LINUX PROGRAMMING

ASSIGNMENT-7

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Q1.What is a bash shell script? Give one example.

Ans:

A **bash shell script** is a text file that contains a sequence of Linux commands and logic (like loops, conditionals, functions) that can be executed together.

Example:

```
#!/bin/bash

echo "This is a Bash script"
```

Q2.Write a simple shell script to print “Hello World”.

Ans:

```
#!/bin/bash

echo "Hello World"
```

Q3. What is the purpose of comments (#) in a shell script?

Ans:

The # symbol is used to **add comments**, which are ignored by the shell during execution. They help explain code logic and improve readability.

Example:

```
# This script prints Hello World

echo "Hello World"
```

Q4. How do you declare variables in a shell script?

Ans:

Syntax:

```
name="John"          # String

age=25               # Integer

pi=3.14              # Float

isTrue=true          # Boolean

char='A'             # Character
```

Q5.Write a shell script to display the current date and time.

Ans:

```
#!/bin/bash
echo "Current Date and Time: $(date)"
```

Q6.Explain the difference between a constant and a variable.

Ans:

Aspect	Constant	Variable
Value	Fixed	Can change
Declaration	readonly var=value	var=value
Example	readonly pi=3.14	count=5

Q7.Script to read two integers and display their sum.

Ans:

```
#!/bin/bash
read -p "Enter first number: " a
read -p "Enter second number: " b
sum=$((a + b))
echo "Sum: $sum"
```

Q8.What is the use of the source command?

Ans:

The source command runs a script **within the current shell**, allowing exported variables or functions to persist.

Example:

```
source config.sh
```

Q9. How can you debug a shell script?

Ans:

Two common methods:

1. Run with debugging mode:

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

2. Add debug flag inside script:

```
set -x
# Commands here
set +x
```

Q10.Write a bash script to create and delete a file.

Ans:

```
#!/bin/bash
touch myfile.txt
echo "File created"
rm myfile.txt
echo "File deleted"
```