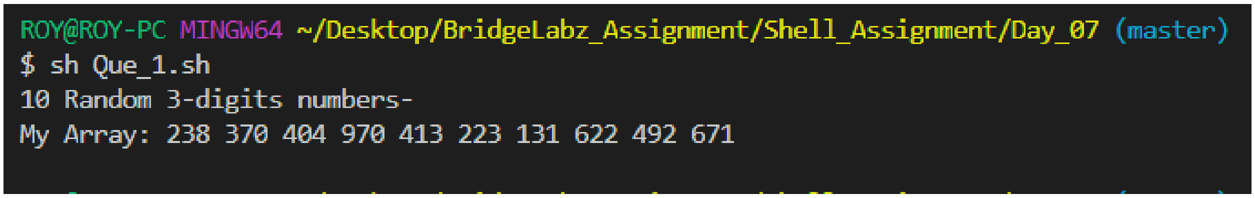
Day 07 Assignment Solutions | ARRAY

1. Write a program that does the following-
a. Generates 10 Random 3 Digit number.
b. Store this random numbers into an array.

CODE:

```
#!/bin/bash/
echo "10 Random 3-digits numbers-"
for (( i=0;i<10;i++))
do
        Random_number=$((RANDOM%9+1))$((RANDOM%10))$((RANDOM%10))
        myArray[$i]=$Random_number
done
echo "${myArray[@]}"
```

OUTPUT:



```
ROY@ROY-PC MINGW64 ~/Desktop/BridgeLabz_Assignment/Shell_Assignment/Day_07 (master)
$ sh Que_1.sh
10 Random 3-digits numbers-
My Array: 238 370 404 970 413 223 131 622 492 671
```

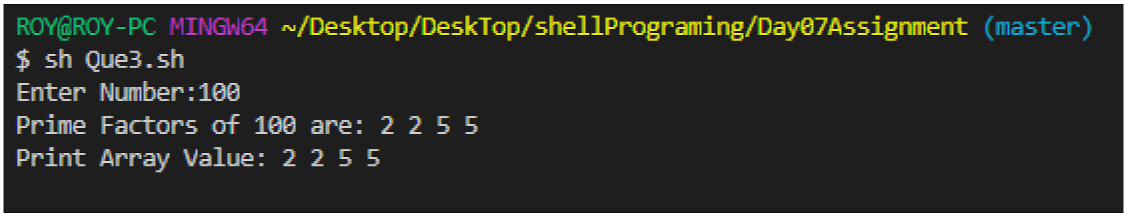
2. Extend the Prime Factorization Program to store all the Prime Factors of a number n into an array and finally display the output.

CODE:

```
#!/bin/bash/
read -p "Enter Number:" number
count=0
printf "Prime Factors of $number are: "
while [[ $(($number%2)) -eq 0 ]]
do
        printf "2 "
        myArray1[((count++))]=2
        number=$(($number/2))
done
for (( i=3;i<$number;i+=2))
do
        while [[ $(($number%$i)) -eq 0 ]]
        do
                printf $i" "
                myArray1[((count++))]=$i
                number=$(($number/$i))
         done
 done
if [ $number -gt 2 ]
then
        printf $number
        myArray1[((count++))]=$number
 fi
printf "\nPrint Array Value: "
```

```
echo "${myArray1[@]}"
```

OUTPUT:



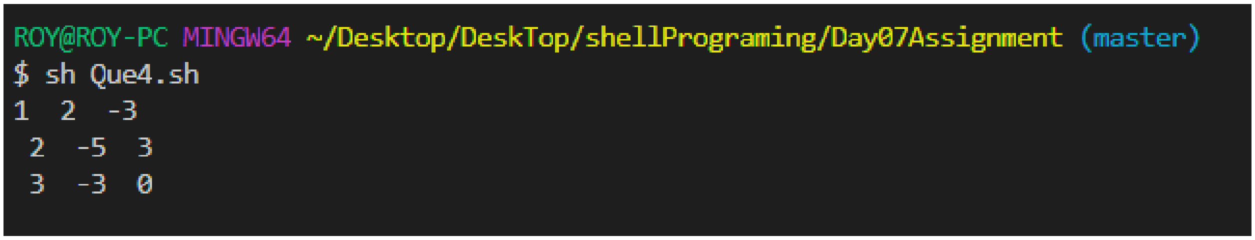
```
ROY@ROY-PC MINGW64 ~/Desktop/DeskTop/shellPrograming/Day07Assignment (master)
$ sh Que3.sh
Enter Number:100
Prime Factors of 100 are: 2 2 5 5
Print Array Value: 2 2 5 5
```

3. Write a Program to show Sum of three Integer adds to ZERO.

CODE:

```
#!/bin/bash/
arr=( 1 2 -5 3 -3 0 9 )
n=${#arr[@]}
for (( i=0; i<$(($n-2));i++ ))
do
        for (( j=$(($i+1));j<$(($n-1));j++ ))
        do
                for (( k=$(($j+1));k<$n;k++ ))
                do
                         if [[ $(( $((${arr[$i]}))+$((${arr[$j]}))+$((${arr[$k]})) )) -eq 0 ]]
                        then
                           printf "`echo "${arr[$i]}  "``echo "${arr[$j]}  "``echo "${arr[$k]}"`"
                           printf "\n "
                           found=1
                        fi
                 done
        done
done
if [ $(($found)) -eq 0 ]
then
        echo "Not Found"
fi
```

OUTPUT:



```
ROY@ROY-PC MINGW64 ~/Desktop/DeskTop/shellPrograming/Day07Assignment (master)
$ sh Que4.sh
1  2  -3
 2  -5  3
 3  -3  0
```

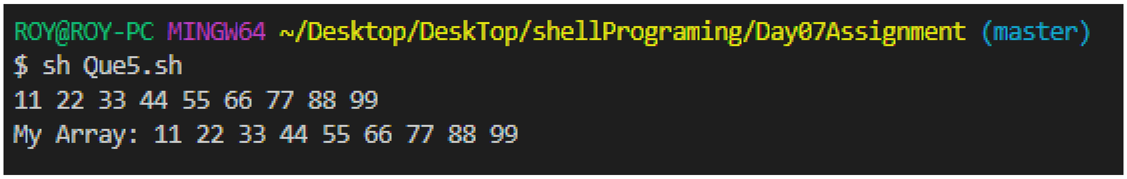
4. Take a range from 0 – 100, find the digits that are repeated twice like 33, 77, etc. and store them in an array.

CODE:

```
#!/bin/bash/
count=0
i=0
while [[ $count -lt 100 ]]
do
        if [ $count -gt 10 ]
        then
                if [ $(($count%10)) -eq $(($count/10)) ]
                then
                        printf "$count "
                        myArray[((i++))]=$count
                fi

        fi
        count=$(($count+1))
done
printf "\n"
echo "My Array: ${myArray[@]}"
```

OUTPUT:



```
ROY@ROY-PC MINGW64 ~/Desktop/DeskTop/shellPrograming/Day07Assignment (master)
$ sh Que5.sh
11 22 33 44 55 66 77 88 99
My Array: 11 22 33 44 55 66 77 88 99
```