Problem 1

Question 1: How do you navigate to your home directory and list its contents?

```
cdac@LAPTOP-4TS0GSD5:~$ cd ~
cdac@LAPTOP-4TS0GSD5:~$ ls
LinuxAssignment  docs      extracted_docs    wildcard
Linuxassignment  docs.zip  shellprogramming
cdac@LAPTOP-4TS0GSD5:~$
```

Question 2: How can you create and navigate to a directory named 'LinuxAssignment' if it doesn't

```
cdac@LAPTOP-4TS0GSD5:~$ cd LinuxAssignment
cdac@LAPTOP-4TS0GSD5:~/LinuxAssignment$
```

Question 3: Create a new directory named "docs" inside the "LinuxAssignment" directory.

```
cdac@LAPTOP-4TS0GSD5:~/LinuxAssignment$ cd docs
cdac@LAPTOP-4TS0GSD5:~/LinuxAssignment/docs$
```

Question 4: Copy the "file1.txt" file into the "docs" directory and rename it to "file2.txt".

```
cdac@LAPTOP-4TS0GSD5:~/LinuxAssignment$ touch file1.txt
cdac@LAPTOP-4TS0GSD5:~/LinuxAssignment$ cp file1.txt docs/file2.tx
cdac@LAPTOP-4TS0GSD5:~/LinuxAssignment$
```

Question 4: Change the permissions of "file2.txt" to allow read, write, and execute permissions for the owner and only read permissions for others. Then, change the owner of "file2.txt" to the current user.

```
cdac@LAPTOP-4TS0GSD5:~/LinuxAssignment$ chmod 744 docs/file2.txt
chown $USER docs/file2.txt
cdac@LAPTOP-4TS0GSD5:~/LinuxAssignment$
```

Question 4: Finally, list the contents of the "LinuxAssignment" directory and the root directory to ensure that all operations were performed correctly.

```
cdac@LAPTOP-4TS0GSD5:~$ ls LinuxAssignment
docs  file1.txt  file2.txt
cdac@LAPTOP-4TS0GSD5:~$ ls /
bin  boot  dev  etc  home  init  lib  lib32  lib64  libx32  lost+found  media  mnt  opt  proc  root  run  sbin  snap  srv  sys  tmp  usr  var
cdac@LAPTOP-4TS0GSD5:~$
```

Question 4: Search for all files with the extension ".txt" in the current directory and its subdirectories.

```
cdac@LAPTOP-4TS0GSD5:~$ find . -name "*.txt"
./LinuxAssignment/file1.txt
./LinuxAssignment/file2.txt
./LinuxAssignment/docs/file2.txt
./extracted_docs/docs/file2.txt
./file1.txt
./docs/file2.txt
```

b. Display lines containing a specific word in a file (provide a file name and the specific word to search).

```
cdac@LAPTOP-4TS0GSD5:~/LinuxAssignment$ echo "Hello World" > file1.txt
echo "This is a test file." >> file1.txt
echo "World is beautiful." >> file1.txt
grep "World" file1.txt
Hello World
World is beautiful.
cdac@LAPTOP-4TS0GSD5:~/LinuxAssignment$
```

Question 4: Display the current system date and time.

```
cdac@LAPTOP-4TS0GSD5:~/LinuxAssignment$ date
Sat Aug 31 18:51:58 IST 2024
```

Question 4: Display the IP address of the system

```
cdac@LAPTOP-4TS0GSD5:~/LinuxAssignment$ hostname -I
172.29.200.126
```

Question 4:

. b. Ping a remote server to check connectivity (provide a remote server address to ping).

```
cdac@LAPTOP-4TS0GSD5:~/LinuxAssignment$ ping google.com
PING google.com (142.250.207.238) 56(84) bytes of data.
64 bytes from del12s11-in-f14.1e100.net (142.250.207.238): icmp_seq=1 ttl=110 time=46.9 ms
64 bytes from del12s11-in-f14.1e100.net (142.250.207.238): icmp_seq=2 ttl=110 time=126 ms
64 bytes from del12s11-in-f14.1e100.net (142.250.207.238): icmp_seq=3 ttl=110 time=50.5 ms
64 bytes from del12s11-in-f14.1e100.net (142.250.207.238): icmp_seq=4 ttl=110 time=68.5 ms
64 bytes from del12s11-in-f14.1e100.net (142.250.207.238): icmp_seq=5 ttl=110 time=91.1 ms
64 bytes from del12s11-in-f14.1e100.net (142.250.207.238): icmp_seq=6 ttl=110 time=113 ms
64 bytes from del12s11-in-f14.1e100.net (142.250.207.238): icmp_seq=7 ttl=110 time=52.8 ms
64 bytes from del12s11-in-f14.1e100.net (142.250.207.238): icmp_seq=8 ttl=110 time=54.2 ms
```

Question 4: Compress the "docs" directory into a zip file. b. Extract the contents of the zip file into a new directory.

```
cdac@LAPTOP-4TS0GSD5:~$ zip -r docs.zip docs
unzip docs.zip -d new_di
updating: docs/ (stored 0%)
updating: docs/file2.txt (stored 0%)
Archive:  docs.zip
   creating: new_di/docs/
 extracting: new_di/docs/file2.txt
cdac@LAPTOP-4TS0GSD5:~$
```

s