Assignment-7

Assignments For loop

1) Create a user case where an array stores the first ten prime numbers. Iterate over the array and print out each element inside it

```
bhushan@ubuntu:~/Hardsoft$ cat -n for1.sh
     1  #!/bin/bash
     2  echo "Below output is array list with comma seperated!"
     3  arr=(2,3,5,7,11,13,17,19,23,29)
     4  for x in "${arr[@]}"
     5  do
     6          echo "$x"
     7  done
     8
     9  echo
    10  echo
    11  echo "Below output is array list with space seperated!"
    12  prime=(2 3 5 7 11 13 17 19 23 29)
    13  for p in "${prime[@]}"
    14  do
    15          echo "$p"
    16  done
bhushan@ubuntu:~/Hardsoft$ ./for1.sh
Below output is array list with comma seperated!
2,3,5,7,11,13,17,19,23,29


Below output is array list with space seperated!
2
3
5
7
11
13
17
19
23
29
bhushan@ubuntu:~/Hardsoft$
```

2) Create a user case to print all the files and directory that exists under the /etc directory

```
bhushan@ubuntu:~/Hardsoft$ cat file2.sh
#!/bin/bash
echo "The name of all files/directories present in /etc are..."
for file in /etc/*
do
        echo "$file"
done
bhushan@ubuntu:~/Hardsoft$ ./file2.sh
The name of all files/directories present in /etc are...
/etc/acpi
/etc/adduser.conf
/etc/alsa
/etc/alternatives
/etc/anacrontab
/etc/apg.conf
/etc/apm
/etc/apparmor
/etc/apparmor.d
/etc/apport
/etc/appstream.conf
/etc/apt
/etc/avahi
/etc/bash.bashrc
/etc/bash_completion
/etc/bash_completion.d
/etc/bindresvport.blacklist
/etc/binfmt.d
/etc/bluetooth
/etc/brlapi.key
/etc/brltty
/etc/brltty.conf
/etc/ca-certificates
/etc/ca-certificates.conf
/etc/ca-certificates.conf.dpkg-old
/etc/calendar
/etc/chatscripts
/etc/console-setup
/etc/cracklib
/etc/cron.d
```

3) Create a user case to print all 7 days of a week by passing values as arguments and iterating for loop over these values

```
bhushan@ubuntu:~/Hardsoft$ cat for2.sh
#!/bin/bash
START=$1
END=$2
if [ $END -gt 7 ]
then
        echo "Please pass second value upto 7 only! Sorry for Inconvience!!!!!"
        #break
else
        for((i=START; i<=END; i+=1))
        do
                if [ $i == 1 ]
                then
                        echo "Sunday"
                elif [ $i == 2 ]
                then
                        echo "Monday"
                elif [ $i == 3 ]
                then
                        echo "Tuesday"
                elif [ $i == 4 ]
                then
                      echo "Wednesday"
                elif [ $i == 5 ]
                then
                        echo "Thursday"
                elif [ $i == 6 ]
                then
                        echo "Friday"
                elif [ $i == 7 ]
                then
                        echo "Saturday"
                else
                        echo "Sorry ! Please maintain the passed values in between 1 to 7! It means we have to pass 2 values first value is less than second value!"
                        echo "======================================="
                        echo "Pass values like [1 3] [4 5] [1 7] ....."
                        echo "======================================="
                        break
                fi
        done
fi
bhushan@ubuntu:~/Hardsoft$
```

```
bhushan@ubuntu:~/Hardsoft$ ./for2.sh 1 3
Sunday
Monday
Tuesday
bhushan@ubuntu:~/Hardsoft$
bhushan@ubuntu:~/Hardsoft$ ./for2.sh 3 6
Tuesday
Wednesday
Thursday
Friday
bhushan@ubuntu:~/Hardsoft$ ./for2.sh 3 9
Please pass second value upto 7 only! Sorry for Inconvience!!!!!
bhushan@ubuntu:~/Hardsoft$ ./for2.sh 1 7
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
bhushan@ubuntu:~/Hardsoft$
```

Select Case Use cases

1) Creating a numbered menu to allow a user to select a number. Once a number is selected by the user, display whether the number is even or odd.

```
bhushan@ubuntu:~/Hardsoft$ cat evenodd.sh
#!/bin/bash
echo "Press Control + c for Exit:"
select no in {1..10}
do
   case $no in
          1|2|3|4|5|6|7|8|9|10)
        if [ `expr $no % 2` == 0 ]
        then
                echo $no is Even Number!
        else
                echo $no is Odd Number!
        fi
        ;;
        *)
              echo "Invalid Input!"
              ;;
    esac
done
```

```
bhushan@ubuntu:~/Hardsoft$ vi evenodd.sh
bhushan@ubuntu:~/Hardsoft$ ./evenodd.sh
Press Control + c for Exit:
 1) 1
 2) 2
 3) 3
 4) 4
 5) 5
 6) 6
 7) 7
 8) 8
 9) 9
10) 10
#? 9
9 is Odd Number!
#? 5
5 is Odd Number!
#? 2
2 is Even Number!
#? 8
8 is Even Number!
#? 99
Invalid Input!
#? 56
Invalid Input!
#? :
Invalid Input!
#? *
Invalid Input!
#? ^C
bhushan@ubuntu:~/Hardsoft$
```

2) Create a user case of a simple calculator that prompts the user for input and performs basic arithmetic operations like addition, subtraction, multiplication, and division.

```
bhushan@ubuntu:~/Hardsoft$ cat calculator.sh
#!/bin/bash
input="yes"
while [[ $input == "yes" ]]
do
        PS3="Press 1 for Addition, 2 for Substraction, 3 for Multiplication, 4 for Division and 5 for Exit:"
        select m in Addition Substraction Multiplication Division Exit
        do
                case "$m" in
                        Addition)
                                read -p "Enter First Number:" num1
                                read -p "Enter Second Number:" num2
                                result=$(($num1 + $num2))
                                echo Answer: $result

                        ;;
                        Substraction)
                                read -p "Enter First Number:" num1
                                read -p "Enter Second Number:" num2
                                result=$(($num1 - $num2))
                                echo Answer : $result

                        ;;
                        Multiplication)
                                read -p "Enter First Number:" num1
                                read -p "Enter Second Number:" num2
                                result=$(($num1 * $num2))
                                echo Answer : $result

                        ;;
```

```
                        ;;
                        Multiplication)
                                read -p "Enter First Number:" num1
                                read -p "Enter Second Number:" num2
                                result=$(($num1 * $num2))
                                echo Answer : $result

                        ;;
                        Division)
                                read -p "Enter First Number:" num1
                                read -p "Enter Second Number:" num2
                                result=$(($num1 / $num2))
                                echo Answer : $result

                        ;;
                        Exit)
                                echo "Bye! Happy Scripting!!!!!"
                                break
                                ;;
                        *)
                               echo "Choose 1 to 5 Only!!!!!!!"
                               break
                               ;;
                esac
        done
done
bhushan@ubuntu:~/Hardsoft$
```

```
bhushan@ubuntu:~/Hardsoft$ ./calculator.sh
1) Addition
2) Substraction
3) Multiplication
4) Division
5) Exit
Press 1 for Addition, 2 for Substraction, 3 for Multiplication, 4 for Division and 5 for Exit:3
Enter First Number:4
Enter Second Number:5
Answer : 20
Press 1 for Addition, 2 for Substraction, 3 for Multiplication, 4 for Division and 5 for Exit:4
Enter First Number:56
Enter Second Number:8
Answer : 7
Press 1 for Addition, 2 for Substraction, 3 for Multiplication, 4 for Division and 5 for Exit:5
Bye! Happy Scripting!!!!!
```