DAY 5 LINUX COMMANDS ASSIGNMENT

Q1. Use Random function ((RANDOM)) to generate single digit integer

Ans: echo $(($RANDOM%10))

Q2. Use Random to get dice number integer (1 to 6).

Ans: echo $(($RANDOM%7))

Q3. Add two Random dice number and print the result.

Ans:

#! bin/bash/

a=$(( $RANDOM%7))

b=$(($RANDOM%7))

Result=$( expr $a + $b )

echo "Sum:$result"

Q4.Write a program that reads 5 Random 2 digt values,and then find their sum and average.

Ans: a=$(( RANDOM % (89 ) + 10 ))

b=$(( RANDOM % (89 ) + 10 ))

c=$(( RANDOM % (89 ) + 10 ))

d=$(( RANDOM % (89 ) + 10 ))

e=$(( RANDOM % (89 ) + 10 ))

Sum=$( expr $a + $b + $c + $d + $e )

echo "$Sum"

avg=$( expr $Sum / 5 )

echo "$avg"

Q6.Write a program that reads 5 Random 3 digit values and then outputs the minimum and the maximum value.

Ans:#! /bin/bash

r1=$(( RANDOM%899+100 ));

r2=$(( RANDOM%899+100 ));

r3=$(( RANDOM%899+100 ));

r4=$(( RANDOM%899+100 ));

r5=$(( RANDOM%899+100 ));

if [ $r1 -gt $r2 ] && [ $r1 -gt $r3 ] && [ $r1 -gt $r4 ] && [ $r1 -gt $r5 ]

then

echo " r1 is the maximum value"

elif [ $r2 -gt $r1 ] && [ $r2 -gt $r3 ] && [ $r1 -gt $r4 ] && [ $r1 -gt $r5 ]

then

echo " r2 is the maximum value"

elif [ $r3 -gt $r1 ] && [ $r3 -gt $r2 ] && [ $r3 -gt $r4 ] && [ $r3 -gt $r5 ]

then

echo " r3 is the maximum value"

elif [ $r4 -gt $r1 ] && [ $r4 -gt $r2 ] && [ $r4 -gt $r3 ] && [ $r4 -gt $r5 ]

then

echo " r4 is the maximum value"

else

echo "r5 id the maximum value"

fi

echo "========================================================================================================================================================================"

if [ $r1 -lt $r2 ] && [ $r1 -lt $r3 ] && [ $r1 -lt $r4 ] && [ $r1 -lt $r5 ]

then

echo " r1 is the minimum value"

elif [ $r2 -lt $r1 ] && [ $r2 -lt $r3 ] && [ $r1 -lt $r4 ] && [ $r1 -lt $r5 ]

then

echo " r2 is the minimum value"

elif [ $r3 -lt $r1 ] && [ $r3 -lt $r2 ] && [ $r3 -lt $r4 ] && [ $r3 -lt $r5 ]

then

echo " r3 is the minimum value"

elif [ $r4 -lt $r1 ] && [ $r4 -lt $r2 ] && [ $r4 -lt $r3 ] && [ $r4 -lt $r5 ]

then

echo " r4 is the minimum value"

else

echo "r5 id the minimum value"

fi

Q7. Write a program that takes day and month from the command line and prints true if the day of month is between 20 march and 20 june, false otherwise.

Ans:”

#!/bin/bash

Read -p “Enter the date:” date

Read -p “Enter the month:” month

If [ $month -eq march -a$ date -ge 20 ]

Then

Echo $month $date “true”

Elif [ $month -eq april -a $date -le 30 ]

Then

Echo $month $date “true”

Elif [ $month -eq may -date -le 31 ]

Then

Echo $month $date “true”

Elif [ $month -eq june -date -le 30 ]

Then

Echo $month $date “true”

Else echo “false”

fi

Q8. Write a program to take year as input and output the year as “LeapYear” or “Not a LeapYear”.A Leap Year checks for 4 digit number, divisible by 4,and not by 100 unless divisible by 400.

Ans:

#! /bin/bash

read -y "Enter the year:" year

if [ `expr $year % 400` -eq 0 ]

then

echo leap year

elif [ `expr $year % 100` -eq 0 ]

then

echo not a leap year

elif [ `expr $year % 4` -eq 0 ]

then

echo leap year

else

echo not a leap year

fi

Q9. Write a program to simulate cointoss and print ”heads” and “tails” accordingly.

#! /bin/bash

echo "Welcome to CoinToss"

echo "Choose an option 1.Head 2.Tail"

read -p "Enter your Choice:" choice

coinToss=$(( $RANDOM %2 + 1 ))

if [ $choice -eq $coinToss ]

then

echo " heads"

else

echo "tails"

fi

Q10. Read a single digit number and write the number in word using if ,elif.

Ans: #! bin/bash/

read -p " Enter a number:" num

if [ $num -eq 1 ]

then

echo "one"

elif [ $num -eq 2 ]

then

echo "two"

elif [ $num -eq 3 ]

then

echo "three"

elif [ $num -eq 4 ]

then

echo "four"

else

echo "Out of Range"

Q11. Read a number and display the week day (using if,else)

Ans:

#! /bin/bash

read -p "Enter a Number less than 8:" num

if [ $num -eq 1 ]

then

echo "Sunday"

elif [ $num -eq 2 ]

then

echo "Monday"

elif [ $num -eq 3 ]

then

echo "Tuesday"

elif [ $num -eq 4 ]

then

echo "Wednesday"

elif [ $num -eq 5 ]

then

echo "Thursday"

elif [ $num -eq 6 ]

then

echo "Friday"

elif [$num -eq 7 ]

then

echo "Saturday"

else

echo "Enter a Valid Number"

Fi

Q12. Read a Number 1,10,100,10000 etc and display unit,ten,hundred,………… (using if,else).

Ans:

#! /bin/bash

read -p "Enter a Number in unit,ten,hundred,.... :" num

if [ $num -eq 1 ]

then

echo "Unit"

elif [ $num -eq 10 ]

then

echo "Ten"

elif [ $num -eq 100 ]

then

echo "HUndred"

elif [ $num -eq 1000 ]

then

echo "Thousand"

elif [ $num -eq 10000 ]

then

echo "Ten Thousand"

elif [ $num -eq 100000 ]

then

echo "Hundred Thousand"

elif [ $num -eq 1000000 ]

then

echo "Million"

elif $num -eq 10000000 ]

then

echo "Ten Million"

else

echo "Enter a unit below Ten Millon"

Fi

Q13.Enter 3 numbers and do the following arithmetic operation and find the one that is maximum and minimum.

1. A+b\*c (2) c+a/b (3)a%b+c (4) a\*b+c

#! /bin/bash

a=5

b=8

c=9

r1=$(( $a +$b \* $c ));

r2=$(( $a % $b + $c ));

r3=$(( $c + $a / $b ));

r4=$(( $a \* $b + $c ));

if [ $r1 -gt $r2 ] && [ $r1 -gt $r3 ] && [ $r1 -gt $r4 ]

then

echo " r1 is the maximum value"

elif [ $r2 -gt $r1 ] && [ $r2 -gt $r3 ] && [ $r1 -gt $r4 ]

then

echo " r2 is the maximum value"

elif [ $r3 -gt $r1 ] && [ $r3 -gt $r2 ] && [ $r3 -gt $r4 ]

then

echo " r3 is the maximum value"

else

echo "r4 id the maximum value"

fi

echo "========================================================================================================================================================================"

if [ $r1 -lt $r2 ] && [ $r1 -lt $r3 ] && [ $r1 -lt $r4 ]

then

echo " r1 is the minimum value"

elif [ $r2 -lt $r1 ] && [ $r2 -lt $r3 ] && [ $r1 -lt $r4 ]

then

echo " r2 is the minimum value"

elif [ $r3 -lt $r1 ] && [ $r3 -lt $r2 ] && [ $r3 -lt $r4 ]

then

echo " r3 is the minimum value"

else

echo "r4 id the minimum value"

fi

Q14. Read a single digit number and write the number in word using case.

Ans:

#! bin/bash/

read -p "Enter the number less than 5:" num

case $num in

1) echo "one";;

2) echo "two";;

3) echo "three";;

4) echo "four";;

\*) echo "default";;

esac

1. Read a Number and Display the Week Day.

Ans:

#! bin/bash/

read -p "Enter the number less than 8:" num

case $num in

1) echo "Sunday";;

2) echo "Monday";;

3) echo "Tuesday";;

4) echo "Wednesday";;

5) echo "Thursday";;

6) echo "Friday" ;;

7) echo "Saturday";;

esac

Q16. Read a Number 1,10,100,10000 etc and display unit,ten,hundred,…………

Ans:

#! bin/bash/

read -p "Enter the number for unit , ten , thousand... :" num

case $num in

1) echo "unit";;

10) echo "ten";;

100) echo "hundred";;

1000) echo "thousand";;

10000) echo "ten thousand";;

100000) echo "hundred thousand";;

1000000) echo "million";;

10000000) echo "ten million";;

Esac

Q17. Write a program that takes user input in lenths and does unit conversion of differnet lengths.

Ans:

#! /bin/bash

read -km "Enter distance(in km):" km

meter=`echo $km \\* 1000 | bc`

feet=`echo $meter \\* 3.2808 | bc`

inches=`echo $feet \\* 12 | bc`

cm=`echo $feet \\* 30.48 | bc`

echo "Total meter is : $meter "

echo "Total feet is : $feet "

echo "Total inches is : $inches "

echo "Total centimeters : $cm "