

Lab 12

1. Imagine a small movie theater with a seating plan that can be represented as a 2D array. Each seat in the theater can either be occupied ('O') or vacant ('V'). Initially, all seats are vacant.
 - Write a Method called `displaySeating` that takes a 2D array representing the seating arrangement of the theater and prints it in a way that each row is shown on a new line. Each seat should be represented by its respective character ('O' or 'V') with spaces in between.
 - Write a Method called `bookSeat` that takes three parameters: the 2D array of the seating arrangement, and two integers `row` and `col` indicating the row and column of the seat to be booked. If the seat is vacant, the Method should mark it as occupied ('O') and return `True` indicating the seat was successfully booked. If the seat is already occupied, it should return `False`.
 - Write a Method called `checkFullRows` that takes the 2D array and returns a list of indices of the rows where all seats are occupied.
-

2. Create a list of daily average temperatures for a month, you can make up the values and amount. The temperatures are stored in a 1D array of type `double`, each element representing the temperature of a specific day. Your task is to analyze the temperatures to provide useful insights through various Methods.
 - Write a Method called `averageTemperature` that takes a 1D array of temperatures and returns the average temperature of the month rounded to two decimal places.
 - Write a Method called `countColdDays` that takes a 1D array of temperatures and a temperature threshold as parameters. It returns the count of days where the temperature was below the threshold and returns it.
 - Write a Method called `increaseTemperatures` that takes a 1D array of temperatures and a number to increase by which all temperatures should be increased. The Method should modify the original array.
-

3. Create a `printData` method(s) that can accept as parameters an integer, a double, a 1D integer array, and a 2D integer array. The method(s) should print out the data.
-