**Data Structure and Algorithms**

**(HackerEarth solved Quiz) 2022**

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**Q 1) Monk and Rotation**

<https://www.hackerearth.com/problem/algorithm/monk-and-rotation-3-bcf1aefe/>

java source code:

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 2) Monk and Inversions**

<https://www.hackerearth.com/problem/algorithm/monk-and-inversions-arrays-strings-e5aaa427/>

Java source code:

Scanner s = new Scanner(System.in);

int t = s.nextInt();

// System.out.println("Hi, " + t + ".");

while(t != 0){

int n = s.nextInt();

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

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

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

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

}

}

int count = 0;

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

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

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

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

if(arr[i][j] < arr[p][q]){

count++;

}

}

}

}

}

System.out.println(count);

t--;

}

**Q 3)** **Monk and Nice Strings**

[**https://www.hackerearth.com/problem/algorithm/monk-and-nice-strings-3-e5800d05/**](https://www.hackerearth.com/problem/algorithm/monk-and-nice-strings-3-e5800d05/)

Java source code :

int j = 0;

String str1 = "";

Scanner sc = new Scanner(System.in);

int no = sc.nextInt();

String str[] = new String[100];

str[0] = "A";

for(int i = 1; i <= no; i++){

str1 = sc.next();

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

if(str[j].compareTo(str1) >= 0){

str[j+1] = str[j];

}

else{

break;

}

}

System.out.println(j);

str[j+1] = str1;

}

**Q 4)** **Monk and Suffix sort**

[**https://www.hackerearth.com/problem/algorithm/monk-and-suffix-sort-ebacdaf5/**](https://www.hackerearth.com/problem/algorithm/monk-and-suffix-sort-ebacdaf5/)

Java source code :

Scanner s = new Scanner(System.in);

String str = s.next();

int k = s.nextInt();

List<String> list = new ArrayList<>();

for(int i = 0; i < str.length(); i++)

list.add(str.substring(i));

Collections.sort(list);

System.out.println(list.get(k-1));