# EXPERIMENT -5

# Aim: To find missing number from a sorted array of the numbers.

## Pseudo code

Function findMissingNumber(arr[], n)

For i = 0 to n - 1

If arr[i] ≠ i + 1

Return i + 1

End For

Return n + 1

Input n

Input arr[n]

missingNumber = findMissingNumber(arr, n)

Output "Missing number is:", missingNumber

## Source code:

#include <iostream>

using namespace std;

int findMissingNumber(int arr[], int n) {

    for (int i = 0; i < n; i++) {

        if (arr[i] != i + 1) {

            return i + 1;

        }

    }

    return n + 1;

}

int main() {

    int n;

    cin >> n;

    int arr[n];

    for (int i = 0; i < n; i++) {

        cin >> arr[i];

    }

    int missingNumber = findMissingNumber(arr, n);

    cout << "Missing number is: " << missingNumber << endl;

    return 0;

}

## Output:

**5**

**1 3 4 5 6**

**Missing number is: 2**

## Learning from experiment

* **Array Element Mismatch Detection**: Detects mismatches in array elements.
* **Find Missing Number**: Identifies the missing number efficiently.