SE-1105 HOMEWORK-3

Write a program that contains at least the following functions :

readMatrix(int matrix[][10])	Reads 100 integers from the user and fills into the given 10x10 matrix
rotate(int matrix[][10])	Rotates a given 10x10 matrix 90 degrees clockwise
	Example: if matrix: 1 2 3 Then after rotation: 7 4 1 4 5 6 8 5 2 7 8 9 9 6 3
sortRow(int matrix[][10], int row)	Sorts the given row of the given 10x10 matrix in ascending order
	Example: if matrix: 1 5 3 Then after sorting 2nd row: 1 5 3 7 0 6 0 6 7 2 9 1 2 9 1
sortCol(int matrix[][10], int col)	Sorts the given column of the given 10x10 matrix in ascending order
	Example: if matrix: 1 5 3 Then after sorting 3rd column: 1 5 1 7 0 6 7 0 3 2 9 1 2 9 6
clearFrame(int matrix[][10])	Makes the elements on the frame of the given 10x10 matrix 0. The frame of the matrix is the first and the last row and the first and the last column. See the example
	Example: if matrix: 1 5 3 Then after clearing the frame: 0 0 0 7 8 6 0 8 0 2 9 1 0 0 0
sortFrame(int matrix[][10])	Sorts the elements on the frame of the given 10x10 matrix in ascending order starting from top left corner in clockwise direction. See the example
	Example: if matrix: 1 5 3 Then after sorting the frame: 1 1 2 7 0 6 9 0 3 2 9 1 7 6 5
printMatrix(int matrix[][10])	Prints the given 10x10 matrix
main()	Calls the functions above in the following order: • Reads a matrix from the user • Prints the matrix • Rotates the matrix • Prints the matrix • Sorts the 4th and 7th rows • Prints the matrix • Sorts the 2nd and 5th columns

	• Prints the matrix • Sorts the frame of the matrix • Prints the matrix • Clears the frame of the matrix • Prints the matrix
Remark: Note that the examples given above contains 3x3 matrices for simplicity. Your function must be written so as to work with 10x10 matrices.	