ASSIGNMENT DAY 8

Problem 1] Write a program in the following steps:

a) **Roll a die and find a number between 1 and 6.**
b) **Repeat a die roll and find the result each time.**
c) **Store the result in a dictionary.**
d) **Repeat till any one of the number has reached 10 times.**
e) **Find the number that reached maximum times and the one that was for minimum times.**

Solution: nano dict1.sh

```
#!/bin/bash

declare -A dict=( [n1]=0 [n2]=0 [n3]=0 [n4]=0 [n5]=0 [n6]=0 )
maxiteration=10

while [[ ${dict[n$dicen]} -lt $maxiteration ]]
do
   dicen=$(( RANDOM%6+1 ))
   if [ $dicen -eq 1 ]
   then
      dict["n1"]=$(( ${dict[n1]}+1 ))
   elif [ $dicen -eq 2 ]
   then
      dict["n2"]=$(( ${dict[n2]}+1 ))
   elif [ $dicen -eq 3 ]
   then
      dict["n3"]=$(( ${dict[n3]}+1 ))
   elif [ $dicen -eq 4 ]
   then
      dict["n4"]=$(( ${dict[n4]}+1 ))
   elif [ $dicen -eq 5 ]
   then
      dict["n5"]=$(( ${dict[n5]}+1 ))
   else
      dict["n6"]=$(( ${dict[n6]}+1 ))
   fi

if [[ ${dict[n$dicen]} -eq maxiteration ]]
then
   max=n$dicen
fi
done

for key in "${!dict[@]}"
do
   echo "$key: ${dict[$key]}"
done

min=10
for key in "${!dict[@]}"
do
   if [[ ${dict[$key]} -lt $min ]]
   then
      min="${dict[$key]}"
      minimumkey=$key
   fi
done
echo "The minimum count is $min and have the key $minimumkey"
echo "The maximum count is $maxiteration and have the key $max"
```

Output: chmod +x dict1.sh

```
Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./dict1.sh
n2: 3
n3: 10
n1: 8
n6: 7
n4: 5
n5: 2
```

```
The minimum count is 2 and have the key n5
The maximum count is 10 and have the key n3

Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./dict1.sh
n2: 10
n3: 4
n1: 4
n6: 6
n4: 5
n5: 6
The minimum count is 4 and have the key n3
The maximum count is 10 and have the key n2
```

Problem 2] Write a program to generate a birth month of 50 individuals between the year 92 and 93. Find all the individuals having birthdays in the same month. Store it to finally print.

Solution: nano dict2.sh

```
#!/bin/bash
declare -A born92
declare -A born93

for (( count=1;count<=12;count++ ))
do
        born92[$count]=0
        born93[$count]=0
done

for (( count=1;count<=50;count++ ))
do
        k=$(( RANDOM % 12 + 1 ))
        ((born92[$k]++))
        k=$(( RANDOM % 12 + 1 ))
        ((born93[$k]++))
done

echo "Total number of people born in 1992 are:"
for (( count=1;count<=12;count++ ))
do
        echo "${born92[$count]}"
done
echo ""

echo "Total number of people born in 1993 are:"
for (( count=1;count<=12;count++ ))
do
        echo "${born93[$count]}"
done
echo ""

for (( count=1; count<=12; count++ ))
do
        case $count in
                "1")mnth="January"
                ;;
                "2")mnth="February"
                ;;
                "3")mnth="March"
                ;;
                "4")mnth="April"
                ;;
                "5")mnth="May"
                ;;
                "6")mnth="June"
                ;;
                "7")mnth="July"
                ;;
                "8")mnth="August"
                ;;
                "9")mnth="September"
                ;;
                "10")mnth="October"
                ;;
```

```
                    "11")mnth="November"
                    ;;
                    "12")mnth="December"
                    ;;
esac

echo  "$mnth: ${born92[$count]} ${born93[$count]}"

done
```

Output: chmod +x dict2.sh

```
Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./dict2.sh
Total number of people born in 1992 are:
4
5
7
2
4
4
3
7
3
5
3
3

Total number of people born in 1993 are:
4
3
6
5
3
4
5
2
2
5
7
4

January: 4 4
February: 5 3
March: 7 6
April: 2 5
May: 4 3
June: 4 4
July: 3 5
August: 7 2
September: 3 2
October: 5 5
November: 3 7
December: 3 4
```