7Vals Interview(!2024)

First Interview:

-class vs interface

-abstract classes (can we create objects of it?)

-virtual and pure virtual

-polymorphism

-Diamond problem

-Given a 2d array mxn, find all possible paths from 0,0 to a specific point inside the array. e.g the point is 4,5 then find all possible paths from 0,0 to 4,5.

-Check if a tree is BST or not.

-convert array to bst

-AVL tree and how rotations are performed

-Best sorting algorithm in terms of time complexity?

-Write an SQL query to return all duplicate rows of the table.

-Write an SQL query to return a count of all rows of the table that - are duplicates.

-There are two tables Customer and Orders. Customers contains customer ID and Orders contains productid + CustomerID. write a query to find all customerIDs with no orders.

-There are two ropes and each of them takes exactly 1 hour to burn. -Find a way to find when 45 minutes have passed by burning those two ropes.

Second Interview:

-Discussion on FYP

-Non functional requirements of our FYP and how we have implemented them

-There is a 2d array and each row is sorted. Write a code to find the minimum common number present in all rows.

-Schema of FYP + Few queries on that schema

-Normalization and denormalization on the schema I built

-Rest apis

-GET vs POST

-Cookies and session

-session management in web

-Injection attacks in web