

## Problem 3: The Case of the Missing Book

### 11 Points

Problem ID: `library`

Rank: 2

## Introduction

You're living a glamorous life as your school library's only T.A. One day, a freshman English class comes in to return some books from their Shakespeare unit—but some of their returns are all mixed up! Students are turning in others' books—and to make matters worse, your school has yet to electronically track their inventory, so you have to keep track of all these returns by hand. After all the students have left the library, you're notified that one student was absent from class—meaning one book is still yet to be returned. Can you find out whose book is missing from today's records alone?

Your task is to create a program that will output the owner of the absent student's book.

## Program Input

The first line of the input from STDIN will contain a positive integer  $T$  denoting the number of test cases that follow. Each test case will have the following input:

- A first line consisting of two values separated by a space. The values are as follows:
  - The name of the absent student.
  - A non-negative integer  $n$  denoting the number of returns that happened that day.
- The next  $n$  lines will consist of a single transaction record in the following format:  
`<NAME> TURNS IN <OWNER>'s BOOK`
- A blank line separating individual test cases.

### Example Input:

```
3
David 1
Alexa TURNS IN David's BOOK

Javid 5
Preston TURNS IN Walter's BOOK
Jon TURNS IN Quincy's BOOK
Walter TURNS IN Javid's BOOK
Quincy TURNS IN Jon's BOOK
Gary TURNS IN Gary's BOOK

Susan 2
Abcde TURNS IN Felicia's BOOK
Felicia TURNS IN Abcde's BOOK
```

## Program Output

For each test case, your program should output the owner of the absent student's book in the following format: <ABSENT STUDENT> HAS <OWNER>'s BOOK

### Example Output:

```
David HAS Alexa's BOOK
Javid HAS Preston's BOOK
Susan HAS Susan's BOOK
```

## Problem Constraints

$$T \leq 100$$

$$0 \leq n < 100$$

It is possible for students to turn in their own book.

Assume all names listed plus the absent student are the only students in the class.

Assume all students' names are unique and consist of only one word.

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