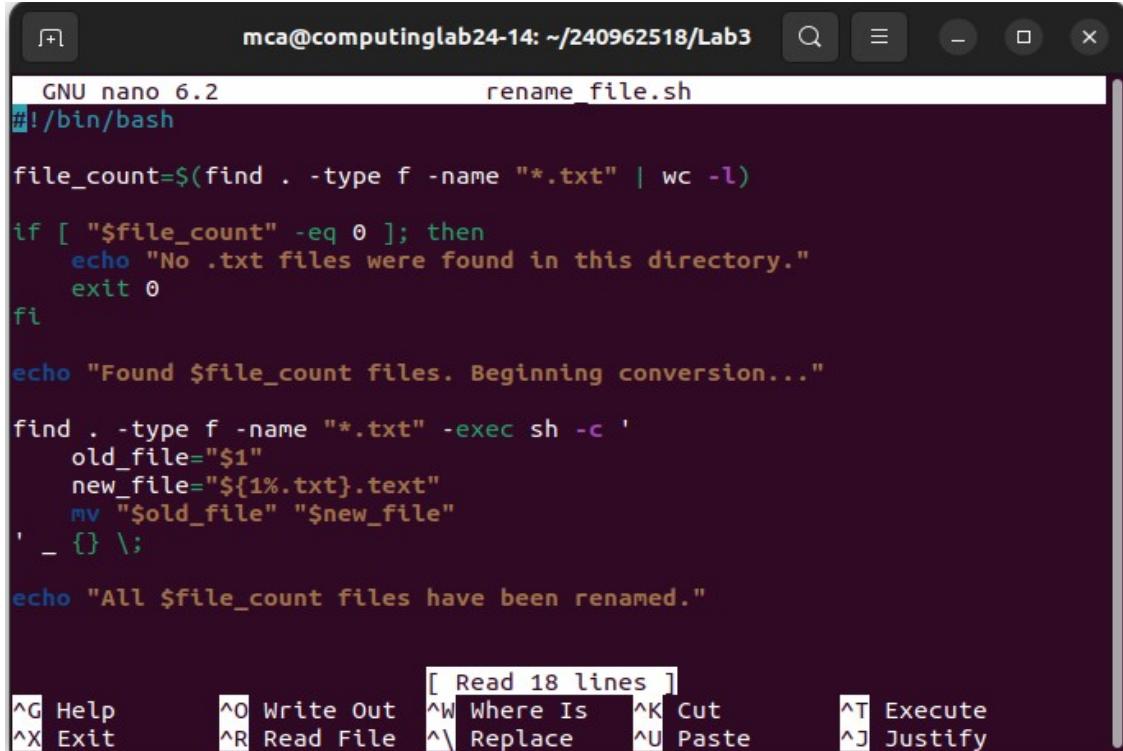
OUTPUT:

The screenshot shows a terminal window titled "mca@computinglab24-14: ~/240962518/Lab3". The window displays the following session:

```
mca@computinglab24-14:~/240962518/Lab3$ nano check_pattern.sh
mca@computinglab24-14:~/240962518/Lab3$ bash check_pattern.sh
Enter the folder path: /Lab3
Enter the string pattern to search: echo
grep: /Lab3/*: No such file or directory
mca@computinglab24-14:~/240962518/Lab3$ bash check_pattern.sh
Enter the folder path: /test_directory
Enter the string pattern to search: hi
grep: /test_directory/*: No such file or directory
mca@computinglab24-14:~/240962518/Lab3$ cd test_directory/
mca@computinglab24-14:~/240962518/Lab3/test_directory$ nano testfile.txt
mca@computinglab24-14:~/240962518/Lab3/test_directory$ cd ..
mca@computinglab24-14:~/240962518/Lab3$ bash check_pattern.sh
Enter the folder path: test_directory
Enter the string pattern to search: hi how are you
test_directory/testfile.txt
mca@computinglab24-14:~/240962518/Lab3$ bash check_pattern.sh
Enter the folder path: test_directory
Enter the string pattern to search: hello
mca@computinglab24-14:~/240962518/Lab3$
```

3. Write a shell script to replace all files with .txt extension with .text in the current directory. This has to be done recursively i.e if the current folder contains a folder “OS” with abc.txt then it has to be changed to abc.text (Hint: use find, mv)

CODE:



The screenshot shows a terminal window titled "mca@computinglab24-14: ~/240962518/Lab3". The file being edited is "rename_file.sh". The script content is as follows:

```
GNU nano 6.2          rename_file.sh
#!/bin/bash

file_count=$(find . -type f -name "*.txt" | wc -l)

if [ "$file_count" -eq 0 ]; then
    echo "No .txt files were found in this directory."
    exit 0
fi

echo "Found $file_count files. Beginning conversion..."

find . -type f -name "*.txt" -exec sh -c '
    old_file="$1"
    new_file="${1%.txt}.text"
    mv "$old_file" "$new_file"
' _ {} \;

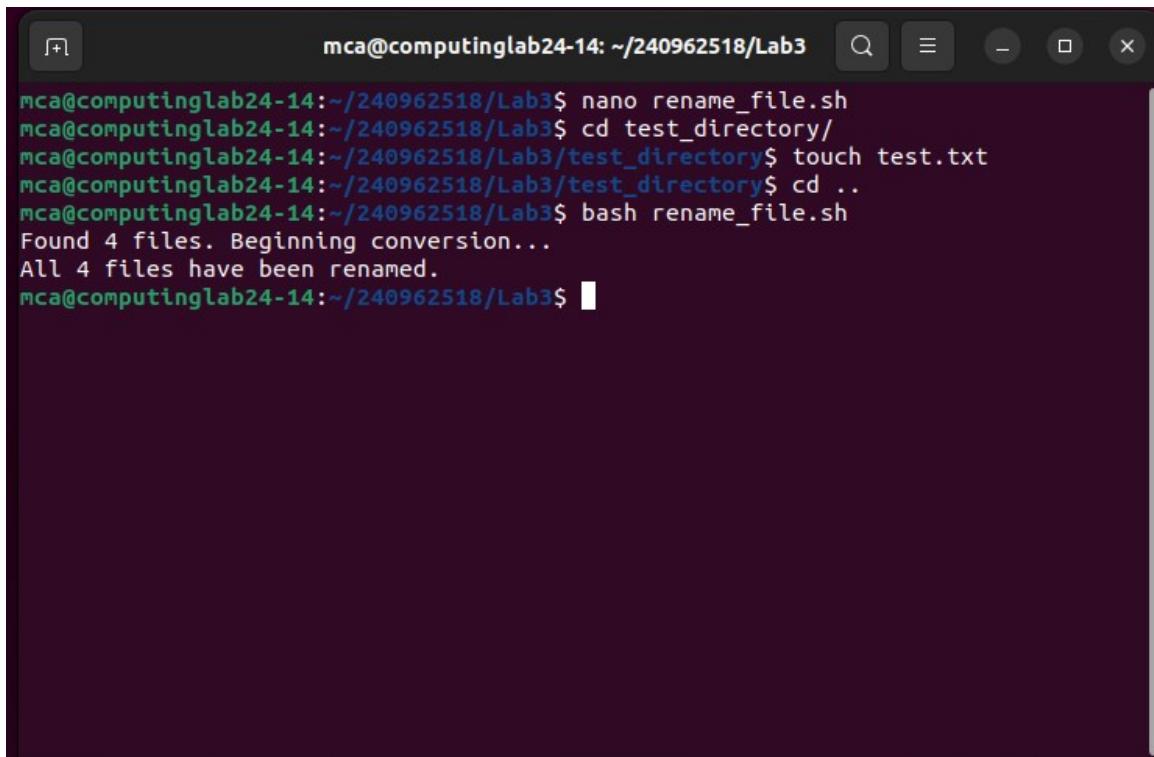
echo "All $file_count files have been renamed."
```

At the bottom of the terminal window, there is a menu bar with various keyboard shortcuts:

- ^G Help
- ^O Write Out
- ^W Where Is
- ^K Cut
- ^T Execute
- ^X Exit
- ^R Read File
- ^V Replace
- ^U Paste
- ^J Justify

[Read 18 lines]

OUTPUT:

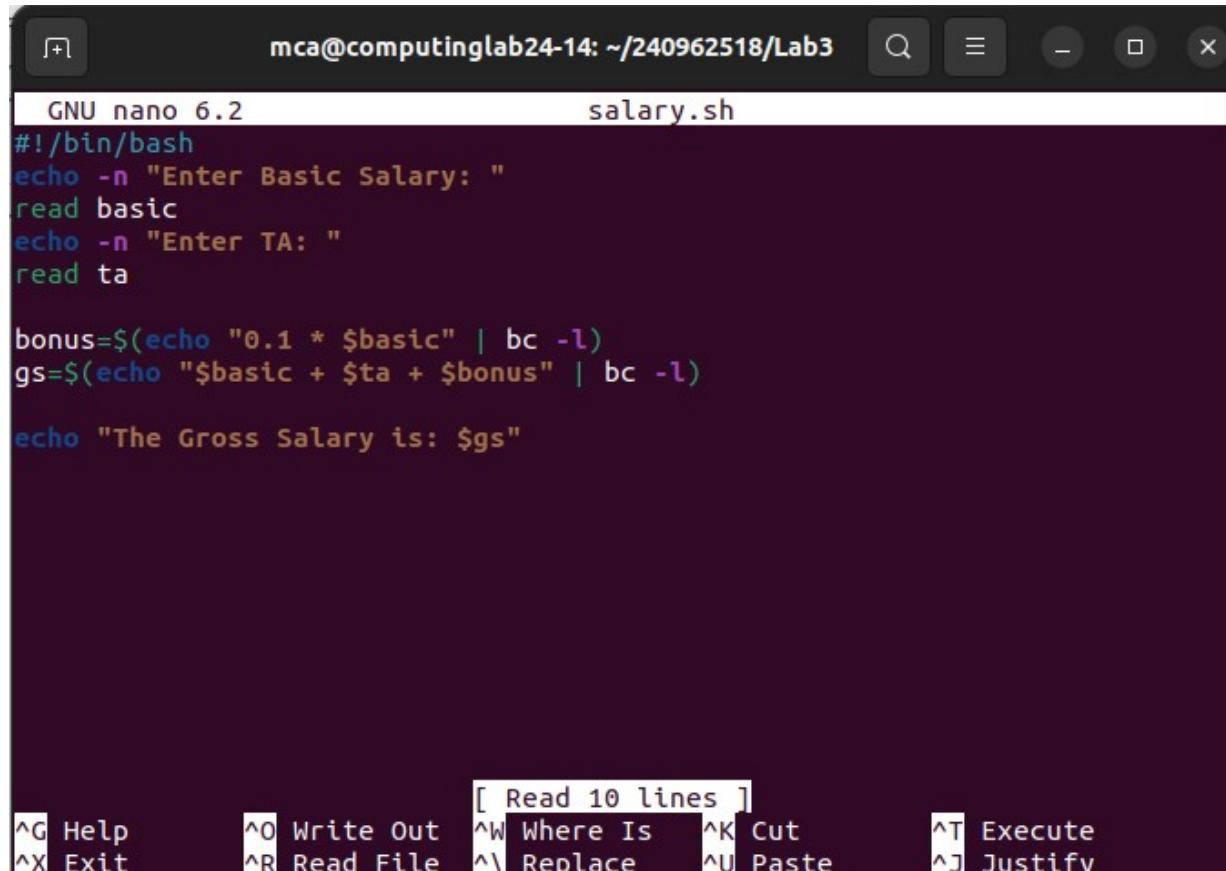


The screenshot shows a terminal window titled "mca@computinglab24-14: ~/240962518/Lab3". The user runs the script "rename_file.sh" in the "test_directory". The output is as follows:

```
mca@computinglab24-14:~/240962518/Lab3$ nano rename_file.sh
mca@computinglab24-14:~/240962518/Lab3$ cd test_directory/
mca@computinglab24-14:~/240962518/Lab3/test_directory$ touch test.txt
mca@computinglab24-14:~/240962518/Lab3/test_directory$ cd ..
mca@computinglab24-14:~/240962518/Lab3$ bash rename_file.sh
Found 4 files. Beginning conversion...
All 4 files have been renamed.
mca@computinglab24-14:~/240962518/Lab3$
```

**4. Write a shell script to calculate the gross salary. GS=Basics + TA + 10% of Basics.
Floating point calculations has to be performed.**

CODE:



```
GNU nano 6.2 salary.sh
#!/bin/bash
echo -n "Enter Basic Salary: "
read basic
echo -n "Enter TA: "
read ta

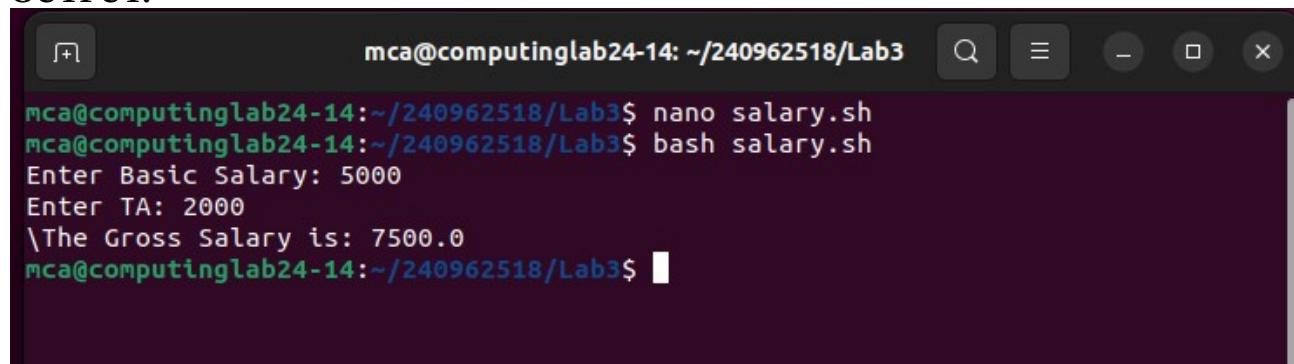
bonus=$(echo "0.1 * $basic" | bc -l)
gs=$(echo "$basic + $ta + $bonus" | bc -l)

echo "The Gross Salary is: $gs"
```

[Read 10 lines]

^G Help **^O Write Out** **^W Where Is** **^K Cut** **^T Execute**
^X Exit **^R Read File** **^\\ Replace** **^U Paste** **^J Justify**

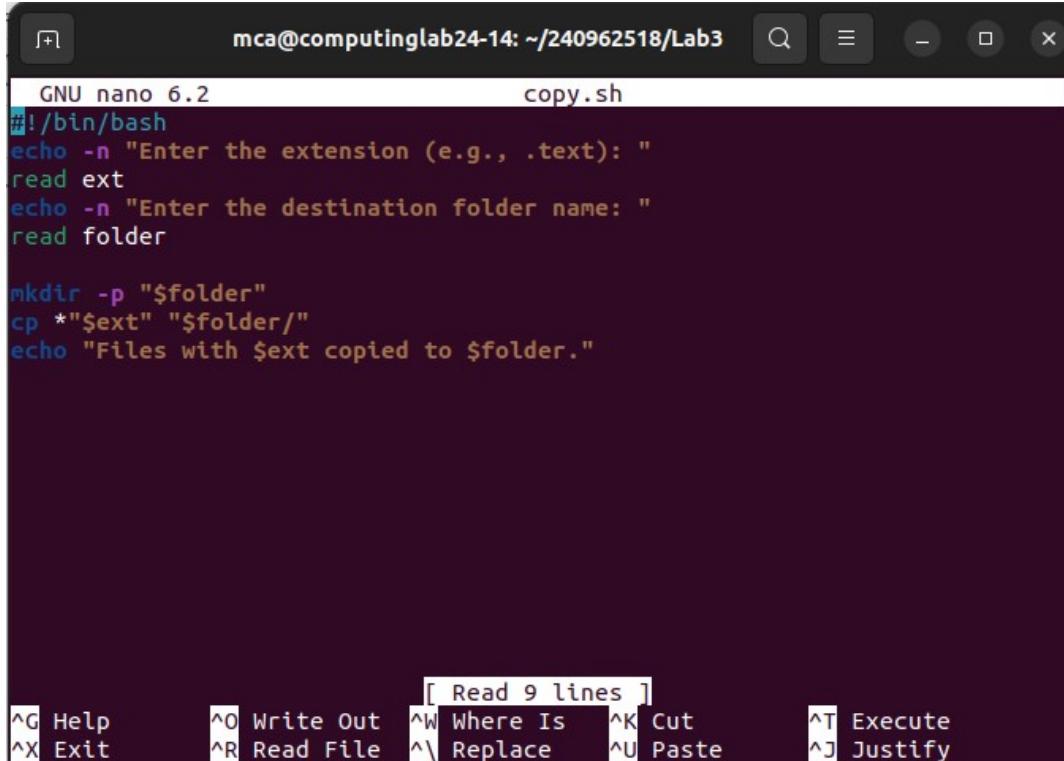
OUTPUT:



```
mca@computinglab24-14:~/240962518/Lab3$ nano salary.sh
mca@computinglab24-14:~/240962518/Lab3$ bash salary.sh
Enter Basic Salary: 5000
Enter TA: 2000
The Gross Salary is: 7500.0
mca@computinglab24-14:~/240962518/Lab3$
```

5. Write a program to copy all the files (having file extension input by the user) in the current folder to the new folder input by the user. ex: user enter .text TEXT then all files with .text should be moved to TEXT folder. This should be done only at single level. i.e if the current folder contains a folder name ABC which has .txt files then these files should not be copied to TEXT.

CODE:



The screenshot shows a terminal window titled "mca@computinglab24-14: ~/240962518/Lab3". Inside the terminal, the command "nano 6.2" is run, opening a file named "copy.sh". The script content is as follows:

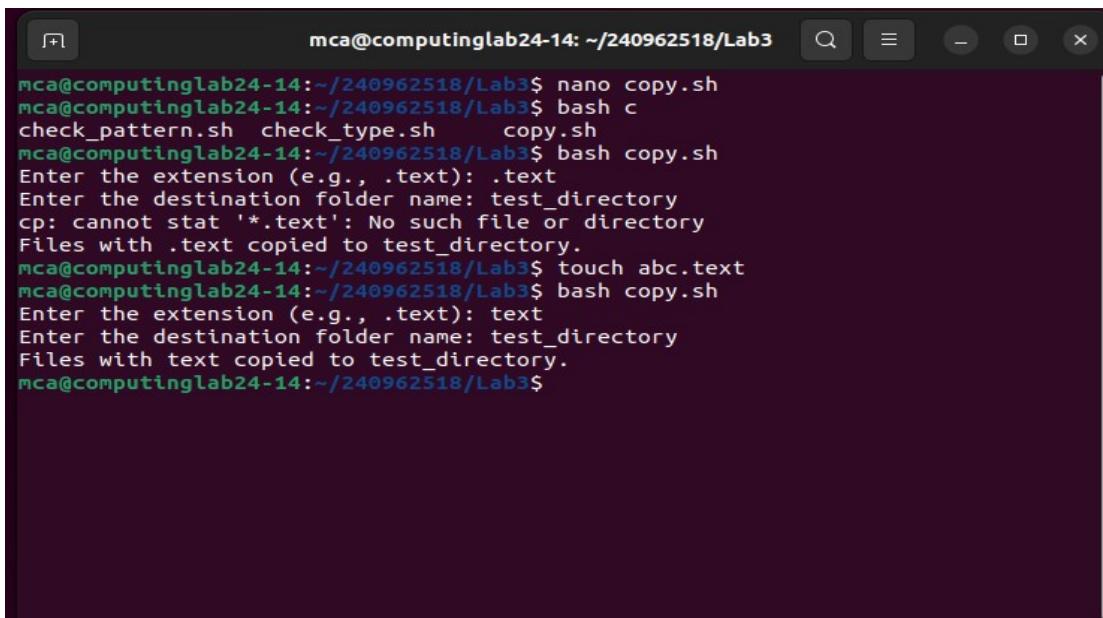
```
GNU nano 6.2                               copy.sh
#!/bin/bash
echo -n "Enter the extension (e.g., .text): "
read ext
echo -n "Enter the destination folder name: "
read folder

mkdir -p "$folder"
cp *"$ext" "$folder/"
echo "Files with $ext copied to $folder."
```

At the bottom of the terminal window, there is a menu bar with various keyboard shortcuts:

- ^G Help
- ^O Write Out
- ^W Where Is [Read 9 lines]
- ^K Cut
- ^T Execute
- ^X Exit
- ^R Read File
- ^V Replace
- ^U Paste
- ^J Justify

OUTPUT



The screenshot shows a terminal window titled "mca@computinglab24-14: ~/240962518/Lab3". The user runs "nano copy.sh" to view the script. Then, they run "bash copy.sh" to execute it. The terminal output shows the script prompting for an extension (.text) and a destination folder (test_directory). It then attempts to copy files with the .text extension but fails because no such files exist. Finally, it copies a file named abc.text to the test_directory.

```
mca@computinglab24-14:~/240962518/Lab3$ nano copy.sh
mca@computinglab24-14:~/240962518/Lab3$ bash copy.sh
check_pattern.sh  check_type.sh      copy.sh
mca@computinglab24-14:~/240962518/Lab3$ bash copy.sh
Enter the extension (e.g., .text): .text
Enter the destination folder name: test_directory
cp: cannot stat '*.text': No such file or directory
Files with .text copied to test_directory.
mca@computinglab24-14:~/240962518/Lab3$ touch abc.text
mca@computinglab24-14:~/240962518/Lab3$ bash copy.sh
Enter the extension (e.g., .text): text
Enter the destination folder name: test_directory
Files with text copied to test_directory.
mca@computinglab24-14:~/240962518/Lab3$
```