

# DAA ASSIGNMENT

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1 .Given a row wise sorted matrix of size **R\*C** where R and C are always **odd**, find the median of the matrix.

Program:

```
r,c=map(int,input().split())
a=[]
for i in range(r):
    k=[]
    k=list(map(int,input().split()))
    for j in k:
        a.append(j)
a.sort()
print(a[(r*c)//2])
```

Test case1:

```

1 r,c=map(int,input().split())
2 a=[]
3 for i in range(r):
4     k=[]
5     k=list(map(int,input().split()))
6     for j in k:
7         a.append(j)
8 a.sort()
9 print(a[(r*c)//2])

```

Input:

```

3
3 5
6 9
6 9

```

..Program finished with exit code 0  
Press ENTER to exit console.

Test case2:

```

1 r,c=map(int,input().split())
2 a=[]
3 for i in range(r):
4     k=[]
5     k=list(map(int,input().split()))
6     for j in k:
7         a.append(j)
8 a.sort()
9 print(a[(r*c)//2])

```

Input:

```

3 1
1 2 3
2

```

...Program finished with exit code 0  
Press ENTER to exit console.

2. Given the arrival and departure times of all trains that reach a railway station, the task is to find the minimum number of platforms required for the railway station so that no train waits. We are given two arrays that represent the arrival and departure times of trains that stop.

Program:

```
#include <bits/stdc++.h>
```

```
using namespace std;
```

```
int ans(int arr[],int dep[],int n)
```

```

{
    int min=0,i,j;
    for (i=0;i<n-1;i++)
    {
        int p=1;
        for (j=i+1;j<n;j++)
        {
            if ((arr[i]>=arr[j] && arr[i]<= dep[j]) || (arr[j]>=arr[i] && arr[j]<=dep[i]))
                p++;
        }
        min = max(min,p);
    } return min;
}

int main()
{
    int n,i;
    cin>>n;
    int arr[n],dep[n];
    for(i=0;i<n;i++)
        cin>>arr[i];
    for(i=0;i<n;i++)
        cin>>dep[i];
    cout <<ans(arr,dep,n);
    return 0;
}

```

Output:



```

9 10 1200 1120 1130 1900 2000
3

```