Chanya
(Interviewer: Vivek)
Round 1

N gifts
A particular gift you can buy on a particular day
Inputs given in (day, cost) form
You have 0₹ on starting day and it will increment by 1 per day

Find maximum number of gifts you can buy.

Input
3
3 2
5 4
6 3
Output
2

Aryaman
(Interviewer : Ila)
Round 1
Given N rooms and M customers, each customer has an appointment at time t which lasts for duration d. Every customer is assigned the first available room with the lowest index. Find which rooms get the maximum customers. Times can be arbitrarily large.

Approach: priority queue.

Aditya
Round 1
Given 2 series and each element is a pair which is time and a value. If a particular time is present in first series and not in second so we have two choices (depends on us what we choose) first we can remove the
Element from the second otherwise we can assume that the element is present in the second with same time but value =0, we have to find the union of the two series by adding the value of the time in the two series.
Follow up: There are k series instead of only two series.
Input : A-> [(1, 1.0), (2, 1.5), (3, 2.0)], B-> [(2, 1.0), (3, 1.5), (5, 1.0)]
Output (following first choice): [(2, 2.5), (3, 3.5)]
Output (following second choice): [(1, 1.0), (2, 2.5), (3, 3.5), (5, 1.0)]

Approach: Map

Round 2
Given a list of circles. Two circles are connected if they intersect at one or more points. We have to tell whether all circles are connected or not.

Approach: Consider two connected circles as an edge of the graph and then check if all the nodes are connected or not using dfs or bfs.

Follow up: Count how many different connected components will be there.
Approach: Same as previous one, just count how many connected components are there.

Follow up: Return k connected components with largest sizes (We need to return the indexes of the connected components).
Approach: Return the indexes of each connected components in dfs/bfs calls and make a vector containing the indexes of connected components and sort them on the basis of their size.

Mayank Kumar
Round 1
Given n blocks, find the length of the maximum continuous segment of color C
Follow up: Do this for a set of different colors
Follow up (on original problem): You can color m different blocks any color you want.
Follow up (on last follow up): Do this for a set of different colors

Note: All of the above can be done in O(N+K) where N is the number of blocks and K is the size of the set of different colors.

Round 2
Q. Given heights of buildings (in form of no of floors). Find the minimum no. of floors which are to be removed to make all the heights of building equal. However if height of a building becomes 0 after removal then, it is not considered "a building".

For example: [3,4,4] => [0 4 4] floors removed would be 3.

Follow up: You can ignore the height of a particular building. For example in [3, 4, 4] you can ignore the building with height 3. The rest of the buildings have same height so the answer would be 0.

Jenil Nagrecha
Round 1
Given a system haiving a component with a malware and a destination to reach and a source to start find if information could reach destination without encountering a component with malware.
Approach Dfs of graph
Follow up : what i there are multiple components with malware
Follow up: what if information can pass through malware but cant reach more than d distance

Dhruv Chitkara
Round 1
Interviewer: udit
Given sentences print next most common
occurring string for a query string. Many queries are given.

Adarsh Kumar
Round 1
Given a list of color (containing integers) and some queries. In each query you are given some color, you need to find the maximum size of the contiguous segment having the same color.
$1<=n,q<=1e5$ | n is the size of the list of color, q is the number of queries
$1<=color[i]<=1e5$

color=[1,2,5,3,2,2,2,5,5]
query=[2,5,3]
ans=[3,2,1]

Approach: Just use a map of vector containing the index of each color and calculate the answer for each color.

Follow up:
Given a list of color. Now you can change some color to any other color m times. You need to find the maximum size of the contiguous segment having the color c.
color=[1,2,5,3,2,2,2,5,5]
m=2, c=2
À ans=6, change index 2 and 3 to color c, then [1,2,2,2,2,2,2,5,5]

Approach: told dp approach running in O(nm), but can be optimised. Couldn't tell due to lack of time.

Kalpana Bishnoi: Round 1
Interviewer: Arjit
Question 1:
Given a list of disks, its child disks and dependent snapshots. There is a class which has the name of the disk, its snapshot object name and vector of its child disks. In what order will you delete the disks such that all the dependent snapshots of it are also deleted?
Conditions of deletion:
1. You can delete a disk if all of its dependent snapshots are deleted.
2. A snapshot can be deleted only if all the child disks associated with that snapshot are deleted.

Question 2: You are given an array, find the total number of ways in which we can divide the array into subarrays such that each subarray has at least one negative element.

Shristi:
Interviewer:Gaurav
You need to implement a music player, you will be given with a list of songs for eg.
[A,B,C,D,E], and a variable coolDown. The music player should have a function named
shuffle() which would return a random song from the list and would remove that song from
the list until the shuffle() function has been called for coolDown more times.
For eg.
Eligible Songs -> [A,B,C,D,E] coolDown = 2
shuffle() called -> returns song 'C'
Eligibile Songs -> [A,B,D,E] Ineligible Songs -> [C]
shuffle() called -> returns song 'D'
Eligible Songs -> [A,B,E] Ineligible Songs -> [C,D]
shuffle() called -> returns songs 'A'
Eligible Songs -> [B,C,E] Ineligible Songs -> [D,A] // C returns back to list as cooldown is
complete
Expected Time complexity-> Initialisation in O(n), shuffle in O(1)
Expected Space complexity -> O(n)

Follow Up:
What would be the solution if each song had different cooldown time?

ShivanshJ
Q1) Given a list of circles. Two circles are connected if they intersect at one or more points.
Tell whether all the circles form one connected component.

Q2) Given heights of buildings (in form of no of floors). Find the minimum no. of floors which are to
be removed to make all the heights of building equal. However if height of a building becomes 0
after removal then, it is not considered "a building".

For example: [3,4,4] => [0 4 4] floors removed would be 3.

Ashish (round 1)
Same ques as mayank and adarsh

Neha :
Same question as mayank got

Astha:

Given array it is increasing after one value in array it is decreasing find max value in array.