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- > General
- > BASIC C PROGRAMMING
- > Finding Time Complexity of ...
- > Divide and Conquer
- > Greedy Algorithms
- > Dynamic Programming
- ▼ Competitive Programming

- 1-Finding Duplicates-O(n^2) Ti...
- 2-Finding Duplicates-O(n) Tim...
- 3-Print Intersection of 2 sorte...
- 4-Print Intersection of 2 sorte...
- 5-Pair with Difference-O(n^2)T...
- 6-Pair with Difference -O(n) Ti...



DIVYASH H 2024-CSE

D2



Dashboard My courses



CS23331-DAA-2024-CSE / 2-Finding Duplicates-O(n) Time Complexity,O(1) Space Complexity



2-Finding Duplicates-O(n) Time Complexity,O(1) Space Complexity

Started on	Sunday, 19 October 2025, 8:01 PM
State	Finished
Completed on	Sunday, 19 October 2025, 8:05 PM
Time taken	3 mins 39 secs
Marks	1.00/1.00
Grade	4.00 out of 4.00 (100%)

Question 1 | Correct Mark 1.00 out of 1.00 [Flag question](#)

Find Duplicate in Array.

Given a read only array of n integers between 1 and n, find one number that repeats.

Input Format:

First Line - Number of elements

n Lines - n Elements

Output Format:

Element x - That is repeated

For example:

Input	Result
5	1
1 1 2 3 4	

Answer: (penalty regime: 0 %)

```

1 #include <stdio.h>
2
3 int main() {
4     int n;
5     scanf("%d", &n);
6
7     int arr[n];
8     int freq[n + 1];
9
10    for (int i = 0; i <= n; i++)
11        freq[i] = 0;
12
13    for (int i = 0; i < n; i++) {
14        scanf("%d", &arr[i]);
15        freq[arr[i]]++;
16
17        if (freq[arr[i]] > 1) {
18            printf("%d\n", arr[i]);
19            return 0;
20        }
21    }
22
23    printf("No duplicate\n");
24    return 0;
25 }
```

Input	Expected	Got	
✓ 11 10 9 7 6 5 1 2 3 8 4 7	7	7	✓
✓ 5 1 2 3 4 4	4	4	✓
✓ 5 1 1 2 3 4	1	1	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

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Data retention summary

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- > General
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Dashboard My courses



CS23331-DAA-2024-CSE / 2-Finding Duplicates-O(n) Time Complexity,O(1) Space Complexity



2-Finding Duplicates-O(n) Time Complexity,O(1) Space Complexity

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Find Duplicate in Array.

Given a read only array of n integers between 1 and n, find one number that repeats.

Input Format:

First Line - Number of elements

n Lines - n Elements

Output Format:

Element x - That is repeated

For example:

Input	Result
5	1
1 1 2 3 4	

Answer: (penalty regime: 0 %)

```

1 #include <stdio.h>
2
3 int main() {
4     int n;
5     scanf("%d", &n);
6
7     int arr[n];
8     int freq[n + 1];
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10    for (int i = 0; i <= n; i++)
11        freq[i] = 0;
12
13    for (int i = 0; i < n; i++) {
14        scanf("%d", &arr[i]);
15        freq[arr[i]]++;
16
17        if (freq[arr[i]] > 1) {
18            printf("%d\n", arr[i]);
19            return 0;
20        }
21    }
22
23    printf("No duplicate\n");
24    return 0;
25 }
```

Input	Expected	Got	
✓ 11 10 9 7 6 5 1 2 3 8 4 7	7	7	✓
✓ 5 1 2 3 4 4	4	4	✓
✓ 5 1 1 2 3 4	1	1	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

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General

- MODEL EXAM CSE Batch 1
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- > BASIC C PROGRAMMING
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DIVYASH H 2024-CSE

D2



Dashboard My courses



CS23331-DAA-2024-CSE / 6-Pair with Difference -O(n) Time Complexity,O(1) Space Complexity



6-Pair with Difference -O(n) Time Complexity,O(1) Space Complexity

Started on	Sunday, 19 October 2025, 8:21 PM
State	Finished
Completed on	Sunday, 19 October 2025, 8:25 PM
Time taken	4 mins 41 secs
Marks	1.00/1.00
Grade	4.00 out of 4.00 (100%)

Question 1 | Correct Mark 1.00 out of 1.00 ⚡ Flag question

Given an array A of sorted integers and another non negative integer k, find if there exists 2 indices i and j such that $A[j] - A[i] = k$, $i \neq j$.

Input Format:

First Line n - Number of elements in an array

Next n Lines - N elements in the array

k - Non - Negative Integer

Output Format:

1 - If pair exists

0 - If no pair exists

Explanation for the given Sample Testcase:

YES as $5 - 1 = 4$

So Return 1.

For example:

Input	Result
3	1
1 3 5	
4	

Answer: (penalty regime: 0 %)

```

1 #include <stdio.h>
2
3 int main() {
4     int n;
5     scanf("%d", &n);
6
7     int A[n];
8     for (int i = 0; i < n; i++)
9         scanf("%d", &A[i]);
10
11    int k;
12    scanf("%d", &k);
13
14    int i = 0, j = 1;
15
16    while (i < n && j < n) {
17        int diff = A[j] - A[i];
18
19        if (diff == k && i != j) {
20            printf("1\n");
21            return 0;
22        } else if (diff < k) {
23            j++;
24        } else {
25            i++;
26            if (i == j) j++;
27        }
28    }
29
30    printf("0\n");
31    return 0;
32 }
33

```

Quiz navigation

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	Input	Expected	Got	
✓	3 1 3 5 4	1	1	✓
✓	10 1 4 6 8 12 14 15 20 21 25 1	1	1	✓
✓	10 1 2 3 5 11 14 16 24 28 29 0	0	0	✓
✓	10 0 2 3 7 13 14 15 20 24 25 10	1	1	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

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Data retention summary

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- MODEL EXAM AIDS,AIML,IT

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► Finding Time Complexity of ...

► Divide and Conquer

► Greedy Algorithms

► Dynamic Programming

▼ COMPETITIVE PROGRAMMING

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DIVYASH H 2024-CSE

D2



Dashboard My courses



CS23331-DAA-2024-CSE / 5-Pair with Difference-O(n^2)Time Complexity,O(1) Space Complexity



5-Pair with Difference-O(n^2)Time Complexity,O(1) Space Complexity

Started on	Sunday, 19 October 2025, 8:15 PM
State	Finished
Completed on	Sunday, 19 October 2025, 8:20 PM
Time taken	5 mins 12 secs
Marks	1.00/1.00
Grade	4.00 out of 4.00 (100%)

Question 1 | Correct Mark 1.00 out of 1.00 ⚡ Flag question

Given an array A of sorted integers and another non negative integer k, find if there exists 2 indices i and j such that $A[j] - A[i] = k$, $i \neq j$.

Input Format:

First Line n - Number of elements in an array

Next n Lines - N elements in the array

k - Non - Negative Integer

Output Format:

1 - If pair exists

0 - If no pair exists

Explanation for the given Sample Testcase:

YES as $5 - 1 = 4$

So Return 1.

For example:

Input	Result
3	1
1 3 5	
4	

Answer: (penalty regime: 0 %)

```

1 #include <stdio.h>
2
3 int main() {
4     int n;
5     scanf("%d", &n);
6
7     int A[n];
8     for (int i = 0; i < n; i++)
9         scanf("%d", &A[i]);
10
11    int k;
12    scanf("%d", &k);
13
14    int i = 0, j = 1;
15
16    while (i < n && j < n) {
17        int diff = A[j] - A[i];
18
19        if (diff == k && i != j) {
20            printf("1\n");
21            return 0;
22        } else if (diff < k) {
23            j++;
24        } else {
25            i++;
26            if (i == j) j++;
27        }
28    }
29
30    printf("0\n");
31    return 0;
32}
33

```

Quiz navigation

1



Finish review

	Input	Expected	Got	
✓	3 1 3 5 4	1	1	✓
✓	10 1 4 6 8 12 14 15 20 21 25 1	1	1	✓
✓	10 1 2 3 5 11 14 16 24 28 29 0	0	0	✓
✓	10 0 2 3 7 13 14 15 20 24 25 10	1	1	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

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▼ General

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➢ Finding Time Complexity of ...

➢ Divide and Conquer

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● 6-Pair with Difference -O(n) Ti...



DIVYASH H 2024-CSE

D2



Dashboard My courses



CS23331-DAA-2024-CSE / 3-Print Intersection of 2 sorted arrays-O(m*n)Time Complexity,O(1) Space Complexity



3-Print Intersection of 2 sorted arrays-O(m*n)Time Complexity,O(1) Space Complexity

Started on	Sunday, 19 October 2025, 8:06 PM
State	Finished
Completed on	Sunday, 19 October 2025, 8:10 PM
Time taken	3 mins 44 secs
Marks	1.00/1.00
Grade	30.00 out of 30.00 (100%)

Question 1 | Correct Mark 1.00 out of 1.00

Find the intersection of two sorted arrays.

OR in other words,

Given 2 sorted arrays, find all the elements which occur in both the arrays.

Input Format

- The first line contains T, the number of test cases. Following T lines contain:
 - Line 1 contains N1, followed by N1 integers of the first array
 - Line 2 contains N2, followed by N2 integers of the second array

Output Format

The intersection of the arrays in a single line

Example

Input:

1

3 10 17 57

6 2 7 10 15 57 246

Output:

10 57

Input:

1

6 1 2 3 4 5 6

Output:

1 6

Output:

1 6

For example:

Input	Result
1	10 57
3 10 17 57	
6	
2 7 10 15 57 246	

Answer: (penalty regime: 0 %)

```

1 #include <stdio.h>
2
3 v int main() {
4     int T;
5     scanf("%d", &T);
6
7 v     while (T--) {
8         int N1;
9         scanf("%d", &N1);
10        int A[N1];
11        for (int i = 0; i < N1; i++)
12            scanf("%d", &A[i]);
13
14        int N2;
15        scanf("%d", &N2);
16        int B[N2];
17        for (int i = 0; i < N2; i++)

```

Quiz navigation

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✓

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```
18     scanf("%d", &B[i]);
19
20     int i = 0, j = 0;
21     while (i < N1 && j < N2) {
22         if (A[i] == B[j]) {
23             printf("%d ", A[i]);
24             i++;
25             j++;
26         } else if (A[i] < B[j]) {
27             i++;
28         } else {
29             j++;
30         }
31     }
32     printf("\n");
33 }
34
35     return 0;
36 }
37 }
```

	Input	Expected	Got	
✓	1 3 10 17 57 6 2 7 10 15 57 246	10 57	10 57	✓
✓	1 6 1 2 3 4 5 6 2 1 6	1 6	1 6	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

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○ MODEL EXAM AIDS,AIML,IT

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DIVYASH H 2024-CSE

D2



Dashboard My courses



CS23331-DAA-2024-CSE / 1-Finding Duplicates-O(n^2) Time Complexity,O(1) Space Complexity

1-Finding Duplicates-O(n^2) Time Complexity,O(1) Space Complexity

Started on Monday, 3 November 2025, 8:56 AM

State Finished

Completed on Monday, 3 November 2025, 9:00 AM

Time taken 3 mins 51 secs

Marks 1.00/1.00

Grade 4.00 out of 4.00 (100%)

Question 1 | Correct Mark 1.00 out of 1.00 ⚡ Flag question

Find Duplicate in Array.

Given a read only array of n integers between 1 and n, find one number that repeats.

Input Format:

First Line - Number of elements

n Lines - n Elements

Output Format:

Element x - That is repeated

For example:

Input	Result
5	1
1 1 2 3 4	

Answer: (penalty regime: 0 %)

```

1 #include<stdio.h>
2 int main(){
3     int n;
4     scanf("%d",&n);
5     int arr[n];
6     for(int i=0;i<n;i++){
7         scanf("%d",&arr[i]);
8     }
9     for(int i=0;i<n;i++){
10        for(int j=i+1;j<n;j++){
11            if(arr[i]==arr[j]){
12                printf("%d",arr[i]);
13            }
14        }
15    }
16 }
```

	Input	Expected	Got	
✓	11 10 9 7 6 5 1 2 3 8 4 7	7	7	✓
✓	5 1 2 3 4 4	4	4	✓
✓	5 1 1 2 3 4	1	1	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Quiz navigation

1



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