# PART 2

selectionAscSort and selectionDescSort functions implementation

 and writing sorted data to binary file

Continued FROM PART 1

isSorted ?

YES / NO

sortOrder == 'A' ?

YES / NO

Call selectionAscSort function

Call selectionDecSort function

declare local variable for minRow as unsigned int

declare local variable for maxRow as unsigned int

declare local variable for minValue as float

declare local variable for startAt as int

declare local variable for maxValue as float

declare local variable for elemtoMove as float

initialize startAt with 0

**sortOrder == 'A'**

set minValue to *(*(arr2Dptr+startAt)+sortCol)

**sortOrder == 'D'**

set maxValue to *(*(arr2Dptr+startAt)+sortCol)

set minRow to startAt

set maxRow to startAt

declare "row" as counter of rows and initialize it with startAt+1

**sortOrder == 'A'**
*(*(arr2Dptr+row)+sortCol) < minValue ?

**sortOrder == 'D'**
*(*(arr2Dptr+row)+sortCol) > maxValue ?

Set minRow to current "row" counter value

Set maxRow to current "row" counter value

Set minValue to *(*(arr2Dptr+row)+sortCol)

Set maxValue to *(*(arr2Dptr+row)+sortCol)

**sortOrder == 'A'**

**sortOrder == 'D'**

Set *(*(arr2Dptr+minRow)+col) to *(*(arr2Dptr+startAt)+col)

Set *(*(arr2Dptr+maxRow)+col) to *(*(arr2Dptr+startAt)+col)

Set *(*(arr2Dptr+startAt)+col) to elemtoMove

Set elemtoMove to *(*(arr2Dptr+minRow)+col)

Set elemtoMove to *(*(arr2Dptr+maxRow)+col)

**sortOrder == 'A'**

**sortOrder == 'D'**

col == sortCol ?

YES / NO

increment col col++

col < cols ?

YES / NO

declare "col" as counter of cols and initialize it with 0

Set *(*(arr2Dptr+startAt)+sortCol) to minValue

Set *(*(arr2Dptr+startAt)+sortCol) to maxValue

**sortOrder == 'A'**

**sortOrder == 'D'**

Set *(*(arr2Dptr+maxRow)+sortCol) to *(*(arr2Dptr+startAt)+sortCol)

row < rows ?

YES / NO

increment row counter: row++

Increment startAt:++

startAt < rows-1 ?

YES / NO

**sortOrder == 'A'**
Exit selectionAscSort function

**sortOrder == 'D'**
Exit selectionDecSort function

call displayArray function

..... (output contents of the sorted array)

exit displayArray function

Open "sortedFile" in binary mode for output

Is sortedFile opened ?

YES / NO

Write number of rows and columns in a file

declare "row" as counter of rows and initialize it with 0

declare "col" as counter of cols and initialize it with 0

Write *(*(arr+row)+col) element in a file

increment col: col ++

col < cols ?

YES / NO

increment row: row ++

row < rows ?

YES / NO

Display the message that that data is successfully written to the file

Close sortedFile

free the memory taken by "arr2Dptr" pointer

Display a nice goodbye message

Display the error message

END