Assignment – 7 pseudocodes

1. *Problem 1 solution*

CLASS Occurences

BEGIN

METHOD Main

BEGIN

CREATE array number [10]

READ user\_input for the values to be stored in array

PRINT “Enter 10 integers to be stored in array”

FOR(i🡨0; i<number.length; i🡨i+1)

number[i] 🡨user\_input

ENDFOR

Count(number)

END Main

METHOD Count (num)

BEGIN

Arrays.sort (num)

count🡨1

FOR (i🡨0; i<num.length; i🡨i+1)

IF (i<num.length-1)

IF (num[i] == num[i+1])

count🡨count+1

ELSE

PRINT num[i]+ “ occurred ”+count+ “ times.”

count🡨1

ENDIF

ENDIF

IF (i==num.length-1)

PRINT num[i]+“ occurred ”+count+“ times.”

ENDIF

END FOR

END Count

END Occurrence

1. *Problem 2 solution*

CLASS IndexOfLargest

BEGIN

METHOD Main

BEGIN

CREATE array array[10]

READ user\_input for the values to be stored in the array

PRNIT “Enter 10 integers”

FOR (i🡨0; i<array.length; i🡨i+1)

array[i]🡨user\_input

END FOR

PRINTLINE( )

PRINT “Entered Numbers”

FOR (i🡨0; i<array.length; i🡨i+1)

IF(i<array.length)

PRINT array[i]+ “, ”

ELSE

PRINT array[i]

ENDIF

ENDFOR

PRINTLINE( )

index🡨findIndex(array)

PRINT “Index of the largest value: ”+index

END Main

METHOD findIndex (arr)

BEGIN

max🡨0

index🡨0

FOR (i🡨0; i<arr.length; i🡨i+1)

IF (arr[i]>max) THEN

max🡨arr[i]

index🡨i

ENDIF

END FOR

RETURN index

END findIndex

END IndexOfLargest

1. *Problem 3 solution*

CLASS DistinctValues

BEGIN

METHOD Main

BEGIN

CREATE array number[10]

READ user\_input for the values to be stored in the array

PRINT “Enter 10 integers”

FOR (i🡨0; i<number.length: i🡨i+1)

number[i]🡨user\_input

END FOR

PRINT “Original array: ”

FOR (i🡨0; i<number.length; i🡨i+1)

PRINT number[i]+“ ”

END FOR

PRINTLNE( )

getValues(number)

END MAIN

METHOD getValues (num)

BEGIN

PRINT “Distinct array: ”

FOR (i🡨0; i<num.length; i🡨i+1)

isDistinct🡨true

FOR (j🡨0; j<i; j🡨i+1)

IF (num[i] == num[j]) THEN

isDistinct🡨false

BREAK

ENDIF

END FOR

IF (isDistinct == true)

PRINT num[i]+“ ”

ENDIF

END FOR

END getValues( )

END DistinctValues

1. *Problem 4 solution*

CLASS MinMaxAvg

BEGIN

METHOD Main

BEGIN

CREATE array Grades[4][4]

READ random\_value to store in array

FOR (i🡨0; i<4; i🡨i+1)

FOR(j🡨0; j<4; j🡨j+1)

Grades[i][j]🡨random\_value

END FOR

END FOR

PRINT “Array Grades:”

PRINT “ ”

FOR (i🡨0; i<4; i++)

FOR (j🡨0; j<4; j++)

PRINT Grades[i][j]+“ ”

END FOR

END FOR

PRINTLNE( )

minMaxAvg (Grades)

END Main

METHOD minMaxAvg(int[][] grades)

BEGIN

min🡨100

max🡨0

total🡨0

CREATE avg

FOR (i🡨0; i<4; i🡨i+1)

FOR (j🡨0;j<4; j🡨j+1)

IF (grades[i][j]>max) THEN

max🡨grades[i][j]

ENDIF

IF (grades[i][j]<min) THEN

Min🡨grades[i][j]

ENDIF

total🡨total+grades[i][j]

END FOR

END FOR

avg🡨total/16

PRINT “Highest Grade: ”+max

PRINT “Lowest Grade: ”+min

PRINT “Average Grage: ”+avg

END minMaxAvg( )

END MinMaxAvg

1. *Problem 5 solution*

CLASS WeeklyHours

BEGIN

METHOD Main

BEGIN

CREATE array Hours[3][7]

READ random\_value to store in the array

FOR (i🡨0; i<3; i🡨i+1)

FOR (j🡨0; j<7; j🡨j+1)

Hours[i][j]🡨random\_value

END FOR

END FOR

PRINT “Employees Data: ”

PRINTLNE( )

PRINT “ Mon Tue Wed Thu Fri Sat Sun”

PRINTLINE( )

PRINT “Employee1 ”

FOR (l🡨0; l<7; l🡨l+1)

PRINT Hours[0][l]+“ ”

END FOR

PRINTLINE( )

PRINT “Employee2 ”

FOR (l🡨0; l<7; l🡨l+1)

PRINT Hours[1][l]+ “ ”

END FOR

PRINTLINE( )

PRINT “Employee3 ”

FOR (l🡨0; l<7; l🡨l+1)

PRINT Hours[2][l]+ “ ”

END FOR

PRINTLINE( )

PRINTLINE( )

addHours(Hours)

END Main

METHOD addHours (hours)

BEGIN

PRINT “Employee Weekly Hours”

add1🡨0

add2🡨0

add3🡨0

FOR (i🡨0; i<7; i🡨i+1)

add1🡨add1+hours[0][i]

END FOR

PRINT “ 1 ”+add1

FOR (i🡨0; i<7; i🡨i+1)

add2🡨add2+hours[1][i]

END FOR

PRINT “ 2 ”+add2

FOR (i🡨0; i<7; i🡨i+1)

add3🡨add3+hours[2][i]

END FOR

PRINT “ 3 ”+add3

END addHours( )

END WeeklyHours