main.cpp

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

int findSingle(int ar[], int ar_size)
    {

        int res = ar[0];
        for (int i = 1; i < ar_size; i++)
            res = res ^ ar[i];

        return res;
    }


int main()
    {
        int ar[] = {2, 3, 5, 4, 5, 3, 4};
        int n = sizeof(ar) / sizeof(ar[0]);
        cout << "Element occurring once is "
            << findSingle(ar, n);
```

input

```
Element occurring once is 2

...Program finished with exit code 0
Press ENTER to exit console.
```

```cpp
    int min_xor = INT_MAX;


    for (int i = 0; i < n; i++)
        for (int j = i + 1; j < n; j++)


            min_xor = min(min_xor, arr[i] ^ arr[j]);

    return min_xor;
}


int main()
{
    int arr[] = { 9, 5, 3 };
    int n = sizeof(arr) / sizeof(arr[0]);
    cout << minXOR(arr, n) << endl;
    return 0;
}
```

2

input

```
6

...Program finished with exit code 0
Press ENTER to exit console.
```

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


int solve(int low, int high, int T)
{
    while (low <= high) {
        int mid = (low + high) / 2;


        if ((mid * (mid + 1)) == T)
            return mid;


        if (mid > 0 && (mid * (mid + 1)) > T &&
                        (mid * (mid - 1)) <= T)
            return mid - 1;


        if ((mid * (mid + 1)) > T)
```

```
Number of stair steps = 4



...Program finished with exit code 0
Press ENTER to exit console.
```

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


int numberOfPaths(int m, int n)
{

    if (m == 1 || n == 1)
        return 1;


    return numberOfPaths(m - 1, n) + numberOfPaths(m, n - 1);

}

int main()
{
    cout << numberOfPaths(3, 3);
    return 0;
```

4

```
6

...Program finished with exit code 0
Press ENTER to exit console.
```

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


int floorSqrt(int x)
{

    if (x == 0 || x == 1)
    return x;


    int i = 1, result = 1;
    while (result <= x)
    {
    i++;
    result = i * i;
    }
    return i - 1;
}
```

5

input

```
3



...Program finished with exit code 0
Press ENTER to exit console.
```