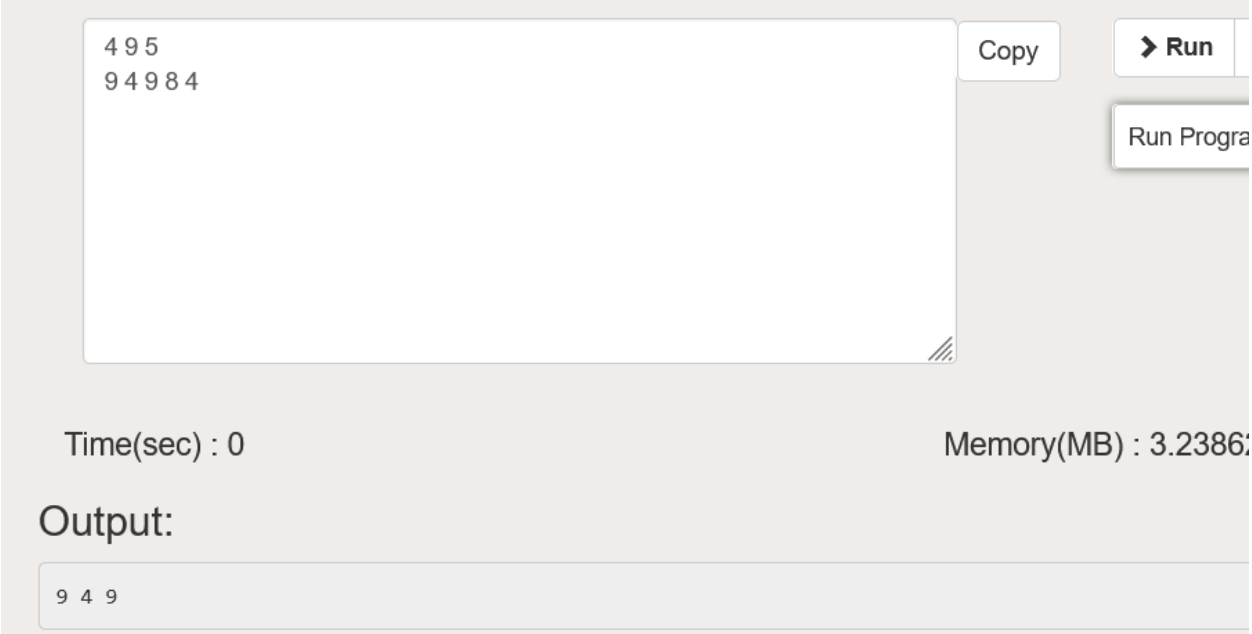
Assignment – 3

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.

Ans:

```
#include<bits/stdc++.h>
using namespace std;
int main()
{
   int nums1,nums2;
   cin>>nums1>>nums2;
   int arr1[nums1];
   int arr2[nums2];
     for(int i=0;i<nums1;i++)
     {
       cin>>arr1[i];
      }
    for(int i=0;i<nums2;i++)
    {
      cin>>arr2[i];
     }
   int m;
   if(nums1<nums2)
   {
   m=nums1;
   }
```

```
  else
  {
   m=nums2;
   }
 int ans[nums2];
  m=0;
 for(int i=0;i<nums1;i++)
 {
   int c=arr1[i];
   for(int j=0;j<nums2;j++)
   {
       if(arr2[j]==c)
       {
           ans[m]=c;
           m++;
           break;
       }
   }
}
  for(int i=0;i<m;i++)
  {
   cout<<ans[i]<<" ";
  }
     return 0;
}
```



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.

Ans :

```
#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(4);
        ll.push(3);
        ll.push(2);
        ll.push(1);
        cout << "Given linked list\n";
        ll.print();
        ll.reverse();
        cout << "\nReversed Linked list \n";
        ll.print();
        return 0;
}
```

Output:

```
Given linked list
1 2 3 4
Reversed Linked list
4 3 2 1
```

MCQs

1. Which stream class is to only write on files ?
   ➔ Ofstream
2. Which stream class is to only read from files ?
   ➔ Ifstream
3. Which stream class is used to both read and write on files ?
   ➔ Fstream
4. Which among following is used to open a file in binary mode ?
   ➔ ios::binary

5. ios::trunc is used for ?
   ➔ If the file is opened for output operations and it already existed, its previous content is deleted and replaced by the new one.
6. Which is correct syntax ?
   ➔ myfile.open ("example.bin", ios::out);
7. Which among following is correct syntax of closing a file in c++ ?
   ➔ myfile.close();

Name : NISHA KUMARI