LINUX ASSIGNMENT - 7

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1. **What is bash shell script ?**
   Ans: a bash shell script is a text file that contains a series of commands written for the bash interpreter
   It is used to automate tasks like file handling ,running programs, systems administration
   Example : echo "this is my first Bash script"

2. **Write a simple shell script to print "hello world"**
   Ans: echo "hello world"

3. **What is the purpose of comments (#)in a shell script ?**
   Ans: comments are used to add notes or explanation in shell script
   They are ignored by the shell during execution

4. **How do you declare variables (int,float,double,string,boolean and char) in a shell script ?**
   Ans: in bash, all variables are stored as strings by default (there's no strict type like int,float,etc..)
   Examples :
   - intvar=10   #integer
   - floatvar=3.14   #float
   - doublevar=12.3456   #double
   - stringvar="hello"   #string
   - boolvar=true   #boolean
   - charvar='A'   #char
     Echo $intvar $floatvar $doublevar $stringvar $boolvar $charvar

5. **Write a shell script to dispaly the current date and time of the system**
   Ans: echo"current date and time: $(date)"

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

FEATURE	VARIABLE	CONSTANT
● Definition	value can change during execution	value remains fixed
● Declaration	name=value	readonly name=value
● Example	count=0 then count=20	readonly pi=3.14

Example :
count=10
readonly pi=3.14
count=20   # valid
pi=4.0   # error – cannot modify readonly variable

7. **Write a shell script to read two integer numbers from the user and compute the sum**
   Ans: echo "Enter first number:"
       read a
       echo"Enter second number:"
       read b
       sum=$((a + b))
       echo "Sum = $sum"

8. **What is the use of source command in shell scripting ?**
   Ans: the source command runs a script in the current shell environment instead of starting a new one
   It's used to reload variables,functions,or configurations without closing the shell
   Example : source myscript.sh
   This loads all the variables and functions from myscript.sh into the current shell

9. **How can you debug a shell script ? give two methods**
   - **Ans:** method 1:
     add -x option while running
     Bash -x script.sh
     (this shows each command before execution)
     - Method 2:
       Add set-x and set +x inside script
       Set -x
       echo "Debugging mode on"
       Set +x
       echo "Debugging mode off"

10. **Write a bash script to create and delete a file**
    Ans:
    echo "Enter file name:"
    read filename

    # Create file
    touch $filename
    echo "File '$filename' created successfully."

    # Delete file
    rm $filename
    echo "File '$filename' deleted successfully."