# Overview

Use the skills and strategies learned in Lessons 1-11 to create Python code segments to analyze healthcare data.

# Instructions

Download and unzip the PyCharm Python project entitled **Hwk13\_STARTER.zip**. After loading it into PyCharm, Refactor | Rename it to the usual **<Hwk13\_YourLastname>.**

Three Python files are there and need renaming: from **Hwk13a\_STARTER** to **Hwk13a\_YourLastname.py**, etc. Several data files are also present.

Please note that the data files have a header line. When processing, we must IGNORE that line. The following code preceding the actual loop that reads the file does just that. Each time you read a file containing a header line you must include this code.

fhand = open(**'Diagnoses.txt'**) *# open the file, establish the file handle*fhand.readline() *# read the first line and ignore it*

*# declare and set any initialization variables here, such as counters, lists, dictionaries*

**for** line **in** fhand: *# loop through the file line by line*

## Part A

## **Generate a list of the patients in alphabetic order.** The PatientsNames.txt file contains three columns, delimited by a single space. The columns are: PatientID, LastName, FirstName.

1. From the file **PatientsName.txt**, load a dictionary of key-value pairs: ID (key), Name (value). Store the name as "last, first".
2. After adding the line of code to ignore the first line in the data file, to load the dictionary you will have to *parse* each line by finding the first and second spaces. (The spaces are shown here using yellow.)

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1. Having used the slice method to obtain the ID (0:8), the lastName (firstSpPos+1:secondSpPos), and the firstName (secondSpPos:), make the appropriate addition to the dictionary as follows:

ID\_Names\_dict[ID] = lastName + ', ' + firstName

1. Then use the strategy found on page 135 of the textbook to sort the dictionary by value (the names, in this case), and then write out the first ten to demonstrate that your code works properly. Sample output is shown below.

## Part B

**What is the name of a patient with a specific ID?**

1. Use the dictionary you built in 13a above to help answer this question.
2. Write a code segment to find the patient name of the following IDs: 69CC25ED, C65A4ADE, 98F593D2. Also look up 11111111 which doesn't exist; the program should respond with "No patient with that ID.” Keep looking up patient names until “done” is entered as an ID.  
     
   The following strategy will guide the process:

*# Strategy  
# From the file PatientsName.txt, load a dictionary of ID, Name ("last, first") pairs  
# prompt the user for an ID,  
# use the ID to find the name in the dictionary  
# terminate on ID of 'done'  
# use the looping strategy on page 71 of the text book to solicit the ID (or "done")*

Sample output is shown in the 13B screen shot.

## Part C

**What are the names (and IDs) of the patients with a diagnosis including the term “*adrenal*?”**

The Diagnoses.txt file contains the patient ID, an admit ID, the ICD-10 code, and the diagnosis code textual description. Loop through the file, finding the lines containing the word “adrenal”. From that line, extract the ID. Then use the dictionary you created in 13a above to get the name.

# Submission

Create a Word doc **(Hwk13\_YourLastName.doc)** containing the console output for each of 13a, 13b, and 13c. Upload the Word doc and the Python program files for 13a, 13b, and 13c to the appropriate assignment in the LMS. Four files total.

## Screen Shots

## 13A

Text

Description automatically generated

## 13B

Text

Description automatically generated