Top Search Problems

* Binary Search: Given a sorted array and a target value, find the index of the target in the array using the binary search algorithm.
* Search in Rotated Sorted Array: Given a rotated sorted array, search for a target value in the array. The array might contain duplicates.
* First Bad Version: Given a range of versions from 1 to n and a function isBadVersion(version), find the first bad version using binary search.
* Find Peak Element: Given an array that is sorted in ascending order and then rotated, find the peak element in the array.
* Substring with Concatenation of All Words: Given a string and a list of words, find all starting indices of substrings in the string that are a concatenation of all the words.
* Search a 2D Matrix: Given a 2D matrix sorted by row and column, determine if a target value exists in the matrix.
* Kth Smallest Element in a Sorted Matrix: Given an n x n matrix, where each row and column is sorted in ascending order, find the kth smallest element in the matrix.
* Implement Trie (Prefix Tree): Design and implement a data structure called Trie that supports word insertion and search operations.
* Find Minimum in Rotated Sorted Array: Given a rotated sorted array, find the minimum element in the array.
* The intersection of Two Arrays: Given two arrays, find their intersection (elements that appear in both arrays) using a set or other efficient approaches.