

Aim:

Elon Musk has given an array of integers of size N and he has to find out if the absolute difference of values of any two consecutive array integers is at most D .

Input Format:

- The first line contains two integers N and D separated by a space, where N denotes the size of the array and D denotes the absolute difference of values respectively.
- The second line contains N integers separated by a space.

Output Format:

- Print **YES** if the absolute difference between any two consecutive integer is at-most D , otherwise print **NO**.

Constraints:

- $1 \leq N \leq 10^3$
- $1 \leq D \leq 100$
- $1 \leq \text{integer}[i] (\text{elements of the array}) \leq 10^6$

Note:

- Not all consecutive integers need to have the difference of at most D . If any of the consecutive array elements satisfy the condition, print 'YES' .
- This question does not have partial weightages for test cases. All the test cases must be passed.

Source Code:

```
absDiff.c
```

```
#include<stdio.h>
#include<stdlib.h>
int main(){
    int n,d,i,flag;
    flag=0;
    scanf("%d %d", &n,&d);
    int arr[n];
    for(i=0;i<n;i++){
        scanf("%d",&arr[i]);
    }
    for(i=0;i<n;i++){
        if(abs(arr[i]-arr[i+1])<=d){
            flag++;
        }
    }
    if(flag >= 1){
        printf("YES");
    }
    else{
        printf("NO");
    }
    return 0;
}
```

Execution Results - All test cases have succeeded!

Test Case - 1	
User Output	
7 4	
11 7 18 21 32 45 52	
YES	

Test Case - 2	
User Output	
5 11	
19 23 45 65 95	
YES	

Test Case - 3	
User Output	
5 61	
221 412 326 951 548	
NO	