**Selection Practice Problems with if, else**

**Write a program that reads 5 Random 3 Digit values and then outputs the minimum**

**and the maximum value.**

count=1 max=1

while [ $count -le 5 ]

do

ran=$(( $((RANDOM%900))+100 ))

printf "\t $ran \t"

if [ $ran -gt $max ]

then

max=$ran

fi

if [ $count -eq 1 ]

then

min=$ran

elif [ $ran -lt $min ]

then

min=$ran

fi

((count++))

done

echo "max = $max and min = $min"

**Write a program that takes day and month from the command line and prints true if day of month is between March 20 and June 20, false otherwise.**

echo "Check day of month is between March 20 and June 20"

read -p " Enter Day (1-31) : " day

read -p " Enter Month number (1-12) : " Month

if [ $day -ge 20 ] && [ $day -le 31 ] && [ $Month -eq 3 ]

then

echo "within range : true"

elif [ $day -ge 1 ] && [ $day -le 30 ] && [ $Month -eq 4 ]

then

echo "within range : true"

elif [ $day -ge 1 ] && [ $day -le 31 ] && [ $Month -eq 5 ]

then

echo "within range : true"

elif [ $day -ge 1 ] && [ $day -le 20 ] && [ $Month -eq 6 ]

then

echo "within range : true"

else

echo "False"

fi

**Write a program that takes a year as input and outputs the Year is a Leap Year or not a Leap Year. A Leap Year checks for 4 Digit Number, Divisible by 4 and not 100 unless divisible by 400.**

read -p "Enter any year (4-digits only) : " year

if [ $year -ge 1000 ] && [ $year -le 9999 ]

then

leapChk1=$(($year % 400)) leapChk2=$(($year % 100))

leapChk3=$(($year % 4))

if [ $leapChk1 -eq 0 ] || [ $leapChk2 -ne 0 ] && [ $leapChk3 -eq 0 ]

then echo "$year : leap year"

else echo "$year : Not a leap year"

fi

else echo "please enter 4 digit year."

fi

**Write a program to simulate a coin flip and print out "Heads" or "Tails" accordingly.**

#!/bin/bash -x

randomValue=$((RANDOM%2))

if [ $randomValue -eq 1 ]

then

echo "Heads"

else

echo "Tails"

fi

**Selection Practice Problems with if, elif and else**

**Read a single digit number and write the number in word**

#!/bin/bash -x

read -p "Enter single digit : " num

if [ $num -eq 0 ]

then echo "$num : Zero"

elif [ $num -eq 1 ]

then echo "$num : One"

elif [ $num -eq 2 ]

then echo "$num : Two"

elif [ $num -eq 3 ]

then echo "$num : Three"

elif [ $num -eq 4 ]

then echo "$num : Four"

elif [ $num -eq 5 ]

then echo "$num : Five"

elif [ $num -eq 6 ]

then echo "$num : Six"

elif [ $num -eq 7 ]

then echo "$num : Seven"

elif [ $num -eq 8 ]

then echo "$num : Eight"

elif [ $num -eq 9 ]

then echo "$num : Nine"

else

echo "$num : not a single digit number"

fi

**Read a Number and Display the week day (Sunday, Monday,…)**

#!/bin/bash -x

#0 for Sunday to 6 for saturday

read -p "Enter single digit (0 To 6) : " num

if [ $num -eq 0 ]

then echo "$num : Sunday"

elif [ $num -eq 1 ]

then echo "$num : Monday"

elif [ $num -eq 2 ]

then echo "$num : Tuesday"

elif [ $num -eq 3 ]

then echo "$num : Wednesday"

elif [ $num -eq 4 ]

then echo "$num : Thursday"

elif [ $num -eq 5 ]

then echo "$num : Friday"

elif [ $num -eq 6 ]

then echo "$num : Saturday"

else

echo "$num : Number not accepted."

fi

**Enter 3 Numbers do following arithmetic operation and find the one that is maximum and minimum**

**1. a + b \* c 3. c + a / b**

**2. a % b + c 4. a \* b + c**

read -p "Enter first number a: " a

read -p "Enter Second number b: " b

read -p "Enter Third number c: " c

cal1=$(($a+$b\*$c)) cal2=$(($a%$b+$c)) cal3=$(($c+$a/$b))

cal4=$(($a\*$b+$c))

echo "calculated values are : a+b\*c = $cal1 , a%b+c = $cal2 , c+a/b = $cal3 , a\*b+c = $cal4"

max=1 min=0

for inpval in $cal1 $cal2 $cal3 $cal4

do

if [ $inpval -ge $max ]

then

max=$inpval

fi

if [ $min -eq 0 ]

then

min=$inpval

elif [ $inpval -le $min ]

then

min=$inpval

fi

done

**Selection Practice Problems with case statement**

**Read a single digit number and write the number in word using Case**.

isZero=0 isOne=1 isTwo=2 isThree=3 isFour=4 isFive=5 isSix=6

isSeven=7 isEight=8 isNine=9

read -p "Enter single digit number : " num

case $num in

$isZero) echo "$num : Zero"

;;

$isOne) echo "$num : One"

;;

$isTwo) echo "$num : Two"

;;

$isThree) echo "$num : Three"

;;

$isFour) echo "$num : four"

;;

$isFive) echo "$num : Five"

;;

$isSix) echo "$num : Six"

;;

$isSeven) echo "$num : Seven"

;;

$isEight) echo "$num : Eight"

;;

$isNine) echo "$num : Nine"

;;

\*) echo "$num : Not a single digit number."

;;

esac

**Read a Number and Display the week day (Sunday, Monday,…)**

isZero=0 isOne=1 isTwo=2 isThree=3 isFour=4 isFive=5 isSix=6

read -p "Enter single digit number (0 to 6) : " num

case $num in

$isZero) echo "$num : Sunday"

;;

$isOne) echo "$num : Monday"

;;

$isTwo) echo "$num : Tuesday"

;;

$isThree) echo "$num : Wednesday"

;;

$isFour) echo "$num : Thursday"

;;

$isFive) echo "$num : Friday"

;;

$isSix) echo "$num : Saturday"

;;

\*) echo "$num : Enter valid number."

;;

esac

**Write a program that takes User Inputs and does Unit Conversion of different Length units**

**1. Feet to Inch 3. Inch to Feet**

**2. Feet to Meter 4. Meter to Feet**

printf "Unit conversion Option : 1.Feet to Inch 2.Inch to Feet 3.Feet to Meter 4.Meter to Feet \n\n"

read -p "Select ur choice : " choice

read -p "Enter value to convert : " number

ch1=1 ch2=2 ch3=3 ch4=4

case $choice in

$ch1) printf "$number Feet = "

awk -v num=$number 'BEGIN { print num\*12 " inch " }'

;;

$ch2) printf "$number Inch = "

awk -v num=$number 'BEGIN { print num\*0.0833 " feet "}'

;;

$ch3) printf "$number Feet = "

awk -v num=$number 'BEGIN { print num\*0.3048 " meter " }'

;;

$ch4) printf "$number Meter = "

awk -v num=$number 'BEGIN { print num\*3.2808 " feet " }'

;;

\*) echo "Enter valid choice number."

;;

esac

**Read a Number 1, 10, 100, 1000, etc and display unit, ten, hundred,…**