PLACEMENTS KEY'S

Coding Challenge #19 (Question)

Day - 10

Rajendar has an array with him. He wants an application program which checks whether the array is Mirror inverse or not. Help him with the required application program.

An array A[] of size 'n' is MIRROR - INVERSE if A[A[i]] = i for all values of i, ranging from 0 to n-1

INPUT FORMAT:

1. 1st line of input takes the size of user array.
2. 2nd line of input takes the elements in the array.

OUTPUT FORMAT:

Checks whether the given array is Mirror-Inverses or not and prints it to the output.

SAMPLE INPUT 0:

4

1 2 3 0

SAMPLE OUTPUT 0:

It is not a Mirror-Inverse array.

SAMPLE INPUT 1:

5

3 4 2 0 1

SAMPLE OUTPUT 1:

It is a Mirror-Inverse array.

PLACEMENTS KEY'S

Coding Challenge #19 (C solution)

Day - 10

```c
#include <stdio.h>

int main()
{
	printf("Enter the size of array\n");
	int size;
	scanf("%d",&size);
	int array[size];
	printf("Enter the elements\n");
	for(int i=0;i<size;i++){
		scanf("%d",&array[i]);
	}
	int test =0;
	for(int i=0;i<size;i++){
		if(array[array[i]]!=i){
			test=1;
			break;
		}
		else
			continue;
	}
	if(test==0)
		printf("Given array is Mirror-Inverse\n");
	else
		printf("Given array is not Mirror Inverse\n");
}
```

PLACEMENTS KEY'S

Coding Challenge #19 (JAVA solution)

Day - 10

```
import java.util.*;
public class MirrorInverse
{
	public static void main(String[] args)
	{
		Scanner input = new Scanner(System.in);
		System.out.println("Enter the size of array");
		int size = input.nextInt();
		int[] array = new int[size];
		System.out.println("Enter the elements");
		for(int i=0;i<size;i++){
			array[i]=input.nextInt();
		}
		int test =0;
		for(int i=0;i<size;i++){
			if(array[array[i]]!=i){
				test=1;
				break;
			}
			else
				continue;
		}
		if(test==0)
			System.out.println("Given array is Mirror-Inverse");
		else
			System.out.println("Given array is not Mirror Inverse");
	}
}
```

PLACEMENTS KEY'S

Coding Challenge #20 (Question)

Day - 10

User gives an integer k and an array of size N. He needs an application which extracts the elements in the array whose frequency is more than equal to k and print the sum of all that elements. Help him to build his application with an efficient program.

INPUT FORMAT:

1. 1st line of input takes the integer k (minimum frequency)
2. 2nd line of input takes the size of user array.
3. 3rd line of input takes the elements in the array.

OUTPUT FORMAT:

Extract the elements with frequency greater than or equal to k and print their sum.

CONSTRAINTS:

K, n should be non-negative integers.

SAMPLE INPUT 0:

2
10
2 3 4 3 4 5 6 4 2 2

SAMPLE OUTPUT 0:

9

EXPLANATION: 2,3,4 are the elements with frequency greater than or equals to 2.
Sum = 2+3+4 = 9

SAMPLE INPUT 1:

3
10
2 3 3 4 4 1 2 4 6 7

SAMPLE OUTPUT 1:

4

EXPLANATION: The only element with frequency greater than or equals to 3 is 4.

PLACEMENTS KEY'S

Coding Challenge #20 (C solution)

Day - 10

```
#include <stdio.h>

int main()
{
        printf("Enter the frequency\n");
        int f;
        scanf("%d",&f);
        printf("Enter the no of elements in the array\n");
        int size;
        scanf("%d",&size);
        int array[size];
        int x[10];
        int xIndex=-1;
        printf("Enter the elements\n");
        for(int i = 0;i<size;i++){
                scanf("%d",&array[i]);
        }
        for(int i=0;i<size;i++){
                int count = 0;
                for(int j=0;j<size;j++){
                        if(array[i]==array[j]){
                                count++;
                        }
                        else
                                continue;
                }
                if(count>=f){
                        xIndex = xIndex+1;
                        x[xIndex]=array[i];
                }
```

PLACEMENTS KEY'S

Coding Challenge #20 (C solution contd.)

Day - 10

```
else
                continue;
        }
        int sum=0;
        for(int i=0;i<xIndex;i++){
                int j;
                for(j=0;j<i;j++){
                        if(x[i]==x[j])
                                break;
                }
                if(i==j){
                        sum=sum+x[i];
                }
        }
        printf("%d",sum);
}
```

PLACEMENTS KEY'S

Coding Challenge #20 (JAVA solution)

Day - 10

```
import java.util.*;
public class FrequencyList
{
	public static void main(String[] args)
	{
		Scanner input = new Scanner(System.in);
		System.out.println("Enter the frequency");
		int f = input.nextInt();
		System.out.println("Enter the no of elements in the array");
		int size = input.nextInt();
		int[] array = new int[size];
		List <Integer> x= new ArrayList<>();
		System.out.println("Enter the elements");
		for(int i = 0;i<size;i++){
			array[i]=input.nextInt();
		}
		for(int i=0;i<size;i++){
			int count = 0;
			for(int j=0;j<size;j++){
				if(array[i]==array[j]){
					count++;
				}
				else
					continue;
			}
			if(count>=f){
				x.add(array[i]);
			}
			else
				continue;
		}
```

PLACEMENTS KEY'S

Coding Challenge #20 (JAVA solution contd.)

Day - 10

```
int sum=0;
                for(int i=0;i<x.size();i++){
                        int j;
                        for(j=0;j<i;j++){
                                if(x.get(i)==x.get(j))
                                        break;
                        }
                        if(j==i)
                                sum=sum+x.get(i);
                }
                System.out.println(sum);
        }
}
```