**Day 1-5:**

**Company Name:**Goldman Sachs

Questions:

1. [Given an array of strings, return all groups of strings that are anagrams.](https://www.google.com/url?q=https://practice.geeksforgeeks.org/problems/print-anagrams-together/1/&sa=D&source=editors&ust=1641047942230000&usg=AOvVaw3wI8trltvStNQxpYmmA2P7)
2. [Overlapping rectangles](https://www.google.com/url?q=https://practice.geeksforgeeks.org/problems/overlapping-rectangles1924/1/&sa=D&source=editors&ust=1641047942230000&usg=AOvVaw1kNQuYemJ0XSK89SqtFHTL)
3. [Count the subarrays having product less than k](https://www.google.com/url?q=https://practice.geeksforgeeks.org/problems/count-the-subarrays-having-product-less-than-k1708/1/&sa=D&source=editors&ust=1641047942231000&usg=AOvVaw1HSW7PYvVtuILDq36p0U3q)
4. [Given a string, Your task is to  complete the function encode that returns the run length encoded string for the given string.](https://www.google.com/url?q=https://practice.geeksforgeeks.org/problems/run-length-encoding/1/&sa=D&source=editors&ust=1641047942231000&usg=AOvVaw2jkXc6ANzaYCcBfXbHhzAx)[eg if the input string is “wwwwaaadexxxxxx”, then the function should return “w4a3d1e1x6″.](https://www.google.com/url?q=https://practice.geeksforgeeks.org/problems/run-length-encoding/1/&sa=D&source=editors&ust=1641047942232000&usg=AOvVaw3CdwyWqvqEKXFqy80dLfre)(Modified version of question named Cute Monkeys)
5. [Program to find Nth Ugly Number.](https://www.google.com/url?q=https://practice.geeksforgeeks.org/problems/ugly-numbers2254/1/&sa=D&source=editors&ust=1641047942232000&usg=AOvVaw1kvwYDredNzrec-1DxeASx)

      6.    [Given two strings](https://www.google.com/url?q=https://leetcode.com/problems/greatest-common-divisor-of-strings/&sa=D&source=editors&ust=1641047942232000&usg=AOvVaw3WMoMAuFXt96IZE2VOlF31)[str1 and str2](https://www.google.com/url?q=https://leetcode.com/problems/greatest-common-divisor-of-strings/&sa=D&source=editors&ust=1641047942233000&usg=AOvVaw1u9czfhFhkhgrsXIxbOtKh)[. We say that str2 divides str1 if it's possible](https://www.google.com/url?q=https://leetcode.com/problems/greatest-common-divisor-of-strings/&sa=D&source=editors&ust=1641047942234000&usg=AOvVaw06KzJMyOvpawQrLEsKfA6S)

[to          concatenate multiple str2 to get](https://www.google.com/url?q=https://leetcode.com/problems/greatest-common-divisor-of-strings/&sa=D&source=editors&ust=1641047942235000&usg=AOvVaw3HvBC6hJrVoY7jZX345EuG)[str1. For example, ab divides](https://www.google.com/url?q=https://leetcode.com/problems/greatest-common-divisor-of-strings/&sa=D&source=editors&ust=1641047942236000&usg=AOvVaw0BVdKWtKtcbyrn_1MeMBaO)[abab.](https://www.google.com/url?q=https://leetcode.com/problems/greatest-common-divisor-of-strings/&sa=D&source=editors&ust=1641047942237000&usg=AOvVaw2a0Ax_DAFG6BtW259ddv79)

[if](https://www.google.com/url?q=https://leetcode.com/problems/greatest-common-divisor-of-strings/&sa=D&source=editors&ust=1641047942237000&usg=AOvVaw2a0Ax_DAFG6BtW259ddv79)[str2 does not divide str1, return -1. Otherwise, return the smallest string](https://www.google.com/url?q=https://leetcode.com/problems/greatest-common-divisor-of-strings/&sa=D&source=editors&ust=1641047942238000&usg=AOvVaw3NuO7UcY_Zb3n0SjrpoAus)

[str3 such that str3 divides both str1 and str2.](https://www.google.com/url?q=https://leetcode.com/problems/greatest-common-divisor-of-strings/&sa=D&source=editors&ust=1641047942239000&usg=AOvVaw010FkK-K-hNCSHaOmkKsX6)

       7. F[ind the kid which gets tha damaged toy](https://www.google.com/url?q=https://www.geeksforgeeks.org/distributing-m-items-circle-size-n-starting-k-th-position/&sa=D&source=editors&ust=1641047942240000&usg=AOvVaw3bTZ6PCex1rFHpIP4gaXTF)

       8. [Total Decoding Messages](https://www.google.com/url?q=https://practice.geeksforgeeks.org/problems/total-decoding-messages1235/1/&sa=D&source=editors&ust=1641047942240000&usg=AOvVaw21DBFBt-X9r0l-ZRkf5K-V)

       9.[Given a pattern containing only I's and D's. I for increasing and D](https://www.google.com/url?q=https://practice.geeksforgeeks.org/problems/number-following-a-pattern3126/1&sa=D&source=editors&ust=1641047942241000&usg=AOvVaw0JrNUdZs3JeJ1LVbcxnuco)

[for decreasing.Devise an algorithm to print the minimum number following](https://www.google.com/url?q=https://practice.geeksforgeeks.org/problems/number-following-a-pattern3126/1&sa=D&source=editors&ust=1641047942241000&usg=AOvVaw0JrNUdZs3JeJ1LVbcxnuco)

[that pattern.](https://www.google.com/url?q=https://practice.geeksforgeeks.org/problems/number-following-a-pattern3126/1&sa=D&source=editors&ust=1641047942241000&usg=AOvVaw0JrNUdZs3JeJ1LVbcxnuco)

     10. Find max 10 numbers in a list having 10M entries.

      11. [Given an unsorted array Arr of size N of positive integers. One number](https://www.google.com/url?q=https://practice.geeksforgeeks.org/problems/find-missing-and-repeating2512/1/&sa=D&source=editors&ust=1641047942242000&usg=AOvVaw0a3AkyPs08ZowzSCmw_dgp)

['A' from     set {1, 2, …N} is missing and one number 'B'](https://www.google.com/url?q=https://practice.geeksforgeeks.org/problems/find-missing-and-repeating2512/1/&sa=D&source=editors&ust=1641047942242000&usg=AOvVaw0a3AkyPs08ZowzSCmw_dgp)

[occurs twice in array. Find these two numbers.](https://www.google.com/url?q=https://practice.geeksforgeeks.org/problems/find-missing-and-repeating2512/1/&sa=D&source=editors&ust=1641047942243000&usg=AOvVaw2YlxgkF8nkWbJp-jBIGN1W)

     12. Find total number of Squares in a N\*N chessboard

    13.[Decode the string](https://www.google.com/url?q=https://practice.geeksforgeeks.org/problems/decode-the-string2444/1&sa=D&source=editors&ust=1641047942243000&usg=AOvVaw1EIZjSKlhJH3DuVZZkFqX4)

    14.[Minimum Size Subarray Sum](https://www.google.com/url?q=https://leetcode.com/problems/minimum-size-subarray-sum/&sa=D&source=editors&ust=1641047942244000&usg=AOvVaw0ft_-9BNGrhXHil0oQ4XyC)

    15.[Array Pair Sum Divisibility Problem](https://www.google.com/url?q=https://practice.geeksforgeeks.org/problems/array-pair-sum-divisibility-problem3257/1&sa=D&source=editors&ust=1641047942244000&usg=AOvVaw2oLgaApEaSYLnvhtiyX1yv)

Amazon

1.[Calculating Maximum Profit](https://practice.geeksforgeeks.org/problems/maximum-profit4657/1) (Multiple Ladders Question)

2.[Longest Mountain](https://leetcode.com/problems/longest-mountain-in-array/)

3.[IPL 2021 - Match Day 2](https://practice.geeksforgeeks.org/problems/deee0e8cf9910e7219f663c18d6d640ea0b87f87/1/) (similar to maximum in subarray)

4.[Brackets in Matrix Chain Multiplication](https://practice.geeksforgeeks.org/problems/brackets-in-matrix-chain-multiplication1024/1/)

5.[Phone directory](https://practice.geeksforgeeks.org/problems/phone-directory4628/1/) (Question similar to this based on Amazon Pay as a service)

6.[Maximum of all subarrays of size k](https://practice.geeksforgeeks.org/problems/maximum-of-all-subarrays-of-size-k3101/1)

7.[First non-repeating character in a stream](https://practice.geeksforgeeks.org/problems/first-non-repeating-character-in-a-stream1216/1)

8.[Count ways to N'th Stair(Order does not matter)](https://practice.geeksforgeeks.org/problems/count-ways-to-nth-stairorder-does-not-matter1322/1/)

9.[Which among them forms a perfect Sudoku Pattern ?](https://practice.geeksforgeeks.org/problems/is-sudoku-valid4820/1/)

10.[Nuts and Bolts Problem](https://practice.geeksforgeeks.org/problems/nuts-and-bolts-problem0431/1)

11.[Tree Serialization and Deserialization](https://practice.geeksforgeeks.org/problems/serialize-and-deserialize-a-binary-tree/1)

12.[Column name from a given column number](https://practice.geeksforgeeks.org/problems/column-name-from-a-given-column-number4244/1/)

13.[Rotten Oranges](https://leetcode.com/problems/rotting-oranges/) -Multiple Repetitions

14.[Tree Burning](https://practice.geeksforgeeks.org/problems/burning-tree/1/)

15. [Delete N nodes after M nodes of a linked list](https://practice.geeksforgeeks.org/problems/delete-n-nodes-after-m-nodes-of-a-linked-list/1/)

***Microsoft Sheet :***

1.[Divide an array into two sets S1 and S2 such that the absolute difference between their sums is minimum and find the minimum difference](https://practice.geeksforgeeks.org/problems/minimum-sum-partition3317/1/)

2.[**Prerequisite Tasks**](https://practice.geeksforgeeks.org/problems/prerequisite-tasks/1/) **(Similar to Question of Modern Park)**

**3.R**[**otate by 90 degree**](https://practice.geeksforgeeks.org/problems/rotate-by-90-degree0356/1/)

**4.** [**Given a matrix of size r\*c. Traverse the matrix in spiral form.**](https://practice.geeksforgeeks.org/problems/spirally-traversing-a-matrix-1587115621/1/)

5. **S**[**tock span problem**](https://practice.geeksforgeeks.org/problems/stock-span-problem-1587115621/1)

**6.**[**Possible Words From Phone Digits**](https://practice.geeksforgeeks.org/problems/possible-words-from-phone-digits-1587115620/1/)

**7.U**[**nit Area of largest region of 1's**](https://practice.geeksforgeeks.org/problems/length-of-largest-region-of-1s-1587115620/1/)

**8.C**[**onnect Nodes at Same Level**](https://practice.geeksforgeeks.org/problems/connect-nodes-at-same-level/1/)

**9.**[**Count Number of SubTrees having given Sum**](https://practice.geeksforgeeks.org/problems/count-number-of-subtrees-having-given-sum/1/)

**10.**[**Stickler Thief**](https://practice.geeksforgeeks.org/problems/stickler-theif-1587115621/1/) **(Similar to Alibaba and Thiefes Question)**

**11.**[**Generate and print all binary numbers with decimal values from 1 to N.**](https://practice.geeksforgeeks.org/problems/generate-binary-numbers-1587115620/1/)

12.[Find all the **unique** quadruple from the given array that sums up to the given number.](https://practice.geeksforgeeks.org/problems/find-all-four-sum-numbers1732/1)

13.[Given a Graph of V vertices and E edges and another edge(c - d), the task is to find if the given edge is a Bridge**.** i.e., removing the edge disconnects the graph.](https://practice.geeksforgeeks.org/problems/bridge-edge-in-graph/1)

14.[Given a destination **D** , find the **minimum** number of steps required to reach that destination.](https://practice.geeksforgeeks.org/problems/minimum-number-of-steps-to-reach-a-given-number5234/1/)

15.[Find the order of characters in the alien language.](https://practice.geeksforgeeks.org/problems/alien-dictionary/1/)

***Arsh Adobe Sheet :***

1.[Find a continuous sub-array which adds to a given number **S**.](https://practice.geeksforgeeks.org/problems/subarray-with-given-sum-1587115621/1)

2.[Find the length of the **L**ongest **A**rithmetic **P**rogression (LLAP) in it.](https://practice.geeksforgeeks.org/problems/longest-arithmetic-progression1019/1/)

3.[**Number of distinct Words with k maximum contiguous vowels**](https://practice.geeksforgeeks.org/problems/7b9d245852bd8caf8a27d6d3961429f0a2b245f1/1/)(Joe and his Dictionary Problem)

4.[**Partition Equal Subset Sum**](https://practice.geeksforgeeks.org/problems/subset-sum-problem2014/1)

5.[Total number of ways **n** can be expressed as sum of **x**th power of unique natural numbers](https://practice.geeksforgeeks.org/problems/express-as-sum-of-power-of-natural-numbers5647/1)

6.[Generate all combinations of well-formed(balanced) parentheses.](https://practice.geeksforgeeks.org/problems/generate-all-possible-parentheses/1/)

7.[**Pots of Gold Game**](https://practice.geeksforgeeks.org/problems/pots-of-gold-game/1/) **(Similar to Covid and Beds problem)**

**8.**[**ATOI**](https://practice.geeksforgeeks.org/problems/implement-atoi/1/)

**9.** [**Smallest palindromic number greater than N using the same set of digits as in N.**](https://practice.geeksforgeeks.org/problems/next-higher-palindromic-number-using-the-same-set-of-digits5859/1/)

**10.**[**Elections**](https://practice.geeksforgeeks.org/problems/winner-of-an-election-where-votes-are-represented-as-candidate-names-1587115621/1/)

**11.**[**String Amendment**](https://practice.geeksforgeeks.org/problems/amend-the-sentence3235/1)

**12.**[**Leaders in Array**](https://practice.geeksforgeeks.org/problems/leaders-in-an-array-1587115620/1/)

**13.**[**Minimum operations to convert array A to B**](https://practice.geeksforgeeks.org/problems/minimum-insertions-to-make-two-arrays-equal/1/)

**14.**[**Smallest range in K lists**](https://practice.geeksforgeeks.org/problems/find-smallest-range-containing-elements-from-k-lists/1/)

**15.**Given two library versions of an executable: for example, “10.1.1.3” and “10.1.1.9” or “10” and “10.1”. Find out which one is more recent? Strings can be empty also.

***Arsh Intuit Sheet :***

1.<https://www.geeksforgeeks.org/partition-a-set-into-two-subsets-such-that-the-difference-of-subset-sums-is-minimum/>

2.<https://practice.geeksforgeeks.org/problems/word-search/1/>

3.[**https://practice.geeksforgeeks.org/problems/find-the-missing-no-in-string/1/**](https://practice.geeksforgeeks.org/problems/find-the-missing-no-in-string/1/)

4.<https://practice.geeksforgeeks.org/problems/largest-number-in-k-swaps-1587115620/1>

5.<https://leetcode.com/problems/split-array-largest-sum/>

6.<https://leetcode.com/problems/find-in-mountain-array>

7.[**https://leetcode.com/problems/capacity-to-ship-packages-within-d-days**](https://leetcode.com/problems/capacity-to-ship-packages-within-d-days)

**8.**[**https://leetcode.com/problems/number-of-boomerangs/**](https://leetcode.com/problems/number-of-boomerangs/)

**9.** [**https://leetcode.com/problems/pacific-atlantic-water-flow/**](https://leetcode.com/problems/pacific-atlantic-water-flow/)

**10.**[**https://leetcode.com/problems/number-of-provinces/**](https://leetcode.com/problems/number-of-provinces/)

**11.**[**https://leetcode.com/problems/construct-quad-tree/**](https://leetcode.com/problems/construct-quad-tree/)

**12.**[**https://leetcode.com/problems/course-schedule-ii/**](https://leetcode.com/problems/course-schedule-ii/)

**13.**[**https://leetcode.com/problems/minimum-swaps-to-arrange-a-binary-grid**](https://leetcode.com/problems/minimum-swaps-to-arrange-a-binary-grid)

**14.**[**https://leetcode.com/problems/as-far-from-land-as-possible/**](https://leetcode.com/problems/as-far-from-land-as-possible/)

**15.**[**https://leetcode.com/problems/koko-eating-bananas/**](https://leetcode.com/problems/koko-eating-bananas/)