Q1:

//Given two integer arrays nums1 and nums2, return an array of their intersection. Each

element in the result must appear as many times as it shows in both arrays and you may

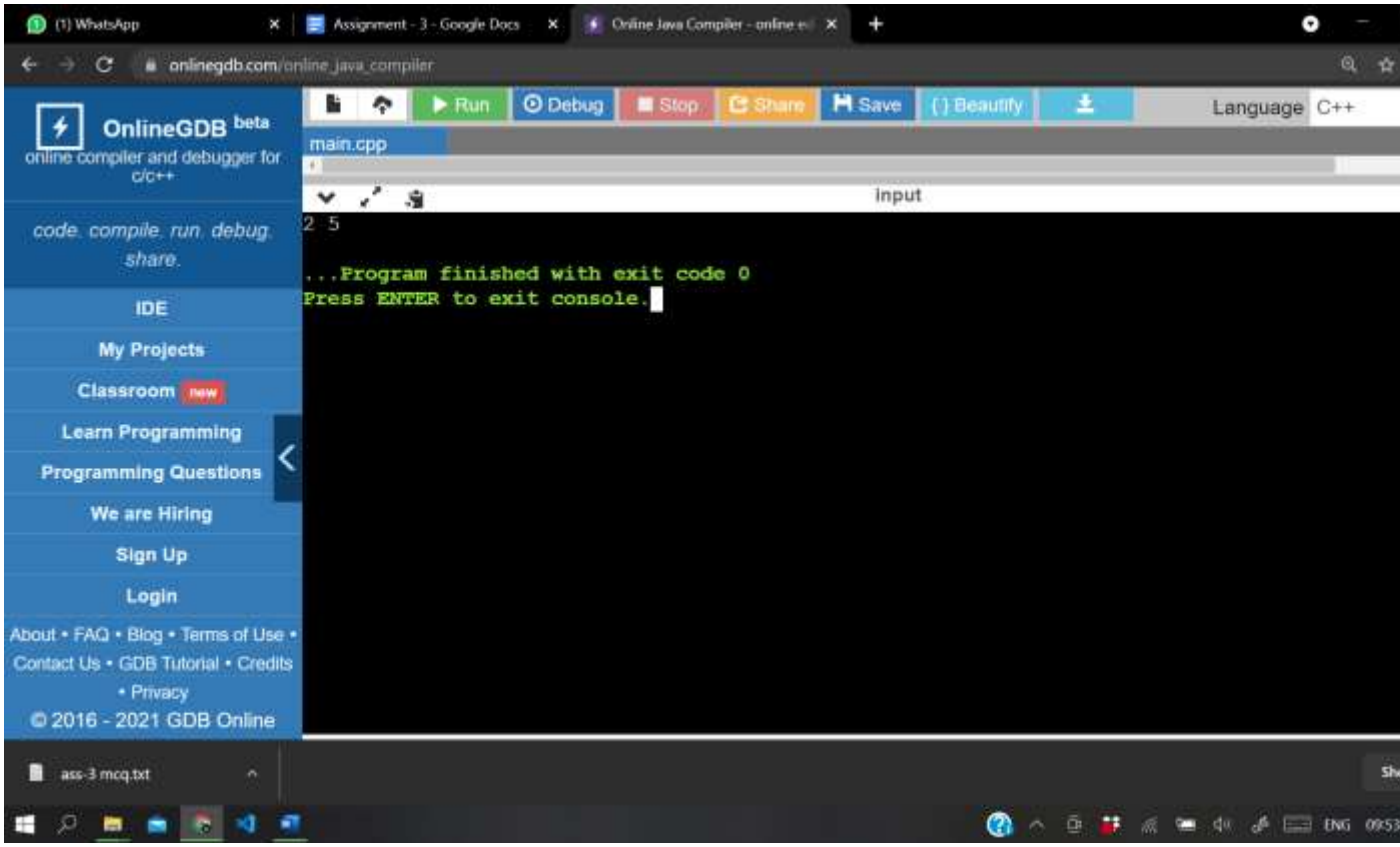
return the result in any order.

PROGRAM:

```
#include <bits/stdc++.h>
using namespace std;
void printIntersection(int arr1[], int arr2[], int m, int n)
{
   int i = 0, j = 0;
   while (i < m && j < n) {
      if (arr1[i] < arr2[j])
         i++;
      else if (arr2[j] < arr1[i])
         j++;
      else /* if arr1[i] == arr2[j] */
      {
         cout << arr2[j] << " ";
         i++;
         j++;
      }
   }
}
int main()
{
   int arr1[] = { 1, 2, 4, 5, 6 };
   int arr2[] = { 2, 3, 5, 7 };
   int m = sizeof(arr1) / sizeof(arr1[0]);
   int n = sizeof(arr2) / sizeof(arr2[0]);
  printIntersection(arr1, arr2, m, n);
```

```
  return 0;
}
```

Output:



Q2:

//Given pointer to the head node of a linked list, the task is to reverse the linked list. We need to reverse the list by changing the links between nodes.

PROGRAM:

```
#include <iostream>

using namespace std;

struct Node {
        int data;
        struct Node* next;
        Node(int data)
        {
                this->data = data;
                next = NULL;
```

```
        }
};
struct LinkedList {
        Node* head;
        LinkedList() { head = NULL; }
        void reverse()
        {
                Node* current = head;
                Node *prev = NULL, *next = NULL;

                while (current != NULL) {
                        next = current->next;
                        current->next = prev;
                        prev = current;
                        current = next;
                }
                head = prev;
        }
        void print()
        {
                struct Node* temp = head;
                while (temp != NULL) {
                        cout << temp->data << " ";
                        temp = temp->next;
                }
        }

        void push(int data)
        {
                Node* temp = new Node(data);
                temp->next = head;
                head = temp;
        }
```

```
};
int main()
{
        LinkedList ll;
        ll.push(20);
        ll.push(4);
        ll.push(15);
        ll.push(85);
        cout << "Given linked list\n";
        ll.print();
        ll.reverse();
        cout << "\nReversed Linked list \n";
        ll.print();
        return 0;
}
```

Output: