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Q1. Write a program to Swap to two numbers.

```
#include <iostream>
using namespace std;
int main()
{
int a=5, b=10;
cout<<"Before swap a= "<<a<<" b= "<<b<<endl;
a=a*b;
b=a/b;
a=a/b;
cout<<"After swap a= "<<a<<" b= "<<b<<endl;
return 0;
}
```

Q2. Write a program to find the largest number among three numbers entered by the user.

```
#include <iostream>
using namespace std;

int main() {
    float n1, n2, n3;

    cout << "Enter three numbers: ";
    cin >> n1 >> n2 >> n3;

    if((n1 >= n2) && (n1 >= n3))
        cout << "Largest number: " << n1;
    else if ((n2 >= n1) && (n2 >= n3))
        cout << "Largest number: " << n2;
    else
        cout << "Largest number: " << n3;

    return 0;
}
```

Q3. Write a program to check whether a year entered by a user is Leap year or not.

```
#include<iostream>
using namespace std;
int main()
{
    int yr;
    cout<<"Enter the Year: ";
    cin>>yr;
    if((yr%4==0) && (yr%100!=0))
        cout<<"\nIt is a Leap Year";
    else if(yr%400==0)
        cout<<"\nIt is a Leap Year";
    else
        cout<<"\nIt is not a Leap Year";
    cout<<endl;
    return 0;
}
```

Q4. Write a program to display Fibonacci Series upto nth term. (Using loops)

```
#include<iostream>
using namespace std;
int main()
{
      int first=0, second=1, i, n, sum=0;
      cout<<"Enter the number of terms: "; cin>>n;
      //accepting the terms
      cout<<"Fibonacci Series: ";

      for(i=0 ; i<n ; i++)
     {
               if(i <= 1)
      {
            sum=i;
```

```
                }
                    // to print 0 and 1
                else
                {
                      sum=first + second;
            first=second;
                      second=sum;
                       //to calculate the remaining terms.
                      //value of first and second changes as
new term is printed.
                }
     cout<<sum<<" ";
      }

   return 0;
}
```

Q5. Write a program to check whether a number is Prime or Not.

```
#include<iostream>
using namespace std;
int main()
{
    int num, i, chk=0;
    cout<<"Enter a Number: ";
    cin>>num;
    for(i=2; i<num; i++)
    {
        if(num%i==0)
        {
            chk++;
            break;
        }
    }
    if(chk==0)
        cout<<"\nIt is a Prime Number";
```

```
    else
        cout<<"\nIt is not a Prime Number";
    cout<<endl;
    return 0;
}
```

Q6. Print this pattern using loops
For n=5

```
     *
    * *
   * * *
  * * * *
 * * * * *
```

```
#include <iostream>
using namespace std;

void triangle(int n)
{

    int k = 2 * n - 2;


    for (int i = 0; i < n; i++) {


        for (int j = 0; j < k; j++)
            cout << " ";


        k = k - 1;

        for (int j = 0; j <= i; j++) {
            // Printing stars
            cout << "* ";
        }

        cout << endl;
```

```
    }
}

// Driver Code
int main()
{
    int n = 5;


    triangle(n);
    return 0;
}
```

Q7.Write a program that takes n elements from the user and displays the second largest element of an array.

```
#include<iostream>
using namespace std;
int main ()
{
    int A[10], n, i, j, x;
    cout << "Enter size of array : ";
    cin >> n;
    cout << "Enter elements of array : ";
    for (i = 0; i < n; i++)
        cin >> A[i];
    for (i = 0; i < n; i++)
    {
        for (j = i + 1; j < n; j++)
        {
            if (A[i] < A[j])
            {
                x = A[i];
                A[i] = A[j];
                A[j] = x;
            }
        }
    }
```

```
    cout << "Second largest number : " << A[1];
    return 0;
}
```

Q8.
https://www.hackerrank.com/challenges/array-left-rotation/problem

```
#include <cmath>
#include <cstdio>
#include <vector>
#include <iostream>
#include <algorithm>
using namespace std;


int main() {
    int N, d; cin >> N >> d;
    vector<int> v(N);
    for (size_t i = 0; i < v.size(); ++i) {
        cin >> v[i];
    }
    d = d % N;
    for (int i = d; i < N; ++i)
        cout << v[i] << ' ';
    for (int i = 0; i < d; ++i)
        cout << v[i] << ' ';
    /* Enter your code here. Read input from STDIN. Print
output to STDOUT */
    return 0;
}
```

Q9. https://www.hackerrank.com/challenges/grading/problem

```
#include <map>
#include <set>
#include <list>
#include <cmath>
#include <ctime>
#include <deque>
#include <queue>
#include <stack>
#include <string>
#include <bitset>
#include <cstdio>
#include <limits>
#include <vector>
#include <climits>
#include <cstring>
#include <cstdlib>
#include <fstream>
#include <numeric>
#include <sstream>
#include <iostream>
#include <algorithm>
#include <unordered_map>

using namespace std;


int main(){
    int n;
    cin >> n;
    for(int a0 = 0; a0 < n; a0++){
        int grade;
        cin >> grade;

        if (grade < 38) {
            cout << grade << "\n";
```

```
            continue;
        }

        int rem = grade % 5;
        if (5 - rem < 3)
            grade += 5 - rem;
        cout << grade << "\n";
    }
    return 0;
}
```

Q10.
https://www.hackerrank.com/challenges/camelcase/problem

```
#include <bits/stdc++.h>
using namespace std;

int main() {

 string str;
 int cnt = 1;
 cin >> str;
 int len = str.length();
 for(int i = 0; i < len; i++){
        if(str[i]>= 65 && str[i] <= 90)cnt++;
 }
 cout << cnt << endl;
 return 0;
}
```