

Penalties/Deductions:

- a. Number of user-defined methods is less than 4: – 1 pt
- b. Used a built-in method : - 2 points
- c. Used static variables : – 2 pts
- d. Used list (or dynamic data structure) : – 2 pts
- e. Program did not execute in command prompt : – 1 pt

Problem:

1. Write a program that will load a 2D array of size m x n with random integers (range: 1 - 25). The program will then sort and group the elements and store it in a jagged array. Store in first row all integers in the range of 1-5, store in second row all integers in the range of 6-10, store in third row all integers in the range of 11-15, and so on. The program will also determine and display the maximum nonrepeating element in each row of the jagged array. The maximum nonrepeating element should be displayed after the last element in each row. If there's no maximum nonrepeating element or the row is empty, display an appropriate message. If there's only one element in the given row, then that element is the maximum. The maximum value of m and n is 10 while the minimum is 3. The program should execute for as long as the user wants to continue. The 2D array must be displayed in tabular form.

Example:
If 2D array is:

19	13	16	21	23
25	6	1	13	17
25	18	2	6	20
19	1	13	20	10
14	10	13	20	25

then

Jagged array elements and the max nonrepeating element in each row:

1	1	2	max = 2					
6	6	10	10	no distinct element				
13	13	13	13	14	max = 14			
16	17	18	19	19	20	20	20	max = 18
21	23	25	25	25	max = 23			

Other Program Requirements:

- Create at least 4 user-defined methods and use it in your program.
- Use of built-in method is not allowed(except for Random and Scanner class methods).
- Use of static variables is not allowed except for Scanner object (only local variables are allowed)
- Use of list (or similar data type) is strictly not allowed.
- This program will be executed in the command prompt.