SHELL SCRIPTING

PRACTICE (05/11/2019)

Exercise 1 :Variables

```
#!/bin/sh
NAME="Anashka"                    # Assigning a string value to a variable
echo $NAME                        # Displaying the value of the variable
age=100                           # Assigning integer value
echo "Age is"$age
```

Output: Anashka

Age is 100

Exercise 2 :Readonly variable

```
#!/bin/sh
NAME="Anashka"
readonly NAME                    #readonly variables cannot change
echo $NAME
#NAME="Anu"
unset NAME                # cannot unset a variable which is readonly
echo $NAME


echo $$                  # PID of the current shell
echo $0                  # file name of the current script
echo $n                 # arguement with which the script was invoked
```

Output:
```
Anashka
Anashka
17590
main.ksh

main.ksh[6]: unset: warning: NAME: is read only
```

Exercise 3 : Array

```
#!/bin/sh
# Assigning values to array named DEPARTMENT

DEPARTMENT[0]="CSE"
DEPARTMENT[1]="ME"
DEPARTMENT[2]="ECE"

echo "The first dept is: ${DEPARTMENT[0]}"
# To get all elements of array
echo "Elements are : ${DEPARTMENT[*]}"

# To get all elements of array
echo "Elements are : ${DEPARTMENT[@]}"
```

Output: The first dept is : CSE
Elements are : CSE ME ECE
Elements are : CSE ME ECE

Exercise 4 : Operators

```
#!/bin/sh
n1=4
n2=5

#Usage of Arithmetic operators

sum=`expr $n1 + $n2`
echo "sum : $sum"
pro=`expr $n1 \* $n2`
echo "product : $pro"
diff=`expr $n1 - $n2`
echo "difference : $diff"

# Usage of Relational operators and if..else..fi

if [ $n1 -gt $n2 ]
then
echo "n1 is bigger..."
else
echo "n2 is bigger..."
fi

if [ $n1 -lt $n2 ]
then
echo "n1 is small..."
else
```

```
echo "n2 is bigger..."
fi
```

Output:

```
sum : 9
product : 20
difference : -1
n2 is bigger...
n1 is small...
```

Exercise 5: Decision making

```
#!/bin/sh

# Biggest among 3 numbers using if..else..fi statement

n1=3
n2=0
n3=1

if [ $n1 -gt $n2 ]
then
 if [ $n1 -gt $n3 ]
  then
   echo "biggest number is : $n1"
  else
   echo "biggest number is : $n3"
 fi
else
 if [ $n2 -gt $n3 ]
 then
   echo "biggest number is : $n2"
  else
   echo "biggest number is : $n3"
 fi
fi
```

Output: biggest number is : 3

Exercise 6: Case statement

```
#!/bin/sh
w=6

case $w in

    1) echo "Monday"
    ;;
    2) echo "Tuesday"
    ;;
    3) echo "Wednesday"
    ;;
    4) echo "Thursday"
    ;;
    5) echo "Friday"
    ;;
    6) echo "Saturday"
    ;;
    7) echo "Sunday"
    ;;

Esac
```

Output:

Saturday

Exercise 7 : While loop

```
#!/bin/sh

#Multiplication table using while loop

num=6
n=1
while [ $n -le 10 ]
do
   res=`expr $n \* $num`
   echo $n "*" $num "=" $res
   n=`expr $n + 1`
done
```

Output:

```
1 * 6 = 6
2 * 6 = 12
3 * 6 = 18
4 * 6 = 24
5 * 6 = 30
6 * 6 = 36
7 * 6 = 42
8 * 6 = 48
9 * 6 = 54
10 * 6 = 60
```