Lab 3

Student ID:

3A Problem Description:

While diff is a useful text-processing utility that finds differences between the contents of two files, this naive diff will start out as a simplistic check, counting how many of the leading characters of two lines of text are the same.

Input Specification:

The first line contains N, $1 \leq N \leq 25$, the number of text pairs to be compared. The next (N*2) lines will contain N sets of input, two lines each. Each line will be a non-empty string less than 255 characters long.

Output Specification:

The output will comprise of N lines, each printing an integer $0 \leq i \leq 255$ – the number of leading characters that are same between the two lines, up to the first difference.

Note that the two lines could be of different lengths. The counter stops before the first character that doesn't match, so two strings that start differently would have a result of 0.

Sample Test Case:

Test Case Input	Test Case Output
5 tony tony dan tony one two three one two four a b abcd abcde	4 0 8 0 4

3B Problem Description:

Basketball players are ranked according to a statistic called points per minute (ppm). This is calculated by dividing the points scored by a player by the number of minutes that the player has played on the court. The resulting value is scaled to 1000 and rounded to an integer. The program must output name of the player and the value of the statistic for a given rank. You can assume that there will be no ties.

Input Specification:

The first line contains N, the number of players on the team, $1 < N \leq 50$ and the required rank. For each player on the team, there will be 5 lines of data their name (in upper case), number of foul shots made (one point each), number of field goals made (two points each), number of three-point baskets made (three points each), number of minutes played, an integer > 0.

Output Specification:

The output will comprise of a single line containing name of the player followed by the score with exactly one space between them and terminated by new line character. No leading or trailing spaces for the name or the score.

Sample Test Case:

Test Case Input	Test Case Output
6 3 KATIE 24 12 4 85 JULIA 25 13 9 97 HILLARY 34 19 2 125 CALLIE 12 6 8 120 AMANDA 14 16 3 90 JOHANNA 12 8 6 60	KATIE 706