**Count Distinct in an Array**

Given an unsorted array **arr[]**of length **N**, The task is to count all distinct elements in **arr[]**.

**Examples:**

***Input :****arr[]={10,20,20,10,30,10}*

***Output :****3*

***Explanation:****There are three distinct elements 10, 20, and 30.*

***Input:****arr[]={10,20,20,10,20}*  
***Output :****2*

**Naive Approach:**

*Create a****count****variable and run two loops, one with counter****i****from****0****to****N-1****to traverse****arr[]****and second with counter****j****from****0****to****i-1****to check if****ith****element has appeared before. If****yes****, increment the****count****.*

C++

#include<iostream>

using namespace std;

int countDistinct(int a[], int n)

{

int count = 0;

bool isDistinct = true;

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

{

isDistinct = true;

for(int j = i-1; j >= 0; j--)

{

if(a[i]==a[j])

{

isDistinct = false;

break;

}

}

if(isDistinct==true)

{

count ++ ;

}

}

return count;

}

int main()

{

int n;

cin >> n;

int a[n];

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

{

cin >> a[i] ;

}

cout << countDistinct(a,n);

return 0;

}

**INPUT -**

**3**

**1 2 3**

**OUTPUT -**

**3**