

**Maximum Time : 1hr 30min**

**Question 1: (Easy)**

Write a Program to efficiently generate and compute the age of people. You can write in any comfortable language you prefer.

Input: Ages of Different people (Eg: 10, 20, 30, 40, 45, 50, 60)

Output:

Age Group	Total number of People
1-10	1
11-20	1
21-30	1
31-40	1
41-50	2
51-60	1
61-70	0
71-80	0
81-90	0
91-100	0

**Question 2: (Medium)**

Problem: Rotate an array of n elements to the right by k steps. For example, with n = 7 and k = 3, the array [1,2,3,4,5,6,7] is rotated to [5,6,7,1,2,3,4]. How many different ways do you know to solve this problem?

**Question 3: (Hard)**

Problem: Given the number a,  $0 < a < 99999999$ . Find the number consecutive occurrence of each digits and total occurrence of each digits and make the respective sentence

**Eg:**

Input:

111

Output:

*three 1's*

*Total: three 1's*

Input:

11221

Output:

*two 1's and two 2's and one 1*

*Total: three 1's and two 2's*

Input

1145221

Output:

*two 1's and one 4 and one 5 and two 2's and one 1*

*Total: four 1's and one 4 and one 5 and two 2's*