

Full Stack Developer: Coding Assignment

3rd June 2021

Project: Design a simple Task List App using React and Django

Description:

You need to design a web-based Task List application, as per the given requirements:

1. Tasks should be displayed in a Tabular format, using [Ant Pro table](#).
2. The table should have the following columns:
 - a. Timestamp created: Timestamp at which a task was created.
Should be auto set when creating a new entry. User should not be able to edit this.
 - b. Title: Title of the task to be done.
 - i. User can set this while creating a new entry. User can also change this updating existing entry.
 - ii. Max length: 100 characters.
 - iii. Mandatory field
 - c. Description: Description of the task to be done.
 - i. User can add details about this task.
 - ii. Max length: 1000 characters
 - iii. Mandatory field
 - d. Due Date: Expected due date to finish the task
 - i. User can set this while creating a new entry. User can also change this updating existing entry.
 - ii. Optional field
 - e. Assignee:
 - i. Name of the person to whom this task is assigned to.
 - ii. Max length: 100 characters
 - iii. Optional field
 - f. Status: Shows status of a task
 - i. Should be one of these values.
 1. OPEN (Default value)
 2. WORKING
 3. DONE
 4. OVERDUE
 - ii. Mandatory field
3. The table should support pagination.
4. User should be able to perform the following operations:
 - a. ADD a new to-do entry
 - b. MODIFY an existing to-do entry
 - c. DELETE an existing to-do entry
 - d. SORT the table using columns a., b., c. and d. given above in both ascending and descending formats

- e. FILTER the table using e. and f. Columns.
5. Provide a search bar on the top where users can perform a case-insensitive search for any task based on the data in any of the above mentioned columns.

Technology to be used for creating this application:

Frontend:

1. Ant Design Pro v4+
<https://github.com/ant-design/ant-design>
<https://github.com/ant-design/ant-design-pro>
Ant Pro Table: <https://github.com/ant-design/pro-table>
2. [BONUS] DVA

Backend:

1. Python v3.8+
2. Django v3.1+
3. Django Rest Framework v3.11+
4. Database: SQLite

Note:

1. You can assume things which are not defined with a reasonable value. For example, we have not defined the pagination size. You can assume it as 15 or 20 or any other number which is generally acceptable.
2. Add validation checks anywhere there is a possibility of an obvious violation of general logic. Example: 'Due Date' field value cannot be before 'Timestamp created' field value
3. Implement necessary design principles wherever possible. For example, when a user tries to DELETE an existing to-do entry, it is good to ask first for a confirmation from the user before firing the DELETE api. The design should look complete.
4. Explore Ant Design sufficiently so you can use the available features from the existing widgets smartly. This will be preferred over creating completely new components. Feel free to take design inspiration from <https://app.algobulls.com>.
5. **BONUS:** The design should be mobile friendly.

Objective:

1. Please come up with a sleek frontend which can accommodate all the requirements.
2. Please come up with an appropriate backend supporting REST APIs to power the frontend.

Duration:

Ideal time is 3 days. If you need extra time, please request for the same with appropriate reasoning.

How to submit:

1. Please upload your code on a private GitHub repo and share it with our GitHub user-id - **algbulls-dev** (registered email: developers@algbulls.com)
2. Make sure your code is cleaned up as per standards, before you do the final submission. It is ok to keep pushing any number of intermediate code commits.
3. Add sufficient comments for complex logic, before you do the final submission.
4. Include a README which includes basic documentation on how to build and run the code.
5. Once done, please send a mail to developers@algbulls.com, mentioning your name and GitHub ID, requesting for a review. We may request you to setup a screen sharing session where you
6. **BONUS:** Extra points if you can deploy your on any cloud service provider like AWS, GCP, Azure, etc. and send us a link to your working application.

Asking for clarification/hints:

Please send an email to developers@algbulls.com with your query and we will get back to you.