Take home assignment

Objective

Your task is to implement a mostly complete mini-project. The goal is to see that you know how a project is put together and have the skills and experience to implement some basic functionality.

The project description is open-ended, but you should not take more than a day on implementation. In this time you will not be able to implement every feature you can think of, so you will have to leave functionality out. This is intentional, we do not want you to take a week writing a perfect project, we want to see what you can achieve in a limited time with a

limited specification.

You may use google and any other development tools you normally use. You may not ask someone or something else to write any of the code for you. You may be asked specific answers about your code in a follow-up interview. In case you use any forks of existing projects, or cookie-cutters, make sure to mention this in your final deliverables.

Deliverables

1. The code in any form you prefer, eg zip, github link etc.
    - Code should be structured as if it’s going to be deployed to production.
    - It should be able to convey how the code is organized and should have comments on what will be in there.
    - All possible error scenario must be handled.
    - Should have tests
2. Actual time taken from start to finish
3. Attach output of some sort, eg a test result. This will help in situations where aren’t able to run your code.
4. A document containing:
    - How to run your code

    - How it works.
- Using cookie cutters and any libraries to make development easier. Make sure to cite the references.

Technical information

The project should use the technologies listed below. If you do not know a particular technology, you may still proceed without it if you feel you could learn it quickly and that your other skills indicate strong abilities to compensate. In all cases, a brief justification as part of the project submission will be helpful.

Language: Python 3

Framework: Any Python framework

Database: Any

Test: Any framework of your choice

Project specification

Build an API service for a TODO app. The service should be able to do the following:

- create new tasks
    - Optionally have a due date associated with it.
    - Should be able to associate a priority with it. This is a mandatory field.
- Edit the task
- List all tasks.
    - Filter tasks that have breached the due date.
    - Filter by priority
    - Should be able to sort by due_date or priority.
- Mark a task as Done or Canceled.
    - Done is for scenarios where the task is complete.
    - Canceled is for state where we don’t wish to do this task anymore. We won’t have a delete API.

Evaluation Criteria

- Code quality
  - How easy is the code to understand?
  - Does the code follow industry best practices?
  - How easy will the code be to work with and maintain in the future?
- Feature completion
- Simplicity: Keep the design simple (goes for both LLD and HLD). Complexity is a no-go.