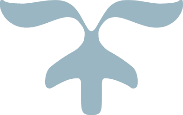


DAA WEEK – 4 SKILL – 4



# [Ice Cream Parlor](https://www.hackerrank.com/contests/daa-skill-04-searching-and-sorting-part-2/challenges/icecream-parlor)

#include <stdio.h>

int main() {

int t, m, n;

scanf("%d", &t);

while (t--) {

scanf("%d %d", &m, &n);

int a[n];

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

scanf("%d", &a[i]);

}

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

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

if (a[i] + a[j] == m) {

printf("%d %d\n", i + 1, j + 1);

break;

}

}

}

}

return 0;

}

**Ice Cream Parlor Test Cases**

**A screenshot of a computer

Description automatically generated**

# [Missing Numbers](https://www.hackerrank.com/contests/daa-skill-04-searching-and-sorting-part-2/challenges/missing-numbers)

#include <stdio.h>

#include <stdlib.h>

void missingNumbers(int\* arr, int\* brr, int n, int m) {

int max = 0;

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

if (arr[i] > max) max = arr[i];

for (int i = 0; i < m; i++)

if (brr[i] > max) max = brr[i];

int\* list = (int\*)calloc(max + 1, sizeof(int));

for (int i = 0; i < n; i++) list[arr[i]]++;

for (int i = 0; i < m; i++) list[brr[i]]--;

for (int i = 0; i <= max; i++)

if (list[i] < 0) printf("%d ", i);

free(list);

}

int main() {

int n, m;

scanf("%d", &n);

int arr[n];

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

scanf("%d", &arr[i]);

scanf("%d", &m);

int brr[m];

for (int i = 0; i < m; i++)

scanf("%d", &brr[i]);

missingNumbers(arr, brr, n, m);

return 0;

}

**Missing Numbers Test Cases**

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# [Sherlock and Array](https://www.hackerrank.com/contests/daa-skill-04-searching-and-sorting-part-2/challenges/sherlock-and-array)

#include <stdio.h>

char\* balancedSums(int\* arr, int n) {

long long leftsum = 0, total = 0;

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

total += arr[i];

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

if (leftsum == total - arr[i] - leftsum)

return "YES";

leftsum += arr[i];

}

return "NO";

}

int main() {

int T;

scanf("%d", &T);

while (T--) {

int n;

scanf("%d", &n);

int arr[n];

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

scanf("%d", &arr[i]);

printf("%s\n", balancedSums(arr, n));

}

return 0;

}

**Sherlock and Array Test Cases**

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Description automatically generated**

# [Minimum Loss](https://www.hackerrank.com/contests/daa-skill-04-searching-and-sorting-part-2/challenges/minimum-loss) C++ CODE

#include <stdio.h>

#include <algorithm>

using namespace std;

typedef long long ll;

int n, k;

pair<ll, int> a[200001];

int main() {

scanf("%d", &n);

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

scanf("%lld", &a[i].first);

a[i].second = i;

}

sort(a, a + n);

ll res = 1e18;

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

if(a[i].second < a[i - 1].second)

res = min(res, abs(a[i].first - a[i - 1].first));

printf("%lld\n", res);

}

**Minimum Loss Test Cases**

**A screenshot of a computer

Description automatically generated**

# [Pairs](https://www.hackerrank.com/contests/daa-skill-04-searching-and-sorting-part-2/challenges/pairs)

#include <stdio.h>

#include <stdlib.h>

int compare(const void \*a, const void \*b) {

return (\*(int\*)a - \*(int\*)b);

}

int main() {

int n, k, count = 0;

scanf("%d %d", &n, &k);

int num[n];

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

scanf("%d", &num[i]);

}

qsort(num, n, sizeof(int), compare);

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

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

if (abs(num[j] - num[i]) == k) {

count++;

} else if (abs(num[j] - num[i]) > k) {

break;

}

}

}

printf("%d\n", count);

return 0;

}

**Paris Test Cases**

**A screenshot of a computer

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**SKILL WEEK – 3**

[**https://www.hackerrank.com/contests/daa-skill-04-searching-and-sorting-part-2/challenges**](https://www.hackerrank.com/contests/daa-skill-04-searching-and-sorting-part-2/challenges)