15-112, Spring 2015
Dictionary Exercises

`getNumber` and `getName`

Write a function `getNumber(book,name)` that takes a `book` (as a `dictionary`), a `name` (as `string`) and returns the phone number corresponding to `name` in the phone `book`. The function returns `"Not in your phone book"` if the `name` is not in the phone `book`.

Write a function `getName(book,number)` that takes a `book` (as a `dictionary`), a phone `number` (as `string`) and returns the name corresponding to the phone `number` in the phone `book`. The function returns `"Not in your phone book"` if the `number` is not in the phone `book`.

`insert` and `update`

Write a function `insert(book, name, number)` that takes a `book` (as a `dictionary`), a `name`, a phone `number` (both as `string`) and adds the `name` and the phone `number` to the phone `book`. The name and number should be added if it does not already exist. This function returns `True` if the name has been added, `False` if it exists already.

Write a function `insert(book, name, number)` that takes a `book` (as a `dictionary`), a `name`, a phone `number` (both as `string`) and updates the `number` corresponding to `name` in the phone `book`. The new number should be added only if a corresponding name already exist. This function returns `True` if the number has been modified, `False` if it does not exist.

Qatar Prefix

Write a function `addQatarPrefix(book, name)` that takes a phone `book` (as a `dictionary`), a `name` (as a `string`) and adds the Qatar prefix to the phone number corresponding to `name` in the phone `book`. The prefix should be added if the number does not have the prefix yet. This function does not return anything.

Write a function `addQatarPrefixToAll(book)` that takes a phone `book` (as a `dictionary`) and adds the Qatar prefix to all phone numbers in the phone `book`. The prefix should be added if the number does not have the prefix yet. This function does not return anything.

A richer phone book

How would you modify the phone book dictionary to be able to record for each person:

- the first name
- the last name
- the mobile phone
- the office phone
- the email address