1. Write a C++ program to count the frequency of each element in an array using a map.

| Input | Output |
| --- | --- |
| 8  1 2 2 6 5 5 5 6 | 1: 1  2: 2  5: 3  6: 2 |

1. Write a C++ program to remove all duplicates from an array using a set.

| Input | Output |
| --- | --- |
| 8  1 2 2 6 5 5 5 6 | 1 2 5 6 |

1. Write a C++ program to sort an array in the increasing order of the values but you also need to memorize the index of the values before sorting.

| Input | Output |
| --- | --- |
| 5  4 6 2 1 7 | Value 1, Previous Index 3  Value 2, Previous Index 2  Value 4, Previous Index 0  Value 6, Previous Index 1  Value 7, Previous Index 4 |

1. Write a C++ program to find the first duplicate element using a Map and print the index where it first occurred.

| Input | Output |
| --- | --- |
| 9  1 2 4 5 2 6 5 5 5 | First duplicate element is 2, first occurring at index 1. |

1. Write a C++ program to find the intersection of two arrays using a set.

| Input | Output |
| --- | --- |
| 5  1 2 3 4 5  6  3 4 5 6 7 9 | 3 4 5 |

The first array is [1,2,3,4,5] and the second array is [3,4,5,6,7,9]. Their intersection is [3,4,5]

1. Write a C++ program to print the maximum occurring word in a text. If there are multiple words occurring maximum time then print the lexicographically smallest one.

| Input | Output |
| --- | --- |
| This is a sample text is a text lol hi is text | Maximum occurring word is “is”. Occurring 3 times. |