Assignment Solutions | Arrays - 3 | Week 5

1. Count the number of triplets whose sum is equal to the given value x.

Solution:

```
#include <iostream>
using namespace std;
int main() {
    int x;
    cin>>x;
    int A[5];
    cout<<"Enter 5 elements for the array"<<endl;
    for(int i=0;i<5;i++)cin>>A[i];
    int count = 0;

      for(int i = 0; i < 5; i++){
        for(int j = i + 1; j < 5; j++){
           for(int k = j + 1; k < 5; k++){
               if(A[i] + A[j] == A[k]){
                     count++;
               }
            }
         }
      }
  cout<<count<<endl;
  return 0;
}
```

2. Find the factorial of a large number.

Solution:

```
#include <iostream>
using namespace std;
int mul(int x, int res[], int res_size){
    int carry = 0;
    for (int i = 0; i < res_size; i++) {
        int prod = res[i] * x + carry;
        res[i] = prod % 10;
        carry = prod / 10;
    }
    while (carry) {
        res[res_size] = carry % 10;
        carry = carry / 10;
        res_size++;
    }
    return res_size;
}

int main() {
    int n;
    cin>>n;
    int res[500];
     res[0] = 1;
     int res_size = 1;
```

3. Find the first non-repeating element in the array .

Solution:

```cpp
#include <iostream>
using namespace std;
int main() {
    int arr[5]={1,2,2,4,7};
    int n=5;
    for (int i = 0; i < n; i++) {
         int j;
         // Checking if ith element is present in array
         for (j = 0; j < n; j++)
             if (i != j && arr[i] == arr[j])break;
             if (j == n){
               cout<<arr[i];
               return 0;
             }
         }
      return 0;
}
```

4. Move all zeros to the end of the array.

Solution:

```cpp
#include <iostream>
using namespace std;
int main(){
    int A[] = { 0, 6, 0, 7, 6, 0, 9, 1 };
    int n = 8;
    int j = 0;
    for (int i = 0; i < n; i++) {
        if (A[i] != 0) {
            swap(A[j], A[i]);
            j++;
        }
    }
    for (int i = 0; i < n; i++) {
        cout << A[i] << " ";
    }
    return 0;
}
```
