Yash pant : Sagar
Dutch flag problem
Binary search implementation in a rotated sorted array

Memory consumed by base and derived classes. In various cases.

Samir:
Starting 5 min about projects

1. Binary search implementation in a rotated  sorted array
2. There are n points in cartesian plane, representing n bulbs whose x and y coordinates are known. There is a man who start running in any random direction and the coordinates of man is known. At each position, we have to turn on bulb m nearest bulb where man is present. As soon as man leaves the position, we have to turn off these m bulbs and this process will continue on. Give an approach to implement turn on/off function for bulb. (N could be order of millions and man changes position at each second).

C doesn't support OOPs but C++ does. Why?

Vikash
First 10 min project discussion..

1. Finding element in the bitonic array?
2. There are n points in cartesian plane, representing n bulbs whose x and y coordinates are known. There is a man who start running in any random direction and the coordinates of man is known. At each position, we have to turn on bulb m nearest bulb where man is present. As soon as man leaves the position, we have to turn off these m bulbs and this process will continue on. Give an approach to implement turn on/off function for bulb. (N could be order of millions and man changes position at each second).

Candidate: Atul Kumar
Interviewer: Atul Anand

1. Project discussion : 10 mins
2. Virtual function and how it works internally in c++ compiler
3. https://leetcode.com/problems/two-sum/
4. Given an array and an integer delta, is it possible to make two arrays such that the absolute difference between ((a[0]+a[1]..+a[x]) - (b[0]+b[1]..+b[y])) is less than equal to delta.
   vector<int> input{2,3,4,10,6,5};  delta = 5
   Output => a[]={2,3,10},  b[] = {4,5,6} diff = 0 which is less than delta.

5. https://leetcode.com/problems/combination-sum/

Harsh Joshi

1. Project Discussion for 10 mins.
2. Sorting an array of 0, 1 and 2.(Follow up: doing it in only one iteration)
3. Searching for a key in rotated and sorted array.
4. Given a function f(x): f(x+1) >= f(x), x is from 0 to inf. f(x) can be from -inf to +inf. Find the value x = k, for which f(k) is positive for the first time.

Yash Gautam
Interviewer: A Rajpoot https://www.linkedin.com/in/rajpurohitashok/?originalSubdomain=in

Project Discussion (5-10mins)
Normal discussion on dfs, bfs, topological sort, cycle in directed graph and undirected graph.
Island problem (find no of islands and size of the largest island).
https://cses.fi/problemset/task/1192

Segment Tree and Fenwick tree (How they work etc)
Kalpana Bishnoi:

1. Project discussion for 5-10 minutes.
2. Searching for an element in sorted and rotated array.
3. Sorting an array of 0,1,2(Follow up: do it in one iteration)
4. Given a function f(x): f(x+1) >= f(x), x is from 0 to inf. f(x) can be from -inf to +inf. Find the value x = k, for which f(k) is positive for the first time.