

Approaches for developing this application

I have divide my whole approaches into multiple reading phases of the question.

First read of the questions

“We preempt that with time, more similar.....acting as a middleman”

From this I have understand following the points:-

This platform will work as a unified interface for all API operations.

This can be easily done with GraphQL.

It is also best option for implementing APIs as a plug in system.

I thought that I can learn the schema of GraphQL and implement with resolving function written in python.

“A very common need for organizations is wanting all their data onto Google.....

.....the sheet, and questions in the form become columns.”

From this I came to understand that I need call Google Sheet API for viewing the record on sheet and from their anyone can easily refer to the process of data representation.

“There are points for details on howkeeps in mind that too.”

From this I have decided to work on Django Framework because it will give an ease to achieve the goal which is mentioned in the above point. Though I was quite familiar with the Django Framework so that's why I decided to work on Django.

“A recent client partner wanted us to sendparticipated in the exercise.”

From this, I have decided to call an API for SMS so that the user can be notified after submitting the form with the details to which he/she responded.

I called Twilio API for these Features

“One of the clients wanted to search for slangs (in local language) for an answer to a text question on the basis of cities (which was the answer to a different MCQ question)”

This Point is still unclear as I have put some following points to think the various approaches

First, I have to build a section in which the user enters the first character of the city and it will drop down the suggested cities name (eg. Del = Delhi, All = Allahabad, etc.)

Second, I have to make a list of local slang which is related to cities (eg. Pink city for Jaipur City, Sangam Nagari for Prayagraj City).

Second Read of the Questions

In this Phase, I have started learning some stuff to implement some of the basic features of the applications.

First two days I forced myself to learn the stuff and understand how things are implemented.

“A market research agency wanted to validate responsescollector to fix it when the rules generate a flag”

For this, I thought that I will put a validator function for each logic. But the problem is that for each such case I need to build a new validator function so that it can revoke easily to the server when it is needed. As this can be easily done with GraphQL.

Third Read of the questions

In this phase I started the real phase development. During the development process I came to know about the time limit in which I have to complete. As understating the tool of GraphQL is taking much more time than I expected. As having only basic Knowledge to Django I was facing difficulties in the implementations. So narrowing down the approaches I have divided my whole development into 4 modules as mentioned below:-

1. Form creation and customization of the form field.
2. Linking my database to Google Sheets.
3. Business Logic over the input data and sending SMS after submitting the form.
4. Slang search over local language.

First Phase

Before I start I took the reference of Google form and downloaded the Google templates which are written in vanilla JS. It helps me to think about what function I need to add to my backend. It helps me to order my work and speed up my development process.

I added the feature of form creation where the user can easily create a form and the type of question is need to ask.

The whole implementation if this phase can be seen in **index/views.py files** and **index/models.py**

Second Phase

I have called Google Sheet API to reflect the responses received from the form.

This can be seen in **index/data_transfer.py**

Third Phase

In this, I have worked on SMS API and some Business logic. Here for business logic, I have **hardcoded the logic** instead of building a **validation function**.

In this, I have to manage the data flow between the APIs so that only necessary data can be transferred. I have solved the data representation in the Google sheet along with SMS API.

Fourth Phase

As this phase was unclear to me I have tried to build the module for it and this phase is still in the process of development. Hope this can phase will be integrated as soon as possible.

Pros & Cons

Pros:

1. Organizations can easily create and add new forms to the platform
2. Organization and easily add or edit the question after creating or sharing the form link.
3. It is included 3 additional templates for ease of the user.
4. It comes with the feature of Login and authentication.
5. Organizations can easily see responses on the platform only as it is a real time update of the responses
6. Can send SMS to users as soon as they submitted the form.
7. Can see the data in the Google sheet.

Cons:

1. Google Sheet works well in reprinting data for one form only.
2. To see the reflection of data we need to refresh the home page for the form.

Additional Links

- Google Sheet Link : <https://docs.google.com/spreadsheets/d/11DSpi3Czu8Geo-OABjfuJsuklfWr8S3U-gX7j31vFPw/edit?usp=sharing>
You can see how data is reflected on the sheet.
- My GitHub Link: <https://github.com/Saurabh-0532/Atlan-backend-development->
You can email me your GitHub Id so that I can add you as contributor to see me further updates
E-mail: saurabhyadav1280@gmail.com