

Python Developer Technical Skills Assessment

CSP Informatics Center, VA Boston Healthcare System

July 2020

Background

For this exercise, you will create a two-page web application using Flask in Python 3. In this scenario, the application is being used by clinicians to look up patient lab results on three different tests (A, B, and C) on various dates. We are looking to assess your Flask, Python 3, HTML/CSS, JavaScript and data manipulation skills in the Python library 'Pandas.'

Please use programming standards, including elegant solutions such as functions and annotations. This exercise is used to get a sense of your skill set, so do not worry if you do not execute each task perfectly and feel free to ask questions if anything is unclear. You are allowed to look up any documentation on the code required but do not copy paste solutions from the web. In evaluating the exercise, we will focus on the functionality of the app, rather than the aesthetic design.

Files

- `app.py`
- `home.html`
- `search.html`
- `patient_tb.csv`

Task

1. Create a static Home page that includes:
 - a. the title "Lab Results Finder" anywhere at the top of the page
 - b. "a way" to navigate to the Search page You are allowed to use a framework like [Bootstrap](#) or write your own HTML/CSS to create this page. Component (b) can be implemented any way you would like (e.g., navigation bar, hyperlink), as long as it gets users to the Search page.
2. Create a form for the Search page where users can type a patient's first name and in return it shows the table of patients that match that first name from `patient_tb.csv`.
3. Remove duplicate values from `patient_tb.csv` using the Pandas library in Python. Here, duplicates records refers to instances where a patient has taken the same test on the same day multiple times. Please share the code

you wrote for this, in addition to the results, and don't remove the rows manually in Excel

Deliverable

When you are done, please re-zip the `python_dev_exercise` folder and send it back to your screener. NOTE: Once you have your zip file, please rename the file extension from `.zip` to `.zop`. This prevents the file from being flagged by our email system. The goal should be that the screener will be able to run `app.py` to use the application in a web browser like Chrome.