Dictionary Practice Problems

1. Write a program in the following steps
a. Roll a die and find the number between 1 to 6.
b. Repeat the Die roll and find the result each time.
c. Store the result in a dictionary.
d. Repeat till any one of the numbers has reached 10 times.
e. Find the number that reached maximum times and the one that was for minimum times.
Program:

```
#!/bin/bash
count1=0
count2=0
count3=0
count4=0
count5=0
count6=0
declare -A DiceNumber

while(($count1<10 && $count2<10 && $count3<10 && $count4<10 && $count5<10 &&
$count6<10))
do
random=$((RANDOM%6+1))
case $random in
1) count1=$((count1+1))
DiceNumber[1]="$count1"

;;
2) count2=$((count2+1))
DiceNumber[2]="$count2"
;;
3) count3=$((count3+1))
DiceNumber[3]="$count3"
;;
4) count4=$((count4+1))
DiceNumber[4]="$count1"
;;
5) count5=$((count5+1))
DiceNumber[5]="$count5"
;;
6) count6=$((count6+1))
DiceNumber[6]="$count6"
;;
esac
done
echo Rolling Dice: "[${DiceNumber[@]}]"
maximum=0

for((i=1; i<=6; i++))
do
if(("${DiceNumber[$i]}">$maximum))
then
maximum="${DiceNumber[$i]}"
fi
```

```
done
echo Max number: "$maximum"

minimum=11
for((i=1;i<=6;i++))
do
if(("${DiceNumber[$i]}"<$minimum))
then
minimum="${DiceNumber[$i]}"
fi
done
echo Min number: "$minimum"
```

Output:

```
mrunali@DESKTOP-IIVD837 MINGW64 /f/TerminalCommands/Day_08
$ sh dice_directory.sh
Rolling Dice: [5 7 10 5 8 4]
Max number: 10
Min number: 4
```

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

Program:

```
#!/bin/bash
count=1
declare -A birthMonth
while [[ $count -le 50 ]]
do
randomCheck=$(( RANDOM%12 + 1 ))
birthMonth[$randomCheck]=$((${birthMonth[$randomCheck]}+1))
((count++))
done

for((i=1;i<=12;i++))
do
echo "Month $i : ${birthMonth[$i]}"
done
```

Output:

```
mrunali@DESKTOP-IIVD837 MINGW64 /f/TerminalCommands/Day_08
$ sh birthmonth.sh
Month 1 : 5
Month 2 : 5
Month 3 : 2
Month 4 : 2
Month 5 : 9
Month 6 : 6
Month 7 : 2
Month 8 : 2
```

Month 9 : 6
Month 10 : 1
Month 11 : 6
Month 12 : 4