

## Creating New Accounts

Please do all assignments using the basic Unix tools, such as Bourne shell, sed, awk, and other commands in the directories `/bin`, `/etc`, and `/sbin`. You are also allowed to use commands from `/usr/bin` and `/usr/sbin`. Make sure that your projects run on both Solaris (hoare/arch) and Linux (machines in lab) without any modification. Also, make sure that any output is nicely formatted.

1. A system administrator has to create new accounts for users. As we noted in class, the usernames should be meaningful and easy to remember. So, to aid in decision making, we will use the following policy to create user names, and go down the list stopping at the first useable username. Make sure that there are no duplicate user names and no user name is more than 8 characters long. If the name is longer than 8 characters, make sure you truncate it to 8 characters. Example is with the name John Smith.
  - (a) The last name of the person. smith.
  - (b) The first name of the person. john.
  - (c) First initial + last name. jsmith.
  - (d) First name + last initial. johns.
  - (e) Last name + first initial. smithj.
  - (f) First initial + last name + two digit number. jsmith01. Increment the number in successive iterations. If the last name is too long, truncate it to five characters; for example, James Johnson (in this step) will get user name as jjohns01.

Use the file `hoare:~sanjiv/cs5780/names` as input. Create an output file from your script. Account for duplicate names; there can be two persons with the same name. However, there are no two persons with same user name.

Names in input file are in the following formats:

```
last_name, first_name
first_name last_name
```

Ignore any special characters. If there is a middle name, ignore it. Remove any special characters from the name. Make sure the usernames are all in lower case.

Output file will be in the following format:

```
first_name last_name username
```

The three columns should be properly lined up. The first two columns will have the names in the form John Smith, i.e., put the names in proper case with first character in capital and the remaining characters in lower case.

At the end of the report, give a break down of the number of collisions at each step (if joe smith and john smith both want jsmith), the number of exact matches in the given name, and the number of names that could not be resolved. Include an option where I should be able to generate a user name for a single user on command line, and where I should be able to add a set of users to the system.

### What to handin

Create your programs in a directory called `username.3` where `username` is your user name on hoare. Once you are done with everything, issue the following commands:

```
% cd
% ~sanjiv/bin/handin cs5780 3
```