

## DAA ASSIGNMENT-1

### Q1: Find the median of the matrix

```
#include <iostream>

#include<bits/stdc++.h>

using namespace std;

int main() {

    int r,c,i,j,low,high;

    cin>>r>>c;

    int m[r][c];

    for(i=0;i<r;i++)

    {

        for(j=0;j<c;j++)

            cin>>m[i][j];

    }

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

    {

        if (m[i][0] < low)

            low=m[i][0];

        if (m[i][c-1]>high)

            high=m[i][c-1];

    }

    int t = (r * c + 1) / 2;

    while (low<high)

    {

        int mid = low+(high-low)/2;

        int temp=0;

        for (i=0;i<r;i++)

        {

            temp+=upper_bound(m[i], m[i]+c, mid) - m[i];

        }

    }
```

```

    if (temp<t)
        low=mid+1;
    else
        high=mid;
}

cout<<"median="<<low;

return 0;
}

```

### OUTPUTS:

```

3 1
1 2 3
median=2
...Program finished with exit code 0
Press ENTER to exit console.

```

```

3 3
1 3 5
2 6 9
3 6 9
median=5
...Program finished with exit code 0
Press ENTER to exit console.

```

### Q2:Minimum no of platform required

```

#include <iostream>

#include<bits/stdc++.h>

using namespace std;

int main() {

    int i,j,n,m;

    cout<<"Enter no of arrivals and deprtures"<<endl;

    cin>>n;

    int a[n],d[n];

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

    {

        cin>>a[i];

    }

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

    {

        cin>>d[i];
    }
}

```

```

    }

    int c = sizeof(a)/sizeof(a[0]);

    int plat, r = 1;

    for (int i=0;i<c;i++)
    {
        plat=1;
        for (int j=0;j<c;j++)
        {
            if (i!=j)
            {
                if (a[i]>=a[j] && d[j]>=a[i])
                    plat++;
            }
        }

        if(r>plat)
            m=r;

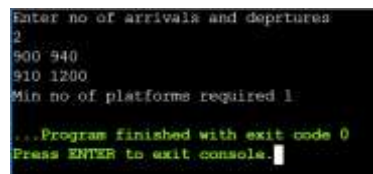
        else
            m=plat;
    }

    cout<<"Min no of platforms required "<<m;

    return 0;
}

```

### OUTPUT:



```

Enter no of arrivals and depatures
2
900 940
910 1200
Min no of platforms required 1
...Program finished with exit code 0
Press ENTER to exit console.

```