Activity 15.5 File Input/Output

In this activity we're going to use the file input/output and CSV features of the Python programming language. Examine the output from the exercise below:

```
●●●                    Python — bash — 80×54
A) Add to Directory
B) Display Directory
X) Exit Directory Program
--A
Add to Directory
First Name:Mark
Last Name:Lassoff
Email:mark@learntoprogram.tv
Phone:203-555-1212
Mark Lassoff added to directory.
A) Add to Directory
B) Display Directory
X) Exit Directory Program
--A
Add to Directory
First Name:Bryan
Last Name:Fisher
Email:bryan@fisher.com
Phone:203-261-7729
Bryan Fisher added to directory.
A) Add to Directory
B) Display Directory
X) Exit Directory Program
--A
Add to Directory
First Name:Aliza
Last Name:Zucker
Email:aliza@ctt.com
Phone:203-295-6601
Aliza Zucker added to directory.
A) Add to Directory
B) Display Directory
X) Exit Directory Program
--A
Add to Directory
First Name:Don
Last Name:Parks
Email:dparks@embassy.com
Phone:512-415-0293
Don Parks added to directory.
A) Add to Directory
B) Display Directory
X) Exit Directory Program
--B
Display Directory
 Mark Lassoff mark@learntoprogram.tv 203-555-1212
 Bryan Fisher bryan@fisher.com 203-261-7729
 Aliza Zucker aliza@ctt.com 203-295-6601
 Don Parks dparks@embassy.com 512-415-0293
A) Add to Directory
B) Display Directory
X) Exit Directory Program
--X
Marks-MacBook-Pro:Python marklassoff$ ▮
```

Notice, first that the program menu is displayed when the program runs and after the user adds to the directory or displays the directory. The menu has three options. The third option allows the user to exit the program gracefully.

The execution above created the following CSV file:

```
Mark,Lassoff,mark@learntoprogram.tv,203-555-1212
Bryan,Fisher,bryan@fisher.com,203-261-7729
Aliza,Zucker,aliza@ctt.com,203-295-6601
Don,Parks,dparks@embassy.com,512-415-0293
```

Your goal in this lab is to create a program that allows the user to create a directory containing first names, last names, email addresses and phone numbers. The file must be saved as a CSV and be easily retrieved. You should find this lab challenging and rewarding.

Again, it is recommended that you break the activity down into several smaller problems. For example, first figure out how to display the menu and loop back to it after adding the new directory member or displaying the directory is completed. Next, work on saving data in the CSV format. Then work on displaying the entire directory and insuring that everything works smoothly.

If you get stuck, take a peek at the suggested answer. Don't copy it line by line— Instead examine the code, understand it and try to rewrite it on your own.

Remember you'll need to **import csv** to complete this exercise. Also, keep in mind, that you can structure this lab exercise using functions. If you make each menu function a single function, you'll make your life much easier.

Good luck!