#Steps to Create and Run the Shell Script in Linux

1. Open the terminal.
2. Create a new shell script file.
3. Open the file in a text editor.

```
manthan@manthan-virtual-machine:~/conditionals$ nano Experiment8
manthan@manthan-virtual-machine:~/conditionals$ bash Experiment8
```
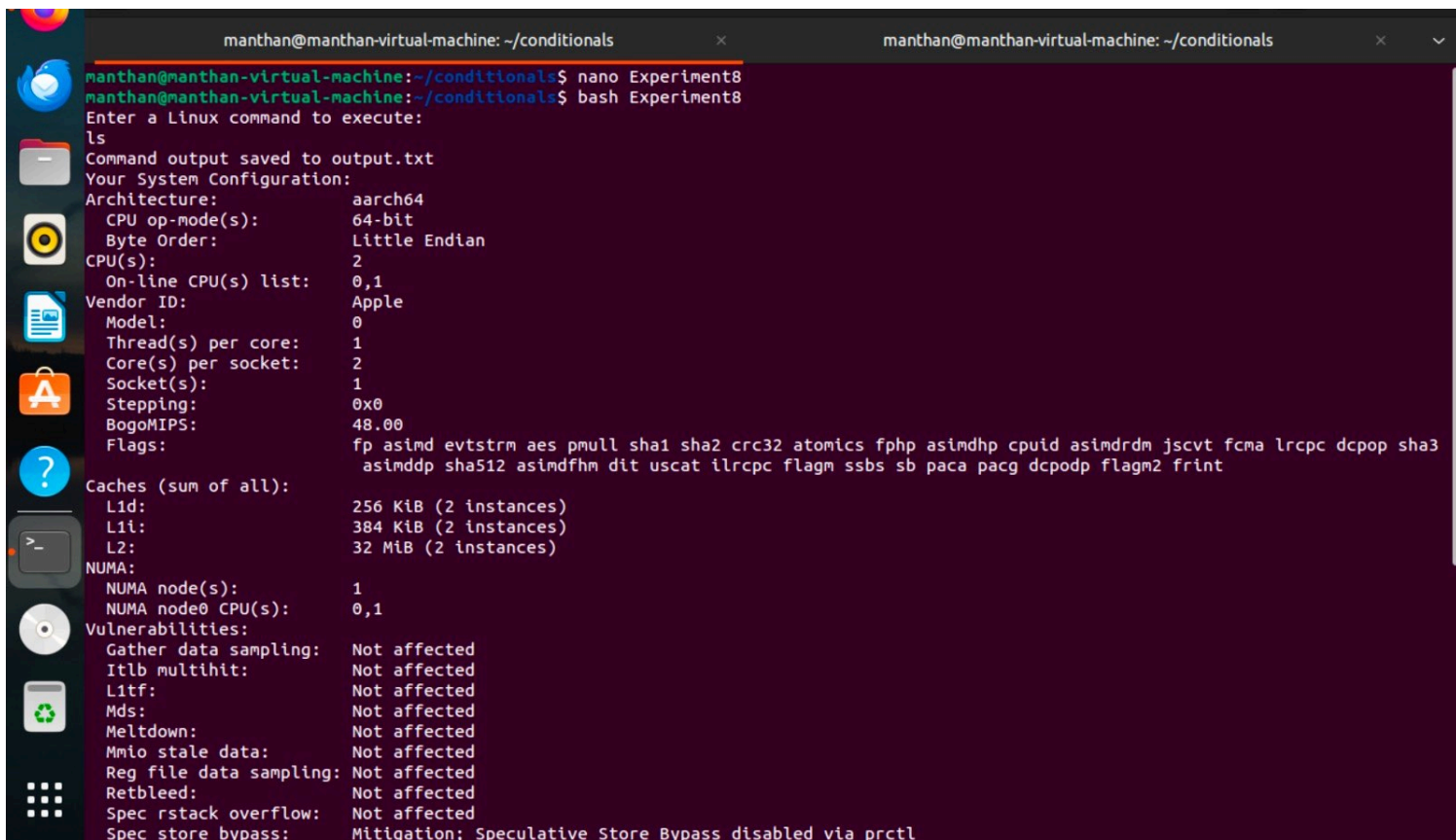
4. Write the script inside the file.

```bash
1    #!/bin/bash
2
3    # Prompt user to enter a system command
4    echo "Enter a Linux command to execute:"
5    read user_command
6
7    # Execute the command and store the output in a file
8    $user_command > output.txt
9    echo "Command output saved to output.txt"
10
11   # Display the system configuration
12   echo "Your System Configuration:"
13   lscpu
14
15   # Prompt user to enter two numbers for mathematical operations
16   echo "Enter two numbers"
17   read number1
18   read number2
19
20   while true; do
21   echo "This is a calculator"
22
23   echo "Enter what do you want to do:- +,-,*,/,exit"
24   read char
25
26   case $char in
27   '+') echo "Addition is:" $((number1+number2));;
28   '-') echo "Subtraction is:" $((number1-number2));;
29   '*') echo "Multiplication is:" $((number1*number2));;
30   '/') echo "Division is:" $((number1/number2));;
31   "exit") echo "exiting"
32   exit 0
33   ;;
34   *) echo "Enter a valid input"
35   esac
36   echo ""
37   done
```

5. Save and exit the editor.

6. Give execution permissions to the script.

7. Run the script.

8. Follow the prompts to enter inputs and perform calculations.

```
Caches (sum of all):
  L1d:                  256 KiB (2 instances)
  L1i:                  384 KiB (2 instances)
  L2:                   32 MiB (2 instances)
NUMA:
  NUMA node(s):         1
  NUMA node0 CPU(s):    0,1
Vulnerabilities:
  Gather data sampling: Not affected
  Itlb multihit:        Not affected
  L1tf:                 Not affected
  Mds:                  Not affected
  Meltdown:             Not affected
  Mmio stale data:      Not affected
  Reg file data sampling: Not affected
  Retbleed:             Not affected
  Spec rstack overflow: Not affected
  Spec store bypass:    Mitigation; Speculative Store Bypass disabled via prctl
  Spectre v1:           Mitigation; __user pointer sanitization
  Spectre v2:           Not affected
  Srbds:                Not affected
  Tsx async abort:      Not affected
Enter two numbers
2
3
This is a calculator
Enter what do you want to do:- +,-,*,/,exit
+
Addition is: 5

This is a calculator
Enter what do you want to do:- +,-,*,/,exit
exit
exiting
manthan@manthan-virtual-machine:~/conditionals$ nano Experiment8
manthan@manthan-virtual-machine:~/conditionals$ nano output.txt
manthan@manthan-virtual-machine:~/conditionals$ 
```

9. Check the stored output in the generated file.

```
  GNU nano 6.2                            output.txt
calculator.sh
casem.sh
case.sh
cpu_info.txt
Experiment8
forr.sh
menu.sh
output.txt
```

```
                          [ Read 8 lines ]
^G Help        ^O Write Out   ^W Where Is    ^K Cut       ^T Execute    ^C Location    M-U Undo    M-A Set Mark
^X Exit        ^R Read File   ^\ Replace     ^U Paste     ^J Justify    ^/ Go To Line  M-E Redo    M-6 Copy
```