**Input File**

You are given an input text file named citation.txt. It contains information regarding the research papers published in various journals. The format of the file is as follows:

#\* --- paper title

#@ --- authors

#t ---- year

#c --- publication venue

#index 00---- index id of this paper

**TASK1**

Count the number of papers published during four time-periods: 1980-1990, 1991-2000, 2001-2010 and 2011-today.

**Sample Output (decade -> Number of paper published in the decade)**

1980-1990 -> 15

**TASK2**

Produce a list of co-authors of each author in the given input file.

**Sample Output (Author -> List of Co -authors)**

David Jones -> Sam Nick, Ali Javed, Daniel Brown

Sam Nick -> David Jones, Zan Jao, Ali Javed

Ali Javed -> David Jones, Sam Nick

Zan Jao -> Sam Nick

Daniel Brown -> David Jones

**TASK3**

Develop a program to find common co-author between any two researchers.

**Sample Output (author1 - author2 -> author3, author4)**

David Jones - Sam Nick -> Ali Javed

David Jones - Ali Javed -> Sam NicK

Sam Nick - Ali Javed -> David Jones

**TASK4**

Output total percentage of papers published by each author in each year.

**Sample Output (author, year -> percentage of the papers published)**

|  |  |  |
| --- | --- | --- |
| David Jones, 2006 -> 30%  David Jones, 2008 -> 50%  David Jones, 2010 -> 20% | Ali, 2007 => 100% | Ahmad, 2005 => 50%  Ahmad, 2006 => 50% |