CS142 Introduction to Object Oriented Programming

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Lab 3: 2D Arrays and Static Methods

Q1. Write a Java program that contains a static method called `printWeatherReport`. The method should print two lines about today's weather. In the main method you should call the `printWeatherReport` method.

Q2. Write a Java program that contains a static method called `oddEven` that accepts a single integer as its parameter. It should write a message ("Odd" or "Even") to the screen, depending on the value of the parameter. Test the method by calling it from your main method.

Q3. Write a Java program that contains a static method called `factorial`. The method should accept a single integer value as its parameter and should print the factorial of this number to the screen. In the main method, create a loop that goes from 1 to 10 and call the factorial method from inside the body of your loop. When the code executes the factorial of all numbers from 1 to 10 should be printed to the screen.

Q4.Write a static method called `determineSize` that accepts two doubles. The method should print a message to the screen that states which number is the smallest, which is the biggest or that they are the same number. Test the method by calling it from the main method

Q5. Write a Java program that creates a non-rectangular 2D array to store the shape below. The program should print the shape to the screen.

```
+
++
+++
++++
+++
++
+
```

Q6. Write a program called to produce the multiplication table of 1 to 9 shown below and store in a 2D array. Print the matrix with a row header and column header as shown on the next page. Tip: use a tab to space between the columns

	1	2	3	4	5	6	7	8	9
1	1	2	3	4	5	6	7	8	9
2	2	4	6	8	10	12	14	16	18
3	3	6	9	12	15	18	21	24	27
4	4	8	12	16	20	24	28	32	36
5	5	10	15	20	25	30	35	40	45
6	6	12	18	24	30	36	42	48	54
7	7	14	21	28	35	42	49	56	63
8	8	16	24	32	40	48	56	64	72
9	9	18	27	36	45	54	63	72	81