

```
return 0; } // task1.cpp // main()
#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;
    }
}
```

```
1  #include <iostream>
2  using namespace std;
3
4  int main() {
5      int N;
6      cin >> N;
7
8      int arr[N];
9      int min = 2001, max = -1;
10
11     for (int i = 0; i < N; i++) {
12         cin >> arr[i];
13         if (arr[i] < min) min = arr[i];
14         if (arr[i] > max) max = arr[i];
15     }
16
17     for (int i = 0; i < N; i++) {
18         if (arr[i] == min) cout << max << " ";
19         else if (arr[i] == max) cout << min << " ";
20         else cout << arr[i] << " ";
21     }
22
23     return 0;
24 }
25
```

```
1  #include <iostream>
2  using namespace std;
3
4  int main() {
5      int N;
6      cin >> N;
7
8      int arr[N];
9      for (int i = 0; i < N; i++) {
10         cin >> arr[i];
11     }
12
13     int min = 1e9;
14
15     for (int i = 0; i < N - 1; i++) {
16         for (int j = i + 1; j < N; j++) {
17             int result = arr[i] + arr[j] + (j - i);
18             if (result < min) {
19                 min = result;
20             }
21         }
22     }
23
24     cout << min << endl;
25     return 0;
26 }
27
```

```
1  #include <iostream>
2  using namespace std;
3
4  int main() {
5      int N;
6      cin >> N;
7
8      int arr[N];
9      for (int i = 0; i < N; i++) {
10         cin >> arr[i];
11     }
12
13     bool isPalindrome = true;
14
15     for (int i = 0; i < N / 2; i++) {
16         if (arr[i] != arr[N - 1 - i]) {
17             isPalindrome = false;
18             break;
19         }
20     }
21
22     if (isPalindrome) {
23         cout << "YES" << endl;
24     } else {
25         cout << "NO" << endl;
26     }
27
28     return 0;
29 }
30
```

```
1  #include <iostream>
2  using namespace std;
3
4  int main() {
5      int N;
6      cin >> N;
7
8      int arr[N];
9      int freq[771] = {0};
10
11     for (int i = 0; i < N; i++) {
12         cin >> arr[i];
13         freq[arr[i] + 500]++;
14     }
15     int maxFreq = 0, mostFreqNum = -500;
16     for (int i = 0; i < 771; i++) {
17         if (freq[i] > maxFreq) {
18             maxFreq = freq[i];
19             mostFreqNum = i - 500;
20         }
21     }
22     cout << mostFreqNum << endl;
23     return 0;
24 }
```

```
1  #include <iostream>
2  using namespace std;
3
4  int main() {
5      int N, num;
6      int freq[10] = {0};
7
8      cin >> N;
9
10     for (int i = 0; i < N; i++) {
11         cin >> num;
12         while (num > 0) {
13             freq[num % 10]++;
14             num /= 10;
15         }
16     }
17
18     for (int i = 0; i < 10; i++) {
19         cout << i << " " << freq[i] << endl;
20     }
21
22     return 0;
23 }
```

```
1 #include <iostream>
2 using namespace std;
3
4 int main() {
5     int index;
6     cin >> index;
7
8     int sequence[201] = {0};
9     bool seen[5000] = {false};
10    seen[0] = true;
11
12    for (int i = 1; i <= 200; i++) {
13        int next = sequence[i - 1] - i;
14        if (next > 0 && !seen[next]) {
15            sequence[i] = next;
16        } else {
17            sequence[i] = sequence[i - 1] + i;
18        }
19        seen[sequence[i]] = true;
20    }
21
22    cout << sequence[index] << endl;
23
24    return 0;
25 }
```

```

1  #include <iostream>
2  using namespace std;
3
4  int main() {
5      int K, N;
6      cin >> K >> N;
7
8      int arr[N];
9      for (int i = 0; i < N; i++) {
10         cin >> arr[i];
11     }
12
13     int sum = 0, maxSum, startIndex = 0;
14
15     for (int i = 0; i < K; i++) {
16         sum += arr[i];
17     }
18     maxSum = sum;
19
20     for (int i = K; i < N; i++) {
21         sum += arr[i] - arr[i - K];
22         if (sum > maxSum) {
23             maxSum = sum;
24             startIndex = i - K + 1;
25         }
26     }
27
28     for (int i = startIndex; i < startIndex + K; i++) {
29         cout << arr[i] << " ";
30     }
31
32     return 0;
33 }
34

```



```
1  #include <iostream>
2  using namespace std;
3
4  int main() {
5      int N;
6      cin >> N;
7
8      int arr[N];
9      for (int i = 0; i < N; i++) {
10         cin >> arr[i];
11     }
12
13     long long count = 0, length = 1;
14
15     for (int i = 1; i < N; i++) {
16         if (arr[i] > arr[i - 1]) {
17             length++;
18         } else {
19             count += (length * (length + 1)) / 2;
20             length = 1;
21         }
22     }
23
24     count += (length * (length + 1)) / 2;
25     cout << count << endl;
26
27     return 0;
28 }
29
```

```
1  #include <iostream>
2  using namespace std;
3
4  int main() {
5      int N, K;
6      cin >> N >> K;
7
8      int arr[200];
9      for (int i = 0; i < N; i++) {
10         arr[i] = i + 1;
11     }
12
13     int index = 0;
14     int remaining = N;
15
16     while (remaining > 1) {
17         index = (index + K - 1) % remaining;
18
19         for (int i = index; i < remaining - 1; i++) {
20             arr[i] = arr[i + 1];
21         }
22         remaining--;
23     }
24     cout << arr[0] << endl;
25     return 0;
26 }
27
```

```
1  #include <iostream>
2  using namespace std;
3
4  int main() {
5      int N;
6      cin >> N;
7
8      int arr[1000], prefixSum[1000];
9
10     for (int i = 0; i < N; i++) {
11         cin >> arr[i];
12         if (arr[i] == 0) arr[i] = -1;
13     }
14
15     int maxLength = 0;
16
17     for (int i = 0; i < N; i++) {
18         int sum = 0;
19         for (int j = i; j < N; j++) {
20             sum += arr[j];
21             if (sum == 0) {
22                 maxLength = max(maxLength, j - i + 1);
23             }
24         }
25     }
26
27     cout << maxLength << endl;
28     return 0;
29 }
```

```

4 int main() {
5     int N;
6     cout << "enter your array: ";
7     cin >> N;
8
9     if (N < 3) {
10         cout << "على الأقل 3 N يجب أن يكون." << endl;
11         return 1;
12     }
13
14     int arr[N];
15     cout << "أرقام: " << N << " ادخل ";
16
17     int min1 = 1000000, min2 = 1000000, min3 = 1000000;
18
19     for (int i = 0; i < N; i++) {
20         cin >> arr[i];
21
22         if (arr[i] < min1) {
23             min3 = min2;
24             min2 = min1;
25             min1 = arr[i];
26         } else if (arr[i] < min2) {
27             min3 = min2;
28             min2 = arr[i];
29         } else if (arr[i] < min3) {
30             min3 = arr[i];
31         }
32     }
33
34     cout << "أصغر 3 أرقام: " << min1 << " " << min2 << " " << min3 << endl;
35
36     return 0;
37 }

```

```
1  #include <iostream>
2  using namespace std;
3
4  int main() {
5      int N;
6      cin >> N;
7
8      int arr[N];
9      bool isIncreasing = true;
10
11     for (int i = 0; i < N; i++) {
12         cin >> arr[i];
13         if (i > 0 && arr[i] < arr[i - 1]) {
14             isIncreasing = false;
15         }
16     }
17
18     if (isIncreasing) {
19         cout << "YES" << endl;
20     } else {
21         cout << "NO" << endl;
22     }
23
24     return 0;
25 }
```

```
1  #include <iostream>
2  using namespace std;
3
4  int main() {
5      string input, str;
6      cin >> input >> str;
7      bool isPrefix = true;
8      if (str.length() > input.length()) {
9          isPrefix = false;
10     } else {
11         for (int i = 0; i < str.length(); i++) {
12             if (input[i] != str[i]) {
13                 isPrefix = false;
14                 break;
15             }
16         }
17     }
18     if (isPrefix) {
19         cout << "YES" << endl;
20     } else {
21         cout << "NO" << endl;
22     }
23     return 0;
24 }
25
```

```
1  #include <iostream>
2  using namespace std;
3
4  int main() {
5      string input, str;
6      cin >> input >> str;
7      bool isSuffix = true;
8      int inputLen = input.length(), strLen = str.length();
9      if (strLen > inputLen) {
10         isSuffix = false;
11     } else {
12         for (int i = 0; i < strLen; i++) {
13             if (input[inputLen - strLen + i] != str[i]) {
14                 isSuffix = false;
15                 break;
16             }
17         }
18     }
19     if (isSuffix) {
20         cout << "YES" << endl;
21     } else {
22         cout << "NO" << endl;
23     }
24     return 0;
25 }
```

```
1  #include <iostream>
2  using namespace std;
3
4  int main() {
5      string input, str;
6      cin >> input >> str;
7      bool found = false;
8      int inputLen = input.length(), strLen = str.length();
9      for (int i = 0; i <= inputLen - strLen; i++) {
10         bool match = true;
11         for (int j = 0; j < strLen; j++) {
12             if (input[i + j] != str[j]) {
13                 match = false;
14                 break;
15             }
16         }
17         if (match) {
18             found = true;
19             break;
20         }
21     }
22     if (found) {
23         cout << "YES" << endl;
24     } else {
25         cout << "NO" << endl;
26     }
27     return 0;
28 }
```



```
1  #include <iostream>
2  using namespace std;
3  bool isSubsequence(string input, string str) {
4      int i = 0, j = 0;
5      while (i < input.length() && j < str.length()) {
6          if (input[i] == str[j]) {
7              j++;
8          }
9          i++;
10     }
11     return j == str.length();
12 }
13 int main() {
14     string input, str;
15     cin >> input >> str;
16
17     if (isSubsequence(input, str)) {
18         cout << "YES" << endl;
19     } else {
20         cout << "NO" << endl;
21     }
22     return 0;
23 }
24
```

```
1  #include <iostream>
2  using namespace std;
3  int main() {
4      int N, M;
5      cin >> N >> M;
6
7      int matrix[N][M];
8      for (int i = 0; i < N; i++) {
9          for (int j = 0; j < M; j++) {
10             cin >> matrix[i][j];
11         }
12     }
13     int Q;
14     cin >> Q;
15     while (Q--) {
16         int r1, r2;
17         cin >> r1 >> r2;
18         r1--; r2--;
19
20         bool isSmaller = true;
21         for (int j = 0; j < M; j++) {
22             if (matrix[r1][j] >= matrix[r2][j]) {
23                 isSmaller = false;
24                 break;
25             }
26         }
27         if (isSmaller)
28             cout << "YES" << endl;
29         else
30             cout << "NO" << endl;
31     }
32     return 0;
33 }
```

```
1  #include <iostream>
2  using namespace std;
3  int main() {
4      int N;
5      cin >> N;
6      int matrix[N][N];
7      int upperSum = 0, lowerSum = 0;
8      for (int i = 0; i < N; i++) {
9          for (int j = 0; j < N; j++) {
10             cin >> matrix[i][j];
11             if (j >= i)
12                 upperSum += matrix[i][j];
13             if (i >= j)
14                 lowerSum += matrix[i][j];
15         }
16     }
17
18     cout << upperSum << endl;
19     cout << lowerSum << endl;
20
21     return 0;
22 }
```