



Coding Challenge #23 (Question)

Write a C program to list all the factorial numbers less than or equal to an input number n .

A number N is called a factorial number if it is the factorial of a positive integer. For example, the first few factorial numbers are 1, 2, 6, 24, 120, ...

Note: *We do not list the factorial of 0.*

Input:

A positive integer, say n .

Output:

All factorial numbers less than or equal to n .

Sample input 0:

4

Sample output 0:

1 2

Sample input 1:

30

Sample output 1:

1 2 6 24



Coding Challenge #23 (C Solution)

```
#include <stdio.h>

int main()
{
    printf("Enter a positive number\n");

    int num;

    scanf("%d", &num);

    int fact=1;
    int x =2;

    for(int i=0;i<num;i++){
        while(fact<=num)
        {
            printf("%d ",fact);

            fact = fact*x;

            x++;
        }
    }

    return 0;
}
```



Coding Challenge #23 (JAVA Solution)

```
import java.util.*;

public class FactorialList
{
    public static void main(String[] args)
    {
        Scanner input = new Scanner(System.in);

        System.out.println("Enter a postive number number");

        int num = input.nextInt();

        int fact =1;

        int x =2;

        for(int i=0;i<num;i++){
            while(fact<=num)
            {
                System.out.print(fact + " ");

                fact = fact*x;

                x++;
            }
        }
    }
}
```



Coding Challenge #24 (Question)

Printing Duplicate Elements

Write a program to print all the duplicate elements in an array.

Sample Input 0:

6

1 2 3 4 2 4 5

Sample Output 0:

2 4

Sample Input 1:

10

1 2 3 20 10 15 10 3 2 1

Sample Output 1:

1 2 3 10

Sample Input 3:

10

10 20 30 20 25 5 15 5 9 12

Sample Output 3:

20 5



Coding Challenge #24 (C Solution)

```
#include<stdio.h>

void repeating_element(int arr[], int n)
{
    int i, j;
    int count = 0;
    for(i = 0; i < n; i++)
    {
        for(j = i+1; j < n; j++)
        {
            if(arr[i] == arr[j])
            {
                printf("%d ", arr[j]);
            }
        }
    }
}

int main()
{
    int n;
    scanf("%d",&n);
    int arr[n];
    int i;
    for(i = 0; i < n; i++){
        scanf("%d",&arr[i]);
    }
    repeating_element(arr,n);
}
```



Coding Challenge #24 (JAVA Solution)

```
import java.io.*;

import java.util.Scanner;

import java.util.*;

public class Main{

    public static void main(String[] args)

    {

        Scanner sc=new Scanner(System.in);

        int n;

        n=sc.nextInt();

        int arr[]=new int[n];

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

        {

            arr[i] = sc.nextInt();

        }

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

        {

            for(int j=i+1;j<arr.length;j++)

            {

                if(arr[i]==arr[j])

                    System.out.print(arr[j]+" ");

            }

        }

    }

}
```