

Linux Programming: Assignment-7

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

Answer: A bash shell script is an ordinary text file with a list of commands for the Bash shell. It is used to automate repeated work and run multiple Linux commands in sequence.

Example:

```
echo "This is a simple bash script."
```

2. Write a simple shell script to print "Hello World".

Answer:

```
echo "Hello World"
```

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

Answer:

Comments are used to explain code and make scripts more readable.

In Bash, any line starting with # is ignored during execution.

Example:

```
echo "Hello World"
```

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

Answer:

Variables in bash do not need explicit type declarations.

Examples

```
int=10
```

```
float=10.5
```

```
double=20.55
```

```
string="Hello"
```

```
Boolean=true
```

```
char='A'
```

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

Answer:

```
echo "Current Date and Time: $(date)"
```

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

Answer:

- Variable: Its value can change during execution.
- Constant: Its value remains fixed.

Example:

```
readonly PI=3.14 # constant
```

```
radius=5      # variable
```

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

Answer:

```
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?

Answer: The source command executes commands from a file in the current shell environment without starting a new shell.

Example:

```
source myscript.sh
```

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

Answer:

Two methods:

1. Run with -x option:

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

2. Add set -x inside script for step-by-step debugging.

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

Answer:

```
touch myfile.txt
```

```
echo "File created."
```

```
rm myfile.txt
```

```
echo "File deleted."
```

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