**Day 8 Dictionary Practice Problems**

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**Ques1:**

**1. Write a program in the following steps**

**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**

#! /bin/bash

declare -A rollCount

rollCount=([1]=0 [2]=0 [3]=0 [4]=0 [5]=0 [6]=0)

function rolldie() {

roll=$(( RANDOM%6+1 ))

(( rollCount[$roll]++ ))

echo "RollCount: "${rollCount[@]}

ret=`checkCount ${rollCount[@]}`

if [ $ret -eq 0 ]

then

rolldie

else

echo "Reached 10"

findMinMax ${rollCount[@]}

fi

}

function checkCount() {

checkDict=$@

count=0

for value in $checkDict

do

(( count++ ))

if [ $value -eq 10 ]

then

echo "1"

flag=0

break

else

flag=1

fi

done

if [ $flag -eq 1 ]

then

echo "0"

fi

}

function findMinMax() {

finalArray=($@)

max=0

min=9

idxMax=0

idxMin=0

for(( counter=0; counter<=5; counter++ ))

do

if [ $(( finalArray[$counter] )) -gt $max ]

then

max=$(( finalArray[$counter] ))

idxMax=$(( $counter+1 ))

fi

if [ $(( finalArray[$counter] )) -lt $min ]

then

min=$(( finalArray[$counter] ))

idxMin=$(( $counter+1 ))

fi

done

echo "Max Count roll is : "$idxMax " and Max Value is : "$max

echo "Min Count roll is : "$idxMin " and Min Value is : "$min

}

rolldie

OP:-

RollCount: 0 0 1 0 0 0

RollCount: 1 0 1 0 0 0

RollCount: 1 1 1 0 0 0

RollCount: 1 1 1 0 0 1

RollCount: 1 1 1 1 0 1

RollCount: 1 1 2 1 0 1

RollCount: 1 1 3 1 0 1

RollCount: 1 1 3 1 0 2

RollCount: 1 1 4 1 0 2

RollCount: 1 1 4 1 0 3

RollCount: 1 1 4 1 0 4

RollCount: 1 1 4 1 1 4

RollCount: 1 2 4 1 1 4

RollCount: 1 2 5 1 1 4

RollCount: 1 3 5 1 1 4

RollCount: 1 3 6 1 1 4

RollCount: 1 3 7 1 1 4

RollCount: 1 3 7 2 1 4

RollCount: 1 3 8 2 1 4

RollCount: 1 3 8 2 1 5

RollCount: 1 3 8 3 1 5

RollCount: 1 4 8 3 1 5

RollCount: 2 4 8 3 1 5

RollCount: 2 4 8 3 2 5

RollCount: 2 4 9 3 2 5

RollCount: 2 4 9 4 2 5

RollCount: 2 5 9 4 2 5

RollCount: 2 5 9 4 2 6

RollCount: 2 5 9 5 2 6

RollCount: 2 5 9 5 3 6

RollCount: 2 5 10 5 3 6

Reached 10

Max Count roll is : 3 and Max Value is : 10

Min Count roll is : 1 and Min Value is : 2

**Ques2: 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.**

#! /bin/bash

declare -A birth\_count

declare -A same\_month

for i in {1..50}

do

birth\_month=$(( RANDOM%12+1 ))

(( birth\_count[$i]=$birth\_month ))

done

for (( counter=1; counter<=12; counter++ ))

do

echo ""

echo "Birthdays in " $counter " month"

for (( i=1; i<=50 ; i++ ))

do

if [ ${birth\_count[$i]} -eq $counter ]

then

echo "Individual : "$i

fi

done

done

OP:-

Birthdays in 1 month

Individual : 16

Individual : 23

Individual : 35

Individual : 45

Birthdays in 2 month

Individual : 27

Individual : 30

Individual : 33

Individual : 37

Individual : 40

Birthdays in 3 month

Individual : 3

Individual : 17

Individual : 47

Birthdays in 4 month

Individual : 22

Individual : 24

Individual : 42

Birthdays in 5 month

Individual : 2

Individual : 6

Individual : 28

Birthdays in 6 month

Individual : 4

Individual : 7

Individual : 10

Individual : 18

Individual : 20

Individual : 49

Birthdays in 7 month

Individual : 12

Birthdays in 8 month

Individual : 26

Individual : 29

Individual : 31

Individual : 41

Individual : 44

Birthdays in 9 month

Individual : 1

Individual : 13

Individual : 25

Birthdays in 10 month

Individual : 5

Individual : 36

Birthdays in 11 month

Individual : 8

Individual : 11

Individual : 14

Individual : 39

Individual : 50

Birthdays in 12 month

Individual : 9

Individual : 15

Individual : 19

Individual : 21

Individual : 32

Individual : 34

Individual : 38

Individual : 43

Individual : 46

Individual : 48