

LAB ASSIGNMENT 5

Subject: Operating system concepts using Unix/Linux

1. Write a script uses the whoami command to determine the current logged-in user. Based on the retrieved username, it prints different messages depending on the user's role, such as root, admin, or a regular user.

```
GNU nano 4.8 n1.sh
USER=$(whoami)

if [ "$USER" == "root" ]; then
    echo "Hello, Root! "
elif [ "$USER" == "admin" ]; then
    echo "Hello, Admin!"
else
    echo "Hello, $USER! You are a regular user."
fi

navdip@LAPTOP-0N09VP88:/mnt/c/users/navdip/documents/NAVDIP$ bash n1.sh
Hello, navdip! You are a regular user.
navdip@LAPTOP-0N09VP88:/mnt/c/users/navdip/documents/NAVDIP$ |
```

2. Read a filename from the user and check if it is a file, directory, or does not exist.

```
GNU nano 4.8 n2.sh
echo "Enter the filename or directory name:"
read filename

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

navdip@LAPTOP-0N09VP88:/mnt/c/users/navdip/documents/NAVDIP$ bash n2.sh
Enter the filename or directory name:
os project file
os project file is a directory.
```

3. Write a script to determine if a given year is a leap year.

```
GNU nano 4.8 n3.sh
echo "Enter a year:"
read year

if [ $((year % 4)) -eq 0 ];
then
    echo "$year is a leap year."
else
    echo "$year is not a leap year."
fi

navdip@LAPTOP-0N09VP88:/mnt/c/users/navdip/documents/NAVDIP$ nano n3.sh
navdip@LAPTOP-0N09VP88:/mnt/c/users/navdip/documents/NAVDIP$ bash n3.sh
Enter a year:
2024
2024 is a leap year.
navdip@LAPTOP-0N09VP88:/mnt/c/users/navdip/documents/NAVDIP$ |
```

4. Write a script to read a number and check if it is prime.

```
GNU nano 4.8 n4.sh
echo "Enter a number:"
read num

[ $num -le 1 ] && echo "$num is not prime" && exit
for ((i=2; i*i<=num; i++));
do
    [ $((num % i)) -eq 0 ] && echo "$num is not prime" && exit
done
echo "$num is prime"

navdip@LAPTOP-0N09VP88:/mnt/c/users/navdip/documents/NAVDIP$ bash n4.sh
Enter a number:
7
7 is prime
navdip@LAPTOP-0N09VP88:/mnt/c/users/navdip/documents/NAVDIP$ |
```

5. The script presents a menu with four options.

- 1 → Displays the current date and time.
- 2 → Shows the current working directory.
- 3 → Lists all files and directories.
- 4 → Displays a goodbye message and exits.
- If the user enters an invalid option, it asks for input again.

```
GNU nano 4.8 n5.sh
echo "Enter your choice:"
read choice

case $choice in
1)
    echo "Current Date and Time: $(date)"
    ;;
2)
    echo "Current Working Directory: $(pwd)"
    ;;
3)
    echo "Files and Directories:"
    ls -l
    ;;
4)
    echo "Goodbye! Exiting the script."
    exit 0
    ;;
*)
    echo "Invalid option. Please try again."
    ;;
esac

navdip@LAPTOP-0N09VP88:/mnt/c/users/navdip/documents/NAVDIP$ bash n5.sh
Enter your choice:
2
Current Working Directory: /mnt/c/users/navdip/documents/NAVDIP
```