CloudSEK Task Documentation

Introduction:

Aim: Build random number generator API and add a rate limiting service on top of it.

Ambiguities and Assumptions Made:

(Note: If any of the assumptions are wrong and the code needs to be modified, please let me know so that I can modify it appropriately)

1. Ambiguity: In the given problem statement, there existed mentions of both, a 5 requests/minute limit as well as "number of requests per hour".

Assumption: The solution assumes that both rate limits exist and has been made while taking into consideration both: a short "burst" limit (5/min) as well as a per hour limit (assumed as 100/hour)

2. Ambiguity: Was not clear if the rate limit had to be built from scratch or if an existing library can be used.

Assumption: Burst limit has been executed by using Django-ratelimit package and hour limit has been built from scratch

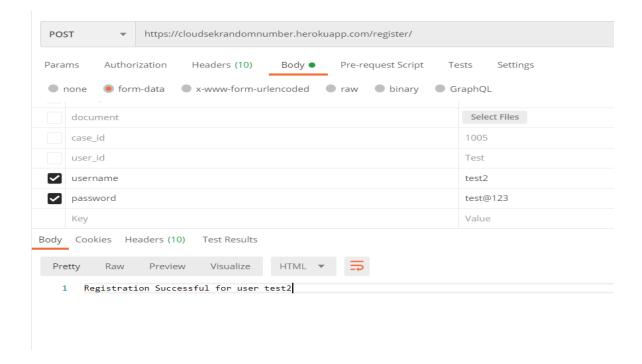
3. Ambiguity: Authentication methodology unclear

Assumption: Authentication method is a simple token based authentication. If required, OAuth or OAuth 2.0 can be implemented as well.

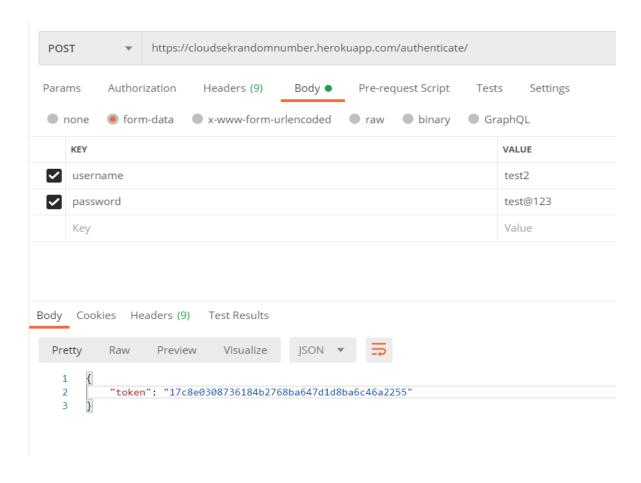
Endpoints and sample requests

Endpoint	Method	Headers	Body	Example
/register/	POST	N/A	username: <value>, password:<value></value></value>	https://cloudsekrandomnumber.herokuapp.com/register/
/authenticate/	POST	N/A	username: <value>, password:<value></value></value>	https://cloudsekrandomnumber.herokuapp.com/authenticate/
/call_api/	GET	Authorizatio n: "token <tokenvalue></tokenvalue>	N/A	https://cloudsekrandomnumber.herokuapp.com/call_api/
/see_remaining_limits/	GET	Authorizatio n: "token <tokenvalue></tokenvalue>	N/A	https://cloudsekrandomnumber.herokuapp.com/see_remainin g_limits/

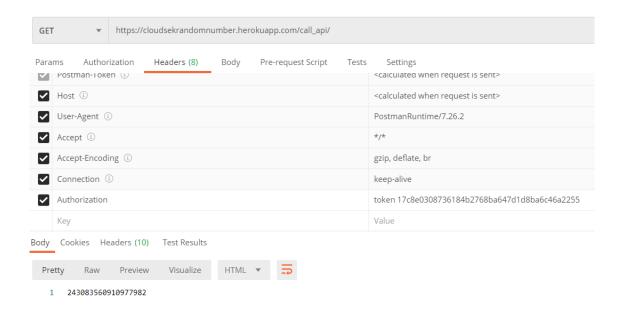
1. Registration:



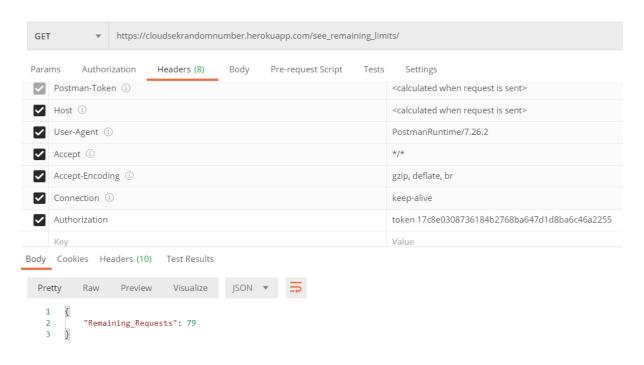
2. Authentication:



3. Call_api:



4. See_remaining_limits:



Hosting Information:

Django Rate Limiter (Hosted on Heroku):

https://cloudsekrandomnumber.herokuapp.com

FastAPI Random Number Generator (Hosted on Heroku):

(Note: This is accessed directly by the Django api and this URL isn't publicly visible)

https://cloudsek fastapi.herokuapp.com/91ba2c3f3dd5241218d2f24a3b1bfe4ce84923cb

Project Files (Github Public Repo):

https://github.com/vibhusiva98/vibcloudsek/tree/master