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

int main() {
    int N;
    cin >> N;

    int arr[N], Index[501];

    for (int i = 0; i <= 500; i++) Index[i] = -1;

    for (int i = 0; i < N; i++) {
        cin >> arr[i];
        Index[arr[i]] = i;
    }

    int Q, query;
    cin >> Q;

    while (Q--) {
        cin >> query;
        cout << Index[query] << endl;
    }
```

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

int main() {
    int N;
    cin >> N;

    int arr[N];
    int min = 2001, max = -1;

    for (int i = 0; i < N; i++) {
        cin >> arr[i];
        if (arr[i] < min) min = arr[i];
        if (arr[i] > max) max = arr[i];
    }

    for (int i = 0; i < N; i++) {
        if (arr[i] == min) cout << max << " ";
        else if (arr[i] == max) cout << min << " ";
        else cout << arr[i] << " ";
    }

    return 0;
}
```

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

int main() {
    int N;
    cin >> N;

    int arr[N];
    for (int i = 0; i < N; i++) {
        cin >> arr[i];
    }

    int min = 1e9;

    for (int i = 0; i < N - 1; i++) {
        for (int j = i + 1; j < N; j++) {
            int result = arr[i] + arr[j] + (j - i);
            if (result < min) {
                min= result;
            }
        }
    }

    cout << min << endl;
    return 0;
}
```

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

int main() {
    int N;
    cin >> N;

    int arr[N];
    for (int i = 0; i < N; i++) {
        cin >> arr[i];
    }

    bool isPalindrome = true;

    for (int i = 0; i < N / 2; i++) {
        if (arr[i] != arr[N - 1 - i]) {
            isPalindrome = false;
            break;
        }
    }

    if (isPalindrome) {
        cout << "YES" << endl;
    } else {
        cout << "NO" << endl;
    }

    return 0;
}
```

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

int main() {
    int N;
    cin >> N;

    int arr[N];
    int freq[771] = {0};

    for (int i = 0; i < N; i++) {
        cin >> arr[i];
        freq[arr[i] + 500]++;
    }
    int maxFreq = 0, mostFreqNum = -500;
    for (int i = 0; i < 771; i++) {
        if (freq[i] > maxFreq) {
            maxFreq = freq[i];
            mostFreqNum = i - 500;
        }
    }
    cout << mostFreqNum << endl;
    return 0;
}
```

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

int main() {
    int N, num;
    int freq[10] = {0};

    cin >> N;

    for (int i = 0; i < N; i++) {
        cin >> num;
        while (num > 0) {
            freq[num % 10]++;
            num /= 10;
        }
    }

    for (int i = 0; i < 10; i++) {
        cout << i << " " << freq[i] << endl;
    }

    return 0;
}
```

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

int main() {
    int index;
    cin >> index;

    int sequence[201] = {0};
    bool seen[5000] = {false};
    seen[0] = true;

    for (int i = 1; i <= 200; i++) {
        int next = sequence[i - 1] - i;
        if (next > 0 && !seen[next]) {
            sequence[i] = next;
        } else {
            sequence[i] = sequence[i - 1] + i;
        }
        seen[sequence[i]] = true;
    }

    cout << sequence[index] << endl;

    return 0;
}
```

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

int main() {
    int K, N;
    cin >> K >> N;

    int arr[N];
    for (int i = 0; i < N; i++) {
        cin >> arr[i];
    }

    int sum = 0, maxSum, startIndex = 0;

    for (int i = 0; i < K; i++) {
        sum += arr[i];
    }
    maxSum = sum;

    for (int i = K; i < N; i++) {
        sum += arr[i] - arr[i - K];
        if (sum > maxSum) {
            maxSum = sum;
            startIndex = i - K + 1;
        }
    }

    for (int i = startIndex; i < startIndex + K; i++) {
        cout << arr[i] << " ";
    }

    return 0;
}
```

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

int main() {
    int N;
    cin >> N;

    int arr[N];
    for (int i = 0; i < N; i++) {
        cin >> arr[i];
    }

    long long count = 0, length = 1;

    for (int i = 1; i < N; i++) {
        if (arr[i] > arr[i - 1]) {
            length++;
        } else {
            count += (length * (length + 1)) / 2;
            length = 1;
        }
    }

    count += (length * (length + 1)) / 2;
    cout << count << endl;

    return 0;
}
```

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

int main() {
    int N, K;
    cin >> N >> K;

    int arr[200];
    for (int i = 0; i < N; i++) {
        arr[i] = i + 1;
    }

    int index = 0;
    int remaining = N;

    while (remaining > 1) {
        index = (index + K - 1) % remaining;

        for (int i = index; i < remaining - 1; i++) {
            arr[i] = arr[i + 1];
        }
        remaining--;
    }
    cout << arr[0] << endl;
    return 0;
}
```

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

int main() {
    int N;
    cin >> N;

    int arr[1000], prefixSum[1000];

    for (int i = 0; i < N; i++) {
        cin >> arr[i];
        if (arr[i] == 0) arr[i] = -1;
    }

    int maxLength = 0;

    for (int i = 0; i < N; i++) {
        int sum = 0;
        for (int j = i; j < N; j++) {
       sum += arr[j];
        if (sum == 0) {
        maxLength = max(maxLength, j - i + 1);
            }
        }
    }

    cout << maxLength << endl;
    return 0;
}
```

```cpp
int main() {
    int N;
    cout << "enter your array: ";
    cin >> N;

    if (N < 3) {
        cout << "يجب أن يكون N 3 على الأقل." << endl;
        return 1;
    }

    int arr[N];
    cout << "ادخل " << N << " أرقام: ";

    int min1 = 1000000, min2 = 1000000, min3 = 1000000;

    for (int i = 0; i < N; i++) {
        cin >> arr[i];

        if (arr[i] < min1) {
            min3 = min2;
            min2 = min1;
            min1 = arr[i];
        } else if (arr[i] < min2) {
            min3 = min2;
            min2 = arr[i];
        } else if (arr[i] < min3) {
            min3 = arr[i];
        }
    }

    cout << "أصغر 3 أرقام: " << min1 << " " << min2 << " " << min3 << endl;

    return 0;
}
```

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

int main() {
    int N;
    cin >> N;

    int arr[N];
    bool isIncreasing = true;

    for (int i = 0; i < N; i++) {
        cin >> arr[i];
        if (i > 0 && arr[i] < arr[i - 1]) {
            isIncreasing = false;
        }
    }

    if (isIncreasing) {
        cout << "YES" << endl;
    } else {
        cout << "NO" << endl;
    }

    return 0;
}
```

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

int main() {
    string input, str;
    cin >> input >> str;
    bool isPrefix = true;
    if (str.length() > input.length()) {
        isPrefix = false;
    } else {
        for (int i = 0; i < str.length(); i++) {
            if (input[i] != str[i]) {
            isPrefix = false;
             break;
             }
        }
    }
    if (isPrefix) {
        cout << "YES" << endl;
    } else {
        cout << "NO" << endl;
    }
    return 0;
}

```

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

int main() {
    string input, str;
    cin >> input >> str;
  bool isSuffix = true;
  int inputLen = input.length(), strLen = str.length();
    if (strLen > inputLen) {
        isSuffix = false;
    } else {
        for (int i = 0; i < strLen; i++) {
            if (input[inputLen - strLen + i] != str[i]) {
        isSuffix = false;
         break;
           }
       }
    }
    if (isSuffix) {
        cout << "YES" << endl;
    } else {
        cout << "NO" << endl;
    }
    return 0;
}

```

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

int main() {
    string input, str;
    cin >> input >> str;
    bool found = false;
    int inputLen = input.length(), strLen = str.length();
    for (int i = 0; i <= inputLen - strLen; i++) {
        bool match = true;
        for (int j = 0; j < strLen; j++) {
            if (input[i + j] != str[j]) {
            match = false;
      break;
            }
        }
        if (match) {
            found = true;
            break;
        }
    }
    if (found) {
        cout << "YES" << endl;
    } else {
        cout << "NO" << endl;
    }
    return 0;
}

```

```cpp
#include <iostream>
using namespace std;
bool isSubsequence(string input, string str) {
    int i = 0, j = 0;
    while (i < input.length() && j < str.length()) {
        if (input[i] == str[j]) {
            j++;
        }
        i++;
    }
    return j == str.length();
}
int main() {
    string input, str;
    cin >> input >> str;

    if (isSubsequence(input, str)) {
        cout << "YES" << endl;
    } else {
        cout << "NO" << endl;
    }
    return 0;
}

```

```cpp
#include <iostream>
using namespace std;
int main() {
    int N, M;
    cin >> N >> M;

    int matrix[N][M];
    for (int i = 0; i < N; i++) {
        for (int j = 0; j < M; j++) {
            cin >> matrix[i][j];
        }
    }
    int Q;
    cin >> Q;
    while (Q--) {
        int r1, r2;
        cin >> r1 >> r2;
        r1--; r2--;

        bool isSmaller = true;
        for (int j = 0; j < M; j++) {
            if (matrix[r1][j] >= matrix[r2][j]) {
           isSmaller = false;
                break;
            }
        }
        if (isSmaller)
          cout << "YES" << endl;
        else
            cout << "NO" << endl;
    }
    return 0;
}
```

```cpp
#include <iostream>
using namespace std;
int main() {
    int N;
    cin >> N;
    int matrix[N][N];
    int upperSum = 0, lowerSum = 0;
    for (int i = 0; i < N; i++) {
        for (int j = 0; j < N; j++) {
            cin >> matrix[i][j];
          if (j >= i)
            upperSum += matrix[i][j];
            if (i >= j)
                lowerSum += matrix[i][j];
        }
    }

    cout << upperSum << endl;
    cout << lowerSum << endl;

    return 0;
}

```