Use tdd to find the second largest number in the following strings, create the test class, method class and a main class for this:

Input: dfa12321afd

Output: 2

Input: abc1111

Output: -1

Do this in Java

Solid principles of software Engineering

Software Engineering Lifestyle

Requirement Gathering and Analysis

Instanceof method in Java

IO bound and CP bound

Asynchronous Programing

Multi-threading

SRP principle

List of JavaScript Engines

JIT compilation

Abstract Syntax tree

First thinking principles

For a certain value, find its remainder when divided by 10 and add it to its original vaue. Write this code in javascript

For the values x and n, find the resulting value when x is multiplied to its original value n times. Write this code in javascript.

For a certain value a, divide it by the product of x, y and z. x is the sum of a and 10. y is the difference between a and 10. Lastly, z is the remainder when a is divided by 10

You are given three variables left\_operand, right\_operand and operator. Write code in javascript for operator values so that each values does the following;

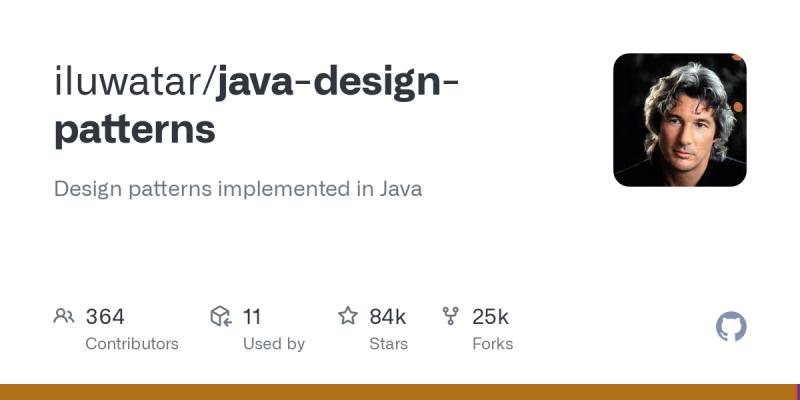
1. ‘+’ : Add left\_operand to right\_operand and assign result to ans.
2. ‘-‘: Subtract left\_operand from right\_operand and assign the result to ans.
3. ‘\*’ : Multiply left\_operand and right\_operand and assign the result to ans.
4. ‘/’: Divide left\_operand with right\_operand and assign the result to ans

For any other operator assign NaN to ans

1. Event Loop  
     
   2. Critical Rendering Path  
     
   3. Let Const Var difference and Block Scoping  
     
   4. Closure  
     
   5. Functional Programming   
     
   6. This keyword behavior   
     
   7. Good understanding of ‘how to use’ and ‘when to use’ frameworks  
     
   8. Prototypical Inheritance  
     
   9. Difference between Async, Await and Promises  
     
   10. Debounce vs Throttle

Java

System Design:  
<https://lnkd.in/gqWYvt4Y>  
<https://lnkd.in/g_pkKETF>  
<https://lnkd.in/gPeZQRqu>  
<https://lnkd.in/gwvB69Q9>  
<https://lnkd.in/gSgcEgbc>  
<https://lnkd.in/gKFMsRVN>  
<https://lnkd.in/g3NMAK7B>      
(MUST READ) --> <https://lnkd.in/gUPbgSZd>  
<https://lnkd.in/g3NMAK7B>  
  
DSA:  
<https://lnkd.in/gMZpJ8NC>  
<https://lnkd.in/gepXUQmK>  
<https://lnkd.in/gjfMYfyA>  
<https://lnkd.in/gum_Pj4p>  
<https://lnkd.in/grvChY4k>  
<https://lnkd.in/gjq5rE2P>  
<https://lnkd.in/gTJTivKw>  
  
Practise Here:   
<https://lnkd.in/gCduWyt8>  
<https://excalidraw.com> (For System Design Interviews)  
  
Thanks to [Shrayansh Jain](https://www.linkedin.com/in/ACoAABXy-pYB5Q_jU-JwKvJzZ0tzemZ_yF94rHc) for creating amazing System Design videos: Follow for more @ <https://lnkd.in/gwvB69Q9> (Concept && Coding)

[[](https://github.com/iluwatar/java-design-patterns)](https://github.com/iluwatar/java-design-patterns" \t "_blank)

Solve this in java. Use tdd approach by creating a test class, a method class and main class to output the number with the highest frequency as shown below;

nums = {3, 2, 3}

Output = 3

Nums ={2,2, 1,1,1,2,2}

Output =2

Complexity

Asymptotic analysis

Types of algorithm

* Siding Window algorithm
* Add digits
* Write a program in java that takes an input of 38 and gives an output of 2. It also takes an input of 0 and outputs 0. Create a test class, method class and main class separately.
* Hint: input = 3+8 = 11 then it adds 1+1 to give output as 2
* Solve it in JavaScript and python without creating a test and method class.
* Asynchronous functions
* Recursion vs iteration
* Construction function
* Stack calls
* Turin test

|  |  |
| --- | --- |
| “cat” | 2000 |
| “Truck” | 500 |
| “Bike” | 6500 |

|  |  |  |
| --- | --- | --- |
| Name | value | Brand |
| “cat” | 2000 | [“Toyota”, “Nissan”] |
| “Truck” | 500 | [“ford”] |
| “Bike” | 6500 | [“Honda”] |

How do I push [“Toyota”, “Nissan”], [“ford”] , [“Honda”] to a newly created third column

**Task:** A demographist wants to find the total population within a demographic. This demographic is in a region with a temperature less than or equal to 10°C. However, with a limited programming background, the demographist has asked for your help! Your task: is to find the *sum* of the population in a **two-dimensional array** of **objects** which reside in a region of temperature less than or equal to 10°C. Each **object** consists of the region information.



|  |  |  |  |
| --- | --- | --- | --- |
| Null | obj | obj | obj |
| Obj | obj | obj | null |
| Obj | null | obj | obj |

let obj = {

    name = "James",

    population = 1000

    temp = 10,

    currency = 20 pounds,

}

Add digits

Write a program in java that takes an input of 38 and gives an output of 2. It also takes an input of 0 and outputs 0. Create a test class, method class and main class separately.

Hint: input = 3+8 = 11 then it adds 1+1 to give output as 2

Solve it in JavaScript and python without creating a test and method class.

Asynchronous functions

Recursion vs iteration

Construction function

Stack calls

Turin test

Hoist in Javascript

Javascript Task  
An ambitious game developer wants to make ONE of the top 10 games in the world. However, there is a problem. Because he makes board games, it takes a lot of his time to create the board and populate it with game pieces. To speed up the process, he asked you to make his work quicker and simpler.

Your task is to create a function that first generates a board (two dimensional array) and then populates that board with values using an array of pieces, where each piece is an object with board coordinates and the value of the piece within the board.

Problem statement:

The game designer gives you three arguments: length, width and pieces.

Each argument is as follows:

* Length (first argument): This is the length of the outer array of the two dimensional array representation of the board.
* Width(second argument): This is the length of the inner arrays of the two dimensional array representation of the board
* Pieces (Third argument): This is an array of objects where each object has the following properties:

. row: Has a number value representing the index of the outer array of two dimensional array representations of the board.

. col: Has a number value representing the index of the inner array of two dimensional array representations of the board.

. value: Is the string value representing the piece that will be assigned to the respective index inside the two dimensional array representation of the board.

Create two dimensional array of the respective length and width and populate it with the pieces values of the objects residing in the array, passed to the third(pieces) argument. All unpopulated indices will be assigned “ ” value(a string with only a single space character).