

Assignment-4

Object Oriented Programming Lab

Array and Jagged Array

Note: You are advised to use only basic functionalities of JAVA (not build up libraries)

1. You are required to store a table that contains substance name along with its parameters such as freezing point and boiling point using 2-D matrix where each row is corresponding to substance and columns correspond to parameters. Design a class that takes temperature input using scanner class and check whether temperature match with freezing point or boiling point of respective substance and display the result.
2. Take a JaggedArray representing 2-D matrix as an input from the user. Write a program that transpose the Jagged matrix. Merge the original and transpose Ragged matrix. Display all the matrices.

1 2 3 4 5 6 7 8 9	Transpose ----->	1 2 5 6 3 7 4 8 9	Merge ----->	1 1 2 5 6 2 3 4 3 7 5 4 8 6 7 8 9 9
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3. You are required to compute correlation factor between two one dimensional integer array. While computing the correlation factor, one has to find out trend of each step in both arrays. Arrays are scanned from index value 0 and compare successive value in array to decide increasing or decreasing or equal one by one while scanning. When we are moving from one element to another element if both have increasing or decreasing order. This results a binary array with its values 0 or 1. The value will be 1 if both matched otherwise 0 The correlation factor is number of 1's divided by total
4. You are given 2D matrix of 5x5 and require to compute correlation factor for each combination of two rows and represent these correlation factor in two dimensional matrix known as correlation matrix.

Note: Programming questions may be added, removed, or modified as per requirement