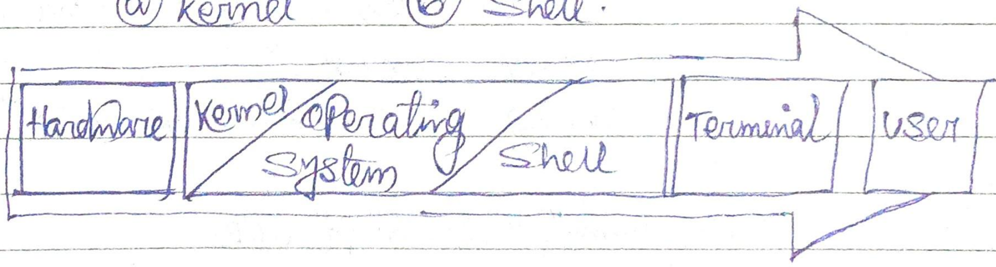
Day - 2

① **How to Create Shell script in Linux / Unix ? Explain in detail**

Sol→ • Shell scripting is an Open-Source Computer Program designed to be run by the Unix/Linux Shell. Shell scripting is a Program to write a series of commands for the shell to execute.

• Shell is a UNIX term for an interface between an user and an Operating System service. Shell Provides users with an interface and accepts human readable Commands into the system and executes those commands which can run automatically and give the Program's output in a shell Script.

• An operating is made of many components, but its two Prime components are—
ⓐ kernel ⓑ Shell.



Types of Shell :
There are two main shells in Linux:

1. The Bourne Shell: The Prompt for this shell is $ and its derivatives are listed below.
   - Posix shell also is known as sh.
   - Korn Shell also knew as sh.
   - Bourne again shell also known as bash.

2. The C shell: The Prompt for this shell is %, and its Subcategories are:
   - C shell also is known as csh.
   - Tops C shell also is known as tcsh.

- Shell Scripts are Written using text editors.
- Let's understand the steps in Creating a shell scrip

1. Create a file using a vi editor (or any other editor). Name script file with extension.sh

2. Start the script with #!/bin/Sh.

3. Write some code.
4. Save the script file as filename.sh
5. For executing the Script type bash filename.sh

- Creating a Script: Samplesc.sh ↙

```
#! /bin/Sh
echo "What is your name?"
read name
echo "How do you do, $name?"
read remark
echo "I am $remark too!"
```

- For running the script file

```
                        Pi @Picoders 1:-$ bash Samplesc.sh
                 O/P ↓  What is your name?
        entering    ←   Pi
        input(name)     How do you do, Pi?
        entering    ←   excellent
        remark(i/p)     I am excellent too!
```

- This is Just a Simple Script. We can develop advanced scripts which contains conditional Statements, loops, and functions. Shell scripts made our life easy and Linux administration a breeze.

② A shell script to make a menu driven Calculator using Case.

Sol→
```
#!/bin/bash
 Clear
 Sum = 0
 i = "y"

 echo "Enter first no".
 read n1
 echo " Enter Second no"
 read n2
 While [$i = "y"]
 do
 echo "1. Addition"
 echo "2. Subtraction"
 echo "3. Multiplication"
 echo "4. Division "
 echo "Enter your choice"
 read ch
 Case $ch in
   1) Sum = `expr $n1 + $n2`
      echo "Sum =" $ Sum ;
   2) Sum = `expr $n1 - $n2`
      echo "Sub = " $ Sum;
   3) Sum = `expr $n1 \* $n2`
      echo "mul = " $ sum;
   4) Sum = `echo "Scale = 2 ; $n1/$n2" | bc`
        echo "div = $ Sum;
   *) echo "Invalid choice";;
 esac
 echo "Do u want to continue ? [y/n] "
 read i
 if [$i != "y"]
```

```
then
    exit
  fi
done.
```

③ Create a Custom menu using echo Statement and show the menu.
Create an infinite loop using while statement ~~and~~ show ~~the menu.~~ that accept the user input option and generate the output continuously until the user input matches the exit Pattern.
Take input from the user using read Statement and store it in a variable.

Sol^n→

```
#!/bin/bash

# Creating a menu With the following options
    echo "SELECT YOUR FAVORITE FRUIT";
    echo "1. Apple"
    echo "2. Grapes"
    echo "3. Mango"
     echo "4. Exit from menu"
      echo -n "Enter your menu choice [1-4]:"

# Running a forever loop using while statement
# This loop will run until select the exit option.
# User will be asked to select option again and again

   while:
       do
   # reading choice
   read choice
```

```
# Case Statement is used to compare one value with
  the multiple cases.
  Case $ choice in
  # Pattern 1
  1) echo "you have selected the option 1 "
     echo " Selected Fruit is Apple. ";

  # Pattern 2
  2) echo "you have selected the option 2"
     echo " selected fruit is Grapes. ";
  # Pattern 3
     echo "you have selected the option 3"
     echo "Selected fruit is Mango." ;
  # Pattern 4
    echo "Quitting..."
    exit;
  # Default Pattern
  *) echo "invalid option";
```