

# STIT BACKEND PROGRAMMING CHALLENGE

Here's a backend design and development challenge for you that is similar to the stuff we do at STIT. There is no time limit for the problem, but it should not take you more than 2 - 4 hours to implement a solution.

## **Problem Statement:**

We need to design the backend for an application that shows the user "Events Around You". You can use any programming language you want for the challenge (although Node.js would be preferred), along with a lightweight database (such as [lowdb](#)). You can simply develop the APIs and use Postman/curl to test. No front-end is necessary.

A possible API structure might consist of the following endpoints:

1. **/register**: For users to register. During registration, users shall provide information about their preferences for events, namely the category and genre of the events they are interested in attending. These preferences will be used to filter events later.
2. **/login**: For users to login to use the service. You may choose how/if to maintain sessions. There should be authentication checks for each subsequent API call.
3. **/getEvents**: To get the events corresponding to the user's preferences. To get this data, you shall need to make use of the external /events API provided to you below. Since users have already provided their preferences, this API should not need that data from the user again.
4. **/setPreferences**: To allow the user to change his/her preferences for events.

You may choose to change the API design as you see fit, but if you do, please mention in comments the motivation behind this change. You are free to decide the nuances of the APIs for yourself, such as the HTTP methods to be used, response formats, request logging etc. These shall not play a major role in our evaluation, so try not to spend too much time on this stuff.

You will be evaluated primarily on API design, code structure and readability, exception handling and documentation. Secondary factors could be performance and descriptive test cases.

## **/events:**

The /events API shall be the external resource you communicate with to get details for events as per the user's preferences.

Endpoint URI: <https://yv1x0ke9cl.execute-api.us-east-1.amazonaws.com/prod/events>

The endpoint uses Basic Auth, with the following credentials

User: stitapplicant

Password: zvaaDsZHLNLFdUVZ\_3cQKns

The API accepts the *classificationName* and the *genreId* as query parameters. These can take the following values:

*classificationName*: String

Possible Values: ["Arts & Theatre", "Film", "Miscellaneous", "Music", "Sports", "Undefined", "Donation", "Event Style", "Group", "Individual", "Merchandise", "Nonticket", "Parking", "Transportation", "Upsell", "Venue Based"]

*genreId*: String

Possible Values:

R&B: KnvZfZ7vAee

Hip-Hop/Rap: KnvZfZ7vAv1

Comedy: KnvZfZ7vAe1

Classical: KnvZfZ7v7nJ

Jazz: KnvZfZ7vAvE

Foreign: KnvZfZ7vAk1

Dance/Electronic: KnvZfZ7vAvF

Comedy: KnvZfZ7vAkA

Animation: KnvZfZ7vAkd

Music: KnvZfZ7vAkJ

Miscellaneous: KnvZfZ7vAka

Family: KnvZfZ7vAkF

Miscellaneous Theatre: KnvZfZ7v7ld

Theatre: KnvZfZ7v7l1

A sample HTTP call to the API to get R&B Music events is as below:

```
GET /prod/events?classificationName=Music&genreId=KnvZfZ7vAee'  
HTTP/1.1  
Host: yv1x0ke9cl.execute-api.us-east-1.amazonaws.com
```

The same request using *curl*:

```
curl -X GET --user stitapplicant:zvaaDsZHLNLFdUVZ_3cQKns \  
'https://yv1x0ke9cl.execute-api.us-east-1.amazonaws.com/prod/ev  
ents?classificationName=Music&genreId=KnvZfZ7vAee'
```

**Submission:**

Please send us a \*.zip file containing your code, or the URL for the Github repository if it's on there, with your resume via the application Google Form.

**Please include running instructions** if needed within the zip.

**Please note that this is only meant to be a short exercise**, so if you feel that it might be taking you too much time, you could also just send us the workflow you've chalked out along with your partially implemented code. The code will still carry greater weight, so please resort to this option only if you have started development but do not have time to complete it.