COMPETITIVE PROGRAMMING

PROBLEM 1:

FINDING DUPLICATES-O(N^2) TIME COMPLEXITY,O(1) SPACE COMPLEXITY

AIM:
Find Duplicate in Array.

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

CODE:

```c
#include <stdio.h>


int main() {

    int n;

    scanf("%d", &n);


    int arr[n];

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

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

    }

    for (int i = 0; i < n - 1; i++)

    {

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

        {

            if (arr[i] == arr[j]) {
```

```
            printf("%d ", arr[i]);

            break;

        }

    }

}


    return 0;

}
```

INPUT AND OUTPUT:

	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	✔