**Data Structure and Algorithms**

**(HackerEarth solved Quiz) 2022**

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**Q 1) Monk and Suffix Sort**

**Que :** <https://www.hackerearth.com/practice/codemonk/>

**Source code:**

import java.io.\*;

import java.util.\*;

class TestClass {

public static void main(String args[] ) throws Exception {

Scanner sc = new Scanner(System.in);

String str = sc.nextLine();

String s = str.split(" ")[0];

int len = s.length();

int n = Integer.parseInt(str.split(" ")[1]);

String arr[] = new String[len];

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

{

arr[i] = s;

s = new String(s.substring(1));

}

Arrays.sort(arr);

System.out.println(arr[n-1]);

}

}

**Q 2) Monk and Nice Strings**

**Que :** <https://www.hackerearth.com/practice/codemonk/>

**Source code:**

import java.io.\*;

import java.util.\*;

class TestClass {

public static void main(String args[] ) throws Exception {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

char s[] = new char[n];

//System.out.println(n);

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

s[i]=sc.next().charAt(0);

int count = 0 ;

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

if(s[i]>s[j])

count+=1;

}

System.out.println(count);

}

}

}

**Q 3) Monk and Rotation**

**Que :** <https://www.hackerearth.com/practice/codemonk/>

**java source code:**

import java.io.\*;

import java.util.\*;

class TestClass {

public static void main(String args[] ) throws Exception {

Scanner scanner = new Scanner(System.in);

int n = scanner.nextInt();

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

int s = scanner.nextInt();

int t = scanner.nextInt();

t = t % s;

scanner.nextLine();

String input = scanner.nextLine();

String[] arr = input.split(" ");

StringBuffer sb = new StringBuffer();

for (int j = 0; j < s; j++) {

sb.append(arr[(s + j - t) % s] + " ");

}

System.out.print(sb);

System.out.println("");

}

}

}

**Q:4 : Monk and Inversions**

**Que :** <https://www.hackerearth.com/practice/codemonk/>

**Source Code :**

import java.util.\*;

import java.io.\*;

class TestClass {

public static void main(String args[] ) throws Exception {

Scanner sc = new Scanner(System.in);

int t = sc.nextInt();

while(t!=0)

{

int n = sc.nextInt();

int arr[][] = new int[n][n];

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

{

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

{

arr[i][j] = sc.nextInt();

}

}

int count=0;

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

{

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

{

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

{

for(int o=j;o<n ;o++)

{

if(arr[i][j]>arr[m][o])

{

count++;

}

}

}

}

}

System.out.println(count);

t--;

}

}

}