

## Java Basics:

1. Java exceptions
2. Java 8, Stream API , Date and Time in Java 8 ,lamda api, Lambda Expressions , Functional Interfaces
3. filter, map, reduce
4. collection
5. multithreading
6. Collection vs Stream
7. Linkedlist and arraylist
8. What is functional interface
9. overload and override
10. hashtable and hashmap
11. different types of map in java, their differences
12. Is hashmap thread safe?
13. Issues when hashmap is used in multi threading situations?
14. Memory leaks in java
15. Did you implement Java 8 features in your project? How?
16. What are differences of Hashtable and HashMap
17. What are the new features of Java 8?
18. What is the new features of java8
19. Difference between functional interface and normal interface, When to use them
20. Use Java8, given a String which contains "sams" , replace with 'walmart', case insensitive.  
Like S = "sams abbdd SAM dd sam.. jj ..sam be"  
I spent some time on this question. I can replace work like "sams", but struggled with "sam.." or "..SAm" or "...sAM.."

## Java programming and Data Structures and Algorithms

1. Find the pair of integers in an array whose sum is x.
2. Merge Sort
3. <https://leetcode.com/problems/n-queens/>
4. <https://leetcode.com/problems/sudoku-solver/solution/>
5. <https://leetcode.com/problems/combinational-sum/description/>
- 6.. <https://www.programcreek.com/2014/04/leetcode-surrounded-regions-java/>
7. Check a string contain 26 letters
8. there are lots brackets in a string , check if all of these brackets are paired  
for example : {[()]} is paired , {( )} is not
9. Find the length of max object in a list of objects
10. Given a string return true if it contains all the alphabets from a-z
11. check the valid parentheses
12. implement Math.pow(x,n)
13. Reverse the string by words. Like : Hello World, output: World, Hello

- 14.find duplicates in an array and also Remove the duplicates elements from an array.
- 15.Check if string is palindrome.
- 16.Check if number is palindrome
- 17.Remove the duplicates characters from a string
- 18.Find the second largest number in an array.
- 19.Sort an array which contains only 0's and 1's without using any inbuilt sorting library.
- 20.Given an Linked List Reorder linkedlist into even and odd nodes
- 21.<https://www.geeksforgeeks.org/find-a-triplet-that-sum-to-a-given-value/>
22. <https://leetcode.com/problems/validate-binary-search-tree/>
23. Find The Maximum Element in a Binary Search Tree
- 24.Reverse linked list
- 25.Reverse string
- 26.Find missing number in an array of number from 1-100
- 25.Calculate  $y = a_0 + a_1 x + a_2 x^2 + \dots + a_n x^n$
- 26.Calculate fibonacci with memoization
- 27.Write a function that takes an array of integers and returns the sum of the integers after adding 1 to each
- 28.Given a string, your code must find out the first repeated as well as non-repeated character in that string. For example, if "JavaConceptOfTheDay" is the given string, then 'J' is a first non-repeated character and 'a' is a first repeated character.
- 29.Increment the trailing numeric value in a string by 1 or just append 1 if no numeric value is present  
Input: string  
Output: string 1

Input: string99  
Output: string100

30. Check if a String is a Pallindrome
31. Dynamic Coin Change Problem DP -1
32. Remove Duplicates in LinkedList
33. find the sum of each level in BST
34. Given two linked lists of integers, reverse the two linked lists, add them, reverse the result and store in a linked list.

Linked List 1 : [2,1,3]  
Linked List 2 : [1,2,7]  
LinkedList1 After Reversal : 312  
LinkedList2 After Reversal : 721  
Result after adding two linked list :: 1033

After Reverseal : [3,3,0,1]

### **Database ::**

1. What are differences between Rational DB vs NoSQL
2. What projects was applied NoSQL in resume
3. How to migrate data from Rational DB to NoSQL
4. What is technical tool/technique used to migrate data from Rational DB to NoSQL
5. What is biggest changllenge to migrate data from Rational DB to NoSQL

### **Spring:**

1. Dependency Injection
2. IOC Container, Spring IOC
3. How to validate request header in Spring?
4. difference between spring and spring boot
5. Explain Bean lifecycle in Spring framework?
6. How to get the id field from headers and store it to a variable ?
7. RestController vs controller
8. Questions from the previous project, How you secure rest API. Spring Security Configuration.
9. Http Methods and when you will use what.
10. When you will use Post even if you only want to get data not posting.
11. Singleton. Which scenario?
12. (From the previous project) How you will determine the user credentials.
13. How Spring @Autowired works, @component, @service
14. How to use spring mvc interceptor
15. Difference between J2ee and Spring
16. deploy a web application to tomcat
17. implement a restcontroller
18. what is spring mvc
19. what is spring interceptor
20. how to secure your rest api
21. what is spring dependency injection
22. what is servlet
23. HTTP error codes - 400 vs 500
24. HTTP error code when the input is not valid for the server side to process?
25. HTTP error code when the db is down?
26. which layer consists of business logic in spring?
27. Default bean scope
28. why is the singleton bean default?
29. difference b/w primary and unique key in DB?

30. In error logging how can the logs help us? and how could we do to make the logs more helpful?
31. How would you read a big file and count characters?
32. Kind of design patterns used in designing an application?
33. How do you secure your REST api?
34. Did you use OAuth in Spring Security? How did you implement?
35. Give an example of creating the REST service
36. Get the list of Book Object which has the price < 10000
37. What is webservice ,what is Restful api, Http methods
38. When use get when use post
39. How does map requests to controller
40. How to write Junit to test
41. what are web filter in spring
42. how to implement singleton in spring
43. the scope of spring.
44. What is prototype
45. How did you use REST services in your previous project?

### **Hibernate:**

1. Many to Many relationship
2. Hibernate Cache

### **Design pattern:**

1. design Solar system
2. design a parking lot
3. What is a singleton design pattern?
4. Composite design pattern
5. Strategy Design pattern
6. Explain about few design patterns?

### **Puzzle:**

1. building the wall with 2 kind of bricks ,short one is 1x1 size long one is 1x2 size the short need to build next the long given the length of the wall specify how many ways to build it
2. We have a list of candidates name, your mission is finding candidates voted more than half of the list of candidates.