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 number has reached 10 times
e. Find the number that reached maximum times and the one that was for minimum times
Ans)#!/bin/bash

```
declare -A dice_roll

one=1
two=2
three=3
four=4
five=5
six=6

key=1

echo "Rolling Dice........"

while [[ $one -le 10 && $two -le 10 && $three -le 10 && $four -le 10 && $five -le 10 && $six -le 10 ]]
do
	dice=$(( RANDOM % 6 + 1 ))
	echo $dice
	dice_roll[i]=$dice

	if [ ${dice} -eq 1 ]
	then
		((one++))
		echo "reached 1"
	elif [ ${dice} -eq 2 ]
	then
		((two++))
		echo "reached 2"
	elif [ ${dice} -eq 3 ]
	then
		((three++))
		echo "reached 3"
	elif [ ${dice} -eq 4 ]
```

```
        then
                ((four++))
                echo "reached 4"
        elif [ ${dice} -eq 5 ]
        then
                ((five++))
                echo "reached 5"
        elif [ ${dice} -eq 6 ]
        then
                ((six++))
                echo "reached 6"
        else
       fi
((key++))
done

echo "total dice_roll : $key "
echo "dice 1 : $one "
echo "dice 2 : $two "
echo "dice 3 : $three "
echo "dice 4 : $four "
echo "dice 5 : $five "
echo "dice 6 : $six"

if [[ $one -lt $two && $one -lt $three && $one -lt $four && $one -lt $five && $one -lt $six ]]
then
        echo "Minimum Time reached dice 1 is : $one"

elif [[ $two -lt $one && $two -lt $three && $two -lt $four && $two -lt $five && $two -lt $six ]]
then
        echo "Minimum Time reached dice 2 is : $two"

elif [[ $three -lt $one && $three -lt $two && $three -lt $four && $three -lt $five && $three -lt $six ]]
then
        echo "Minimum Time reached dice 3 is : $three"

elif [[ $four -lt $one && $four -lt $two && $four -lt $three && $four -lt $five && $four -lt $six ]]
then
        echo "Minimum Time reached dice 4 is : $four"

elif [[ $five -lt $one && $five -lt $two && $five -lt $three && $five -lt $four && $five -lt $six ]]
then
        echo "Minimum Time reached dice 5 is : $five"
```

```
elif [[ $six -lt $one && $six -lt $two && $six -lt $three && $six -lt $four && $six -lt $five ]]
then
	echo "Minimum Time reached dice 6 is : $six"
fi


echo "Maximum Time reached dice is : " ${dice_roll[@]}
```

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.

ans)

```
#!/bin/bash

declare -A birth

birthwishes=(Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec)

for (( i=1; i<=50; i++ ))
do
	month=$(( RANDOM % 12 + 1 ))
	arr[$(($month-1))]="${arr[$month-1]} Person $i"

	birth[${birthwishes[$(($month-1))]}]=${arr[$(($month-1))]}
done

echo " Brithday Month are : "
for key in ${!birth[@]}
do
	echo "$key : ${birth[$key]}"
done
```