



ADNAN MENDERES UNIVERSITY

CSE 203 Object-Oriented Programming

Lab 03


- You should submit **ONLY solutions of Homework**. Submit one project file in zipped format and named project file as *studentNo_NameSurname_AssignmentX*. X is the number of Lab, for this lab: Assignment3.
- Late submissions are not allowed.
- You should do homework **YOURSELF**. Group working is not allowed.
- Copy homework will be evaluated as 0.
- **DO NOT upload a screenshot or something else.**
- Use Google Classroom for your questions. Do not send private messages.

LAB EXAMPLE:

- 1- Write a program that prints a given **sparse matrix** as a regular full matrix. Define and initialize sparse matrix in code.

Example:

	row	col	value
a[0]	6	6	8
[1]	0	0	15
[2]	0	3	22
[3]	0	5	-15
[4]	1	1	11
[5]	1	2	3
[6]	2	3	-6
[7]	4	0	91
[8]	5	2	28



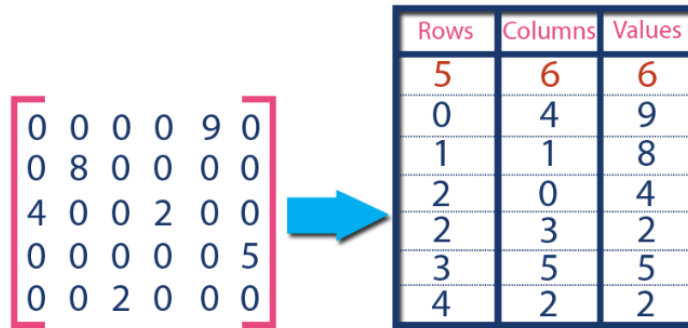
15	0	0	22	0	-15
0	11	3	0	0	0
0	0	0	-6	0	0
0	0	0	0	0	0
91	0	0	0	0	0
0	0	28	0	0	0

Input: `int[][] sparse = {{6,6,8},{0,0,15},{0,3,22},{0,5,-15},{1,1,11}, {1,2,3}, {2,3,-6}, {4,0,91}, {5,2,28}};`

Output:

```
15 0 0 22 0 -15
0 11 3 0 0 0
0 0 0 -6 0 0
0 0 0 0 0 0
91 0 0 0 0 0
0 0 28 0 0 0
```

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2- Write a program that finds a given *sparse matrix* is a **zero-one matrix** or not. The program should print *true* or *false*. Don't take any input from the user, assign the sparse array in the program code. *Zero-one matrix* is a matrix with elements which are either 0 or 1.

HOMEWORK

1- Write a function that takes two 2D integer matrix as an input and returns multiplication of the matrices as an output. Write a program that prompts the user enter 2 matrices with number of row and number of column. Check whether the two matrix are suitable for multiplication or not. If the matrices are suitable for multiplication, calculate multiplication using the created function then, print the result of multiplication.

Sample run:

```
Enter the number of rows of first matrix
3
Enter the number columns of first matrix
2
Enter the elements of first matrix
1 2
3 4
5 6
Enter the number of rows of second matrix
2
Enter the number of columns of second matrix
2
Enter the elements of second matrix
10 11
12 13

Result:
34 37
78 85
122 133
```