ASSIGNMENT – DAY 5 PROBLEM 1 PRACTICE SETS

SEQUENCES PRACTICE PROBLEMS

Problem 1] Use RANDOM function ((RANDOM)) to get single digit.

Solution : nano one.sh

```
#!/bin/bash -x
a=$((RANDOM % 10))
echo $a
```

Output: chmod +x one.sh

```
Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./one.sh
+ a=6
+ echo 6
6

Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./one.sh
+ a=8
+ echo 8
8

Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./one.sh
+ a=9
+ echo 9
9

Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./one.sh
+ a=2
+ echo 2
2

Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./one.sh
+ a=5
+ echo 5
5

Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./one.sh
+ a=3
+ echo 3
3

Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./one.sh
+ a=1
+ echo 1
1

Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./one.sh
+ a=0
+ echo 0
0

Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./one.sh
+ a=7
+ echo 7
7
Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./one.sh
+ a=4
```

```
+ echo 4
4
```

Problem 2] Use RANDOM to get dice number between 1 to 6.

Solution : nano two.sh

```
#!/bin/bash -x
a=$((1 + RANDOM % 6))
echo $a
```

Output : chmod +x two.sh

```
Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./two.sh
+ a=6
+ echo 6
6

Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./two.sh
+ a=5
+ echo 5
5

Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./two.sh
+ a=2
+ echo 2
2

Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./two.sh
+ a=1
+ echo 1
1

Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./two.sh
+ a=4
+ echo 4
4
Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./two.sh
+ a=3
+ echo 3
3
```

Problem 3] Add two Random dice number and Print the result.

Solution: nano three.sh

```
#!/bin/bash -x
a=$((1 + RANDOM % 6))
b=$((1 + RANDOM % 6))
c=$(($a + $b))
echo $c
```

Output: chmod +x three.sh

```
Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./three.sh
+ a=6
+ b=3
+ c=9
+ echo 9
9

Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./three.sh
+ a=4
+ b=6
+ c=10
+ echo 10
10
```

```
Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./three.sh
+ a=3
+ b=2
+ c=5
+ echo 5
5

Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./three.sh
+ a=5
+ b=1
+ c=6
+ echo 6
6

Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./three.sh
+ a=4
+ b=5
+ c=9
+ echo 9
9

Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./three.sh
+ a=6
+ b=3
+ c=9
+ echo 9
9

Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./three.sh
+ a=2
+ b=3
+ c=5
+ echo 5
5

Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./three.sh
+ a=2
+ b=6
+ c=8
+ echo 8
8

Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./three.sh
+ a=3
+ b=1
+ c=4
+ echo 4
4

Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./three.sh
+ a=5
+ b=1
+ c=6
+ echo 6
6
```

Problem 4] Write a program that reads 5 two digit values, then find their sum and the average.
Solution : nano four.sh

```
#!/bin/bash -x
RANDOM=$((10 + RANDOM % 90))
for i in `seq 5`
do
        echo $RANDOM
done
val1=$((10+RANDOM%90))
```

```
val2=$((10+RANDOM%90))
val3=$((10+RANDOM%90))
val4=$((10+RANDOM%90))
val5=$((10+RANDOM%90))
sum=$(($val1+$val2+$val3+$val4+$val5))
echo $sum
avg=$(($sum/5))
echo $avg
```

Output : chmod +x four.sh

```
Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./four.sh
+ RANDOM=30
++ seq 5
+ for i in `seq 5`
+ echo 12690
12690
+ for i in `seq 5`
+ echo 26689
26689
+ for i in `seq 5`
+ echo 16772
16772
+ for i in `seq 5`
+ echo 27897
27897
+ for i in `seq 5`
+ echo 331
331
+ val1=88
+ val2=47
+ val3=74
+ val4=32
+ val5=30
+ sum=271
+ echo 271
271
+ avg=54
+ echo 54
54
```

Prob 5] Unit Conversion:

a. 1 ft = 12 inch then 42 inch = ? ft
b. Rectangular plot of 60 feet x 40 feet in meters
c. Calculate area of 25 such plots in acres.

Solution :a. 1 ft = 12 inch then 42 inch = ? ft

#first approach to solve the problem by not taking the input from user:

```
nano fivea.sh
#!/bin/bash
echo "Unit Conversion:"
read -p "Enter the value in inch: " a
y=12
w=`(awk "BEGIN{print $a/$y}")`
echo "$a inch equal to $w ft"
```

```
Output: Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./fivea.sh
Unit Conversion:
Enter the value in inch: 42
42 inch equal to 3.5 ft
```

b. Rectangular plot of 60 feet x 40 feet in meters

```
nano fiveb.sh
#!/bin/bash
l=60
b=40
area=$(($l*$b))
conv=`(awk "BEGIN{print $area/3.281}")`
echo "Area of rectangular plot in feets : $area ft"
echo "Area of plot in metres : $conv meters"
```

```
Output : Hp@DESKTOP-0AFPT6H MINGW64 ~/Desktop/bridgelabz
```

```
$  ./fiveb.sh
Area of rectangular plot in feets : 2400 ft
Area of plot in metres : 731.484 meters
```

c. Calculate area of 25 such plots in acres.

```
Nano fivec.sh
#!/bin/bash
l=60
b=40
area=$(($l*$b))
onePlot=$area
totalPlots=$((25*$area))
conv=`(awk "BEGIN{print $totalPlots/43560}")`
echo "$conv acres"


Output : Hp@DESKTOP-OAFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./fivec.sh
1.37741 acres


#Second approach to solve by taking input from user:
a. 1 ft = 12 inch then 42 inch = ? ft
Solution: nano fiveau.sh
#!/bin/bash
read -p "Enter the value in feet : " ft
inch=12
result1=$(($ft * $inch))
echo "$ft feet equal to : $result1 inch"
read -p "Enter the value in inch :  " i
result2=`(awk "BEGIN{print $i/$inch}")`
echo "$i inch equal to $result2 feet"

Output : Hp@DESKTOP-OAFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./fiveau.sh
Enter the value in feet : 1
1 feet equal to : 12 inch
Enter the value in inch : 42
42 inch equal to 3.5 feet
```

b. Rectangular plot of 60 feet x 40 feet in meters

```
nano fivebu.sh
#!/bin/bash
read -p "Enter the length of rectangular plot:" l
read -p "Enter the breadth of rectangular plot:" b
area=$(($l*$b))
result=`(awk "BEGIN{print $area/3.28}")`
echo "Area of plot in feet is : $area feet"
echo "Area of plot in meters is : $result meters"

Output : Hp@DESKTOP-OAFPT6H MINGW64 ~/Desktop/bridgelabz
$  ./fivebu.sh
Enter the length of rectangular plot:60
Enter the breadth of rectangular plot:40
Area of plot in feet is : 2400 feet
Area of plot in meters is : 731.707 meters
```

c. Calculate area of 25 such plots in acres.

```
nano fivecu.sh
#!/bin/bash
read -p "Enter the length of rectangular plot:" l
read -p "Enter the breadth of rectangular plot:" b
area=$(($l*$b))
inMeters=`(awk "BEGIN{print $area/3.28}")`
echo "Area of plot in feet is : $area feet"
echo "Area of plot in meters is : $inMeters meters"
read -p "Enter number of plots: " num
result2=$(($num*$area))
footToAcre=`(awk "BEGIN{print $result2/43560}")`
meterToAcre=`(awk "BEGIN{print $inMeters/4047}")`
echo "Area of $num plots for feet to acre is : $footToAcre acres"
echo "Area of $num plots for meter to acre is : $meterToAcre acres"


Output : Hp@DESKTOP-OAFPT6H MINGW64 ~/Desktop/bridgelabz
```

```
$  ./fivecu.sh
Enter the length of rectangular plot:60
Enter the breadth of rectangular plot:40
Area of plot in feet is : 2400 feet
Area of plot in meters is : 731.707 meters
Enter number of plots: 25
Area of 25 plots for feet to acre is : 1.37741 acres
Area of 25 plots for meter to acre is : 0.180802 acres
```