

2D Array Lab

Create a new project named `two_array_lab` with a new class named `TwoDimensionalArrayLab`. Your main method should call each method you write below.

Make sure you use comments and correct java conventions.

Define the following two dimensional array in your main. Pass it into the methods you create.

```
int [][] chessBoard = {{1, 3, 4, 4, 7, 8, 9},
                       {12, 43, 54, 1, 7, 20, 9},
                       {33, 6, 2, 1, 7, 9, 1},
                       {6, 87, 2, 23, 21, 1, 10}};
```

Don't print anything in your methods unless it specifically says to. Printing should be done in your main method which will print the return.

1. Write a method named "findMax" that returns an integer and has an integer two dimensional array as a parameter. Write a nested for loop that will find the max number in the chessboard two dimensional array and return that number. In your main, print the result which should be 87.
2. Write a method named "findMin" that returns an integer and has an integer two dimensional array as a parameter. Write a nested for loop that will find the min number in the chessboard two dimensional array and return that number. In your main, print the result which should be 1.
3. Write a method named "addThree" that returns an integer and has an integer two dimensional array as a parameter. Write a nested for loop that will add 3 to each element. Return the element located at row 3, column 1. Print the result in the main method and verify that it should be 9.
4. Write a method named "addElements" that returns an integer and has an integer two dimensional array as a parameter. Add the elements located at row 3, column 4 and row 2, column 3 and return that value. Print the result in main and verify that the answer is 22.
5. Write a method named "addAllEvenNumbers" that returns an integer and has an integer two dimensional array as a parameter. Add all the even numbers in the chessboard two dimensional array and return that number. Print the result in main and verify the answer is 128.
6. Write a method named "classMateNames" that returns a void and has no parameters. First read in two integers from the console. These integers will be the dimensions of your 2D array (the number of rows and the number of columns). Create the 2D array with these dimensions. Next read in String names of how many your class mates that are needed to fill the whole array (so 2 by 2, needs to have 4 names inputted). Create a nested for loop at the end to print all the elements of the 2D array.