LINUX PROGRAMMING:

ASSIGNMENT-7

SEPTEMBER 25, 2025

1.What is a bash shell script? Give one example.

A Bash shell script is a text file containing Linux commands executed by the Bash shell

Example:

```
#!/bin/bash
echo "Hello World"
```

2.Write a simple shell script to print “Hello World”.

```
#!/bin/bash
echo "Hello World"
```

3.What is the purpose of comments (#) in a shell script?

Purpose of comments (#) in a shell script:
Used to add notes or explanations that the shell ignores during execution

4.How do you declare variables (int, float, double, string, Boolean, and char in a shell script?

In **shell scripting (Bash)**, variables are **not declared with specific data types** like in C or Java.
All variables are treated as **strings by default**, but they can behave like integers or Booleans depending on how you use them

Examples for each type:

1. Integer

```
num=10
echo "Number: $num"
```

2. Float / Double

```
num1=5.5
num2=2.3
result=$(echo "$num1 + $num2" | bc)
echo "Result: $result"
```

3. String

```
name="Anushka"
echo "Hello, $name!"
```

4. Boolean

```
is_ready=true
if [ "$is_ready" = true ]; then
  echo "Ready!"
else
  echo "Not ready!"
fi
```

5. Character

There’s no separate *char* type — just treat it as a string of one character:

```
letter='A'
echo "Character: $letter"
```

5.Write a shell script to display the current date and time of the system.

```
#!/bin/bash
Date
```

6.Explain the difference between a constant and a variable in bash script.

A **variable** can change its value during execution, while a **constant** has a fixed value that cannot be modified once assigned

7.Write a shell script to read two integer number from the user and compute the sum of both the number.

```
#!/bin/bash

read -p "Enter first number: " a

read -p "Enter second number: " b

sum=$((a + b))

echo "Sum: $sum"
```

8.What is the use of source command in shell scripting?

The source command runs a script in the **current shell** instead of a new shell, allowing any variables or functions defined in the script to be available immediately

9.How can you debug a shell script? Give two methods.

Two ways to debug a shell script:

1. **Use -x option**:

```
bash -x script.sh
```

(shows each command before execution)

2. **Add set -x inside the script**:

```
#!/bin/bash

set -x
```

10.Write a bash script to create and delete a file.

```
        #!/bin/bash

# Create a file

        touch myfile.txt

        echo "File created."

# Delete the file

        rm myfile.txt

        echo "File deleted."
```