# Zillious Interview Experience

Initially 1 Offline MCQ test(30 qsn) + Offline Coding Test(2 qsn) + 3 Technical Interviews + HR round were supposed to be conducted but due to some reasons Coding round and HR round were removed from the schedule.

**Round 1: Offline MCQ Test**

30 MCQ questions with -ve marking.

Apart from other companies initial round which included apti questions and few questions of OS and DBMS, they gave most of the questions based on C, OS, DBMS and few Algorithm(DP) based questions (no apti).

**Round 2: Technical Interview**

1. Given an array, find out the next smaller element for each element.

https://stackoverflow.com/questions/9493853/given-an-array-find-out-the-next-smaller-element-for-each-element

2. Given 4x4 interger matrix print the element which occured exactly once in each row if none found print -1.

**Round 3: Technical Interview**

1. Find maximum possible stolen value from houses

There are n houses build in a line, each of which contains some value in it. A thief is going to steal the maximal value of these houses, but he can't steal in two adjacent houses because owner of the stolen houses will tell his two neighbour left and right side. What is the maximum stolen value.

https://www.geeksforgeeks.org/find-maximum-possible-stolen-value-houses/

2. Trapping Rain Water

https://www.geeksforgeeks.org/trapping-rain-water/

**Round 4: Technical Interview**

Again a coding question was given to solve on paper. This question was similar with the "Rat Maze Problem" of backtracking on geeksforgeeks https://www.geeksforgeeks.org/rat-in-a-maze-backtracking-2/

but instead having input matrix with 1's(valid moves) and 0's(blocked paths) we have +ve intergers in place of 1's i.e. 1,2,3 which basically tell how many maximum jumps can be made from that particular position. For example if value at (0,0) is 2 mean that you can go

(i) 1 position East
(ii) 2 position East
(iii) 1 position South
(iv) 2 position South

while in standard problem given on Geeks you can only move either 1 position East or South.

If you are familiar with the problem its simple to write using recursion and applying backtracking.

But when i finished my code, i was asked to optimize the running time which i did with the help of additional matrix whose size was same as the input matrix where i was keeping track of dead ends and putting -1 on those points and accordingly changed the isSafe() function.