# Q1. <https://leetcode.com/problems/find-common-characters/>

## Solution:

import java.util.ArrayList;  
import java.util.List;  
  
*/\*\*  
 \* @author pranoy.chakraborty  
 \* @Date 05/06/2023  
 \*/*public class FindCommonCharacters {  
 public static void main(String[] args) {  
 System.*out*.println(*commonStrings*(new String[]{"bella", "label", "roller"}));  
 }  
  
 public static List<String> commonStrings(String[] words) {  
 List<String> res = new ArrayList<>();  
 String temp = words[0];  
 for (int i = 1; i < words.length; i++) {  
 temp = *getCommonString*(temp, words[i]);  
 if (temp.length() == 0) return res;  
 }  
 char[] arr = temp.toCharArray();  
 for (char c : arr) {  
 res.add(String.*valueOf*(c));  
 }  
 return res;  
 }  
  
 public static String getCommonString(String a, String b) {  
 int[] arr1 = new int[26];  
 int[] arr2 = new int[26];  
 for (char c : a.toCharArray()) {  
 arr1[c - 'a']++;  
 }  
 for (char c : b.toCharArray()) {  
 arr2[c - 'a']++;  
 }  
 StringBuilder sb = new StringBuilder();  
 for (int i = 0; i < 26; i++) {  
 if (arr1[i] != 0 && arr2[i] != 0) {  
 for (int j = 0; j < Math.*min*(arr1[i], arr2[i]); j++) {  
 sb.append((char) (i + 'a'));  
 }  
 }  
 }  
 return sb.toString();  
 }  
}

# Q2. <https://leetcode.com/problems/third-maximum-number/>

## Solution*:*

*/\*\*  
 \* @author pranoy.chakraborty  
 \* @Date 07/06/2023  
 \*/*public class ThirdMaximumNumber {  
 public static void main(String[] args) {  
 System.*out*.println(*findThirdMaximum*(new int[]{2, 2, 3, 1}));  
 }  
  
 static int findThirdMaximum(int[] nums) {  
 long max = Long.*MIN\_VALUE*;  
 long max2 = Long.*MIN\_VALUE*;  
 long max3 = Long.*MIN\_VALUE*;  
 for (int num : nums) {  
 if (num > max) {  
 max3 = max2;  
 max2 = max;  
 max = num;  
 } else if (num > max2 && num < max) {  
 max3 = max2;  
 max2 = num;  
 } else if (num > max3 && num < max2) {  
 max3 = num;  
 }  
 }  
 int result = (int) ((max3 == Long.*MIN\_VALUE*) ? max : max3);  
 return result;  
 }  
}

# Q3. <https://leetcode.com/problems/find-all-numbers-disappeared-in-an-array/>

## Solution:

import java.util.\*;  
  
*/\*\*  
 \* @author pranoy.chakraborty  
 \* @Date 07/06/2023  
 \*/*public class DisappearedNumber {  
 public static void main(String[] args) {  
 System.*out*.println(*findDisappearedNumber*(new int[]{4, 3, 2, 7, 8, 2, 3, 1}));  
 }  
  
 static List<Integer> findDisappearedNumber(int[] nums) {  
 List<Integer> result = new ArrayList<>();  
 Set<Integer> numSet = new HashSet<>();  
 for (int num : nums) {  
 numSet.add(num);  
 }  
 for (int i = 1; i <= nums.length; i++) {  
 if (!numSet.contains(i)) {  
 result.add(i);  
 }  
 }  
 return result;  
 }  
}

# Q4. <https://leetcode.com/problems/minimum-moves-to-equal-array-elements/>

## Solution:

*/\*\*  
 \* @author pranoy.chakraborty  
 \* @Date 07/06/2023  
 \*/*public class MinimumMovesToEqualArrayElements {  
 public static void main(String[] args) {  
 System.*out*.println(*minMoves*(new int[]{1, 2, 3}));  
 }  
  
 static int minMoves(int[] nums) {  
 int sum = 0, min = Integer.*MAX\_VALUE*;  
 for (int num : nums) {  
 sum += num;  
 min = Math.*min*(min, num);  
 }  
 return sum - (min \* nums.length);  
 }  
}

# Q5. <https://leetcode.com/problems/assign-cookies/>

## Solution:

import java.util.Arrays;  
  
*/\*\*  
 \* @author pranoy.chakraborty  
 \* @Date 07/06/2023  
 \*/*public class AssignCookies {  
 public static void main(String[] args) {  
 System.*out*.println(*findContentChildren*(new int[]{1, 2, 3}, new int[]{1, 2}));  
 }  
  
 static int findContentChildren(int[] g, int[] s) {  
 Arrays.*sort*(g);  
 Arrays.*sort*(s);  
 int contentChildren = 0;  
 int i = 0, j = 0;  
 while (i < g.length && j < s.length) {  
 if (s[j] >= g[i]) {  
 contentChildren++;  
 i++;  
 }  
 j++;  
 }  
 return contentChildren;  
 }  
}

# Q6. <https://leetcode.com/problems/range-sum-query-2d-immutable/>

## Solution:

# Q7. <https://leetcode.com/problems/remove-element/>

## Solution:

# Q8. <https://leetcode.com/problems/intersection-of-two-arrays/>

## Solution:

# Q9. <https://leetcode.com/problems/intersection-of-two-arrays-ii/>

## Solution:

# Q10. <https://leetcode.com/problems/next-greater-element-i/>

## Solution:

# Q11. <https://leetcode.com/problems/next-greater-element-ii/>

## Solution:

# Q12. <https://leetcode.com/problems/next-greater-element-iii/>

## Solution:

# Q13. <https://leetcode.com/problems/4sum/>

## Solution:

# Q14. <https://leetcode.com/problems/reduce-array-size-to-the-half/>

## Solution: