FLASK API DEVELOPMENT

BY

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This Project Documentation Submitted to Codegnan

Organization(https://codegnan.com/) for Bootcamp Competition JUN-2020

which is organized by Codegnan.

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Project Aim:

This project main aim to be gives the best user interaction to the end user who is going to this API End points and these can be achieved by flasgger package in Python . This API handling the End User requests dynamically and provide the response in time.

The FLASK API is mainly protected with API KEY. If End user does not have valid API KEY, they are not going to perform some operation with API End Points(EX: ChangePassword,ForgotPassword,DeleteUserName).

The each end point will perform unique tasks for handling requests from the end users.

The Total Number of end points shown below:



Project Main Features:

- 1: This API end Points are secured with API KEY
- 2: The API end Points process the end user requests in dynamic manner.
- 3: Better UI Developed for each and every end point.
- 4: Live API has created for all end points which already shown above. Link: https://codegnan.herokuapp.com/apidocs

Everyone can test the above end point for functionality of application

NOTE: for Forgot_Password end point sending mail has been disabled for above link.
In that case OTP is UserName itself for Changing Password.

5: we can hit the API end points by CURL command also.

C:\Users\venna>curl -X POST "http://127.0.0.1:5000/Signup?UserName=vennam2&Password=test&FullName=vennam&Email=vennamdev endhar%40gmail.com" -H "accept: application/json" vennam2 details are stored successfully C:\Users\venna>

Introduction:

Flask:

Flask is a lightweight WSGI web application framework.

Installation:

Pip install flask

Response:

http://127.0.0.1:5000/UserNameAvailabity?UserName=vennam

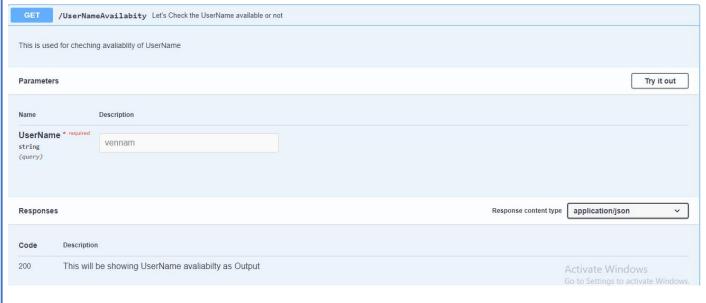
UserName is available.

Flasgger:

Flasgger also comes embedde with SwaggerUI We can access http://localhost:5000/apidocs

Installation:

Pip install flasgger



Curl Curl -X GET "http://127.0.0.1:5000/UserNameAvailabity?UserName=ram" -H "accept: application/json" Request URL http://127.0.0.1:5000/UserNameAvailabity?UserName=ram Server response Code Details 200 Response body UserName is available. Response headers content-length: 22 content-lyps: text/intail; charset-urf-3 date: Tuc, 90 Jun 2008 1352222 GMT server: Merkzeug/1.0.0 Python/3.7.6

flask-ngrok.

A secure URL is provided for the server running on Colab/Local host. Traffic stats can be used to debug in case of any errors in your web app.

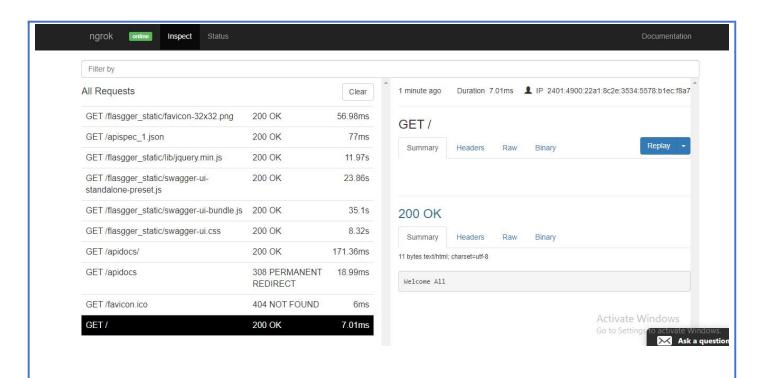
Installation:

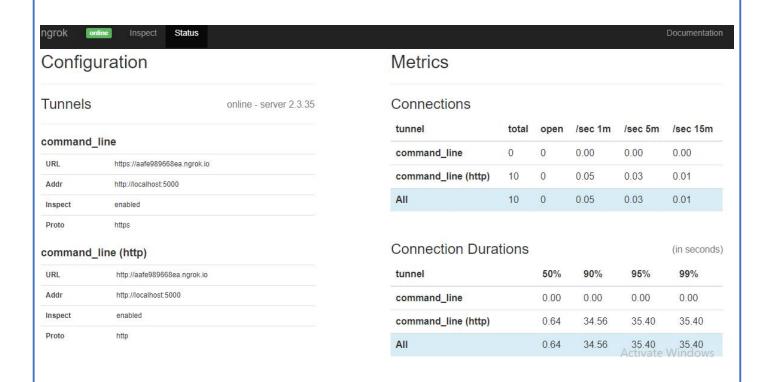
pip install flask-ngrok

```
Online
Account Vennam Devendhar (Plan: Free)
Version 2.3.35
Region United States (us)
Web Interface http://127.0.0.1:4040
Forwarding http://aafe989668ea.ngrok.io -> http://localhost:5000
Forwarding https://aafe989668ea.ngrok.io -> http://localhost:5000
```

Traffics Analysis:

Available on: http://127.0.0.1:4040/





Global

authtokenPrefix	1cqKi8phERYIvE6xxNrOu1WAYYE			
configPathsList	C:\Users\venna/.ngrok2/ngrok.yml			
consoleUi	enabled			
consoleUiColor	black			
heartbeatInterval	10s			
heartbeatTolerance	15s			
inspectDbSize	52428800			
logFormat	logfmt			
logLevel	info			
logTarget	false			
metadata	no value			
proxy	no value			
region	us			
rootCas	ngrok.com trusted root			
serverAddr	tunnel.us.ngrok.com:443			

HTTP Requests

tunnel	total	/sec 1m	/sec 5m	/sec 15m
command_line	0	0.00	0.00	0.00
command_line (http)	10	0.03	0.02	0.01
AII	10	0.03	0.02	0.01

HTTP Request Durations

(in seconds)

tunnel	50%	90%	95%	99%
command_line	0.00	0.00	0.00	0.00
command_line (http)	0.12	33.98	35.10	35.10
All	0.12	33.98	35.10 Activisto	35.10

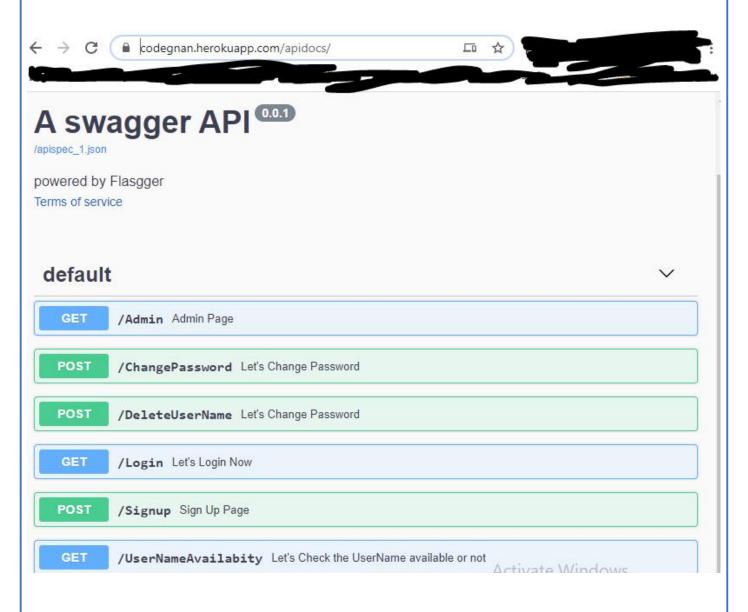
Go to Settin



Live API End Points:

The live API has created and accessed by given below URL

https://codegnan.herokuapp.com/apidocs/



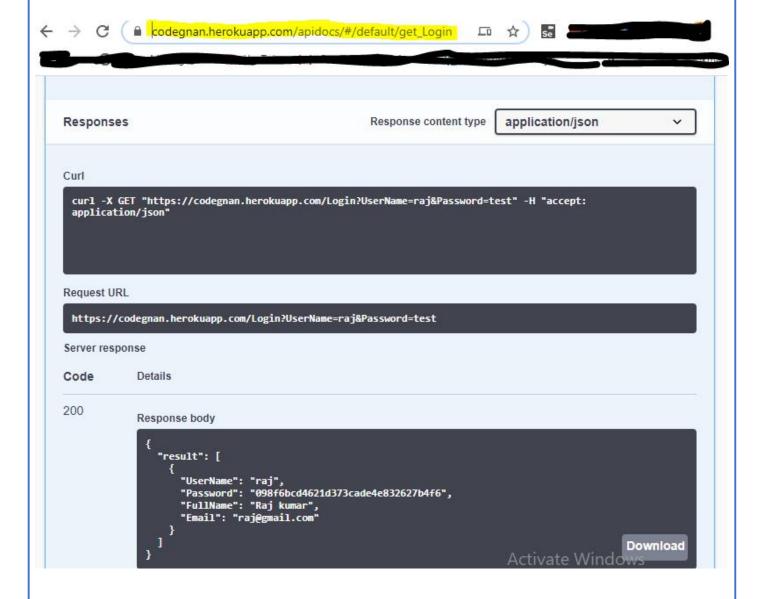
CURL Request:

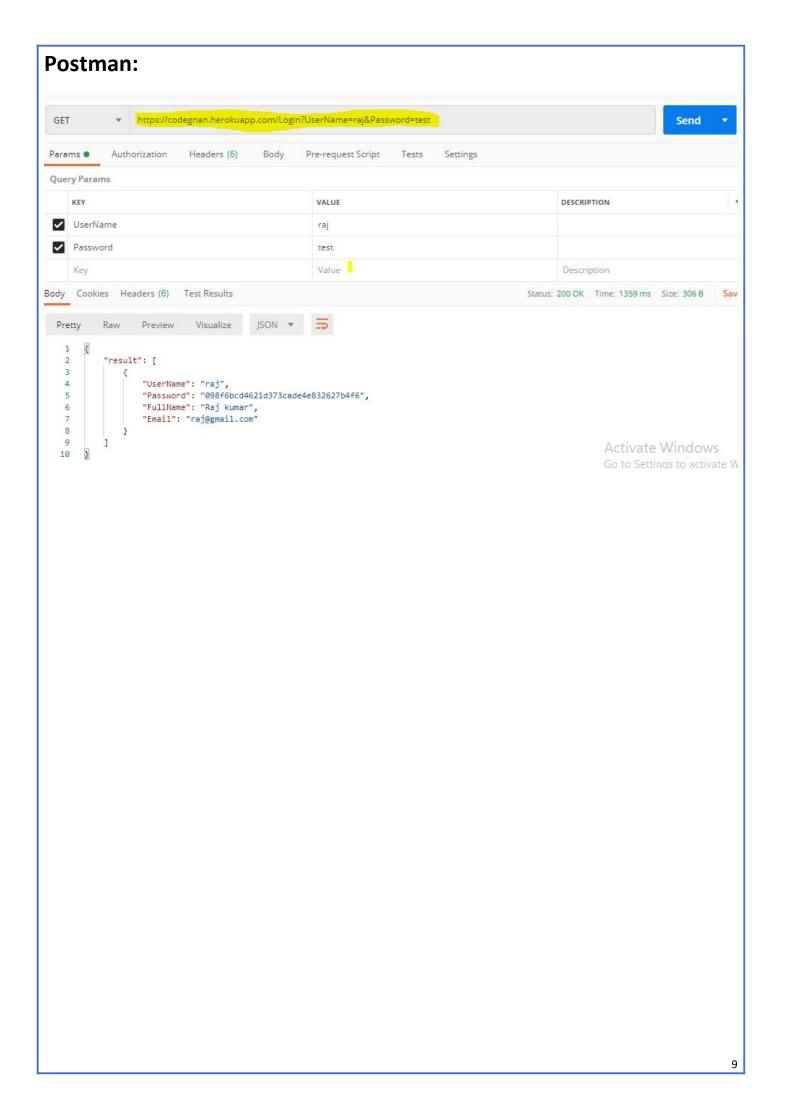
Curl

curl -X GET "https://codegnan.herokuapp.com/Login?UserName=raj&Password=test" -H "accept: application/json"

Request URL

https://codegnan.herokuapp.com/Login?UserName=raj&Password=test





API END-POINTS:

1. GET/UserNameAvailability:

Method 1:(Without Swagger UI)

Case1: If UserName is not taken by anyone

Parameters:

UserName: String

http://127.0.0.1:5000/UserNameAvailabity?UserName=vennam

Response:

UserName is available.

Case2: If UserName is already registered by someone

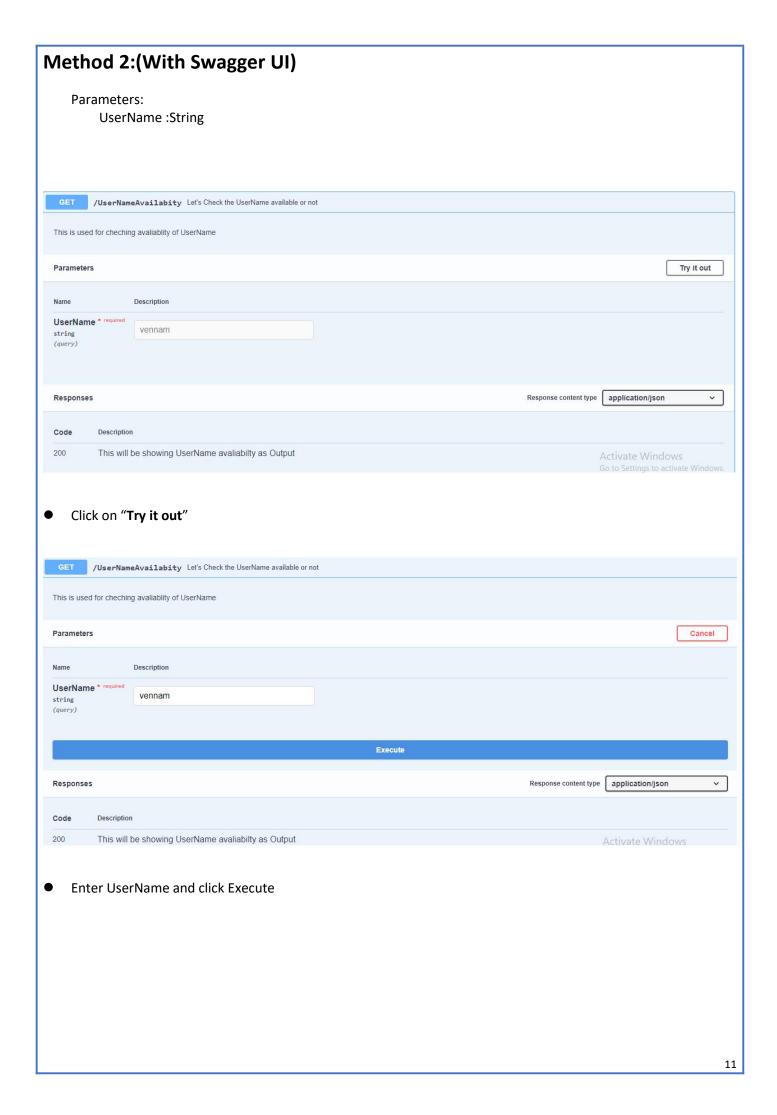
Parameters:

UserName: String

http://127.0.0.1:5000/UserNameAvailabity?UserName=vennam

Response:

UserName is already taken kindly choose another one



Case1: If UserName is already registered by someone

Response:



Case2: If UserName is not taken by anyone



2. POST/Signup:

Method 1:(Without Swagger UI)

Parameters:

UserName : String Password :String FullName :String Email :String

Request URL

http://127.0.0.1:5000/Signup?UserName=vennam1&Password=test&FullName=vennam&Email=vennamdevendhar%40gmail.com

Case1: If UserName is already registered by someone

Response:

kindly go and check UserName_availabity end_point for current vennam1.

Case2: If UserName is Unique.

Response:

vennam12 details are stored successfully

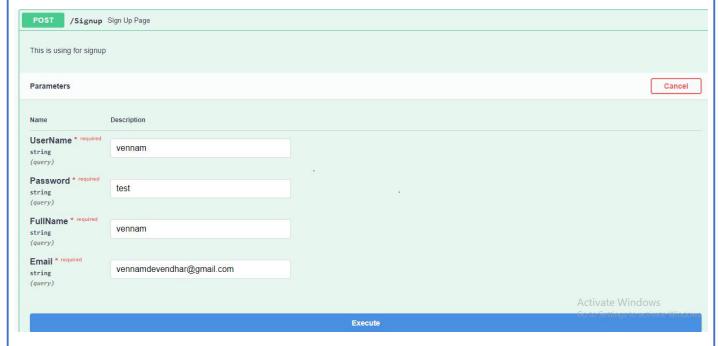
Method 2:(With Swagger UI)

Parameters:

UserName : String Password :String FullName :String Email :String

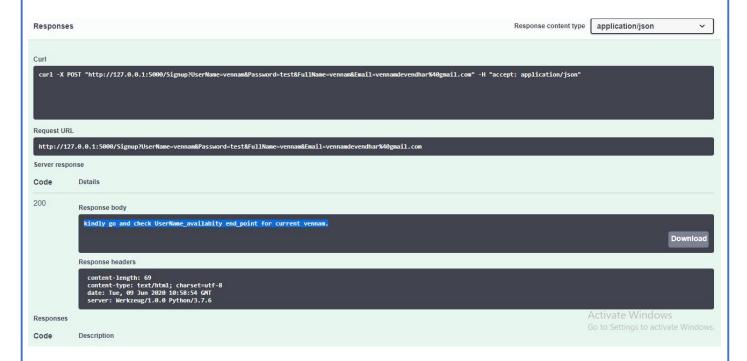


- Click on "Try it out"
- Enter Details correctly and click **Execute**

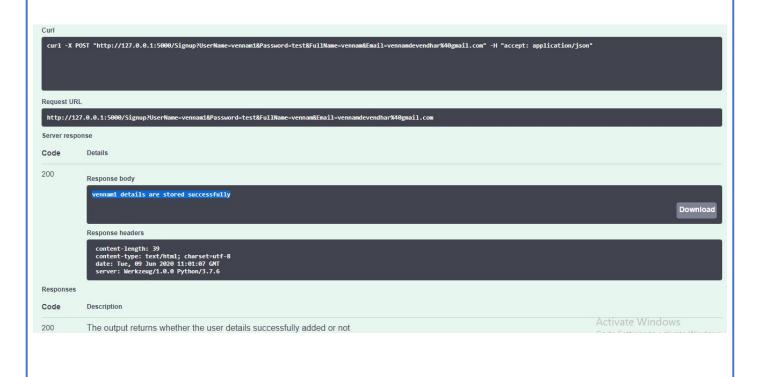


Case1: If UserName is already registered by someone

Response:



Case2: If UserName is Unique.



3. GET/Login:

Method 1:(Without Swagger UI)

Parameters:

UserName : String Password : String

```
Request URL

http://127.0.0.1:5000/Login?UserName=venna&Password=test
```

Case1: If End user enters correct details

Response:

Case1: If End user enters incorrect details

```
Response body

{
    "Error": "Invalid UserName and UserName not available in Database."
}
```

Method 2:(With Swagger UI) Parameters: UserName: String Password :String /Login Let's Login Now This is using for Login Parameters Try it out Description UserName * required UserName string (query) Password * required Password string (query) ~ Responses Response content type application/json Code 200 The output returns the end user details Click on "Try it out" Enter Details correctly and click Execute This is using for Login Parameters Cancel Description UserName * required vennam1 string (query) Password * required test string (query) 17

Case1: If End user enters correct details

Response:

Case2:If End user enters incorrect details



4. POST/ForgotPassword:

Method 1:(Without Swagger UI)

Parameters:

UserName: String Header: API KEY

Request URL

http://127.0.0.1:5000/ForgotPassword?UserName=vennam1

Case1: If username is valid and API key is not Valid

Response:

Enter correct API KEY for Authentication.

Case2: If username and API key are Valid

Response:

Mail has been sent to Registered mail id.

Case2: If username is not valid and API key is valid

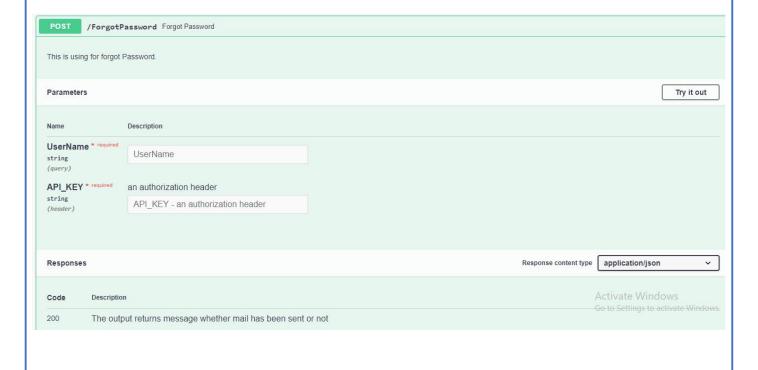
Reponse:

venna details not found kindly enter valid UserName.

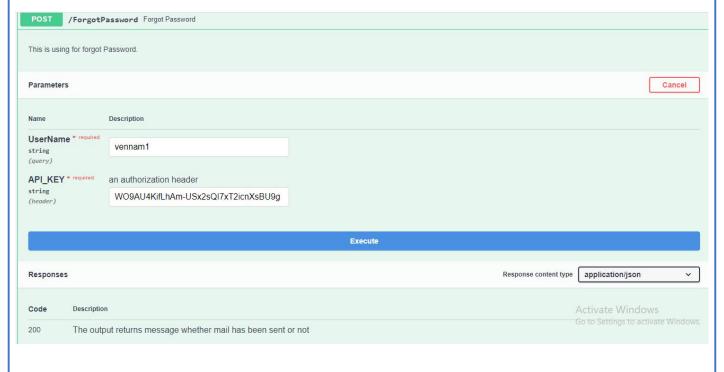
Method 2:(With Swagger UI):

Parameters:

UserName: String Header: API KEY

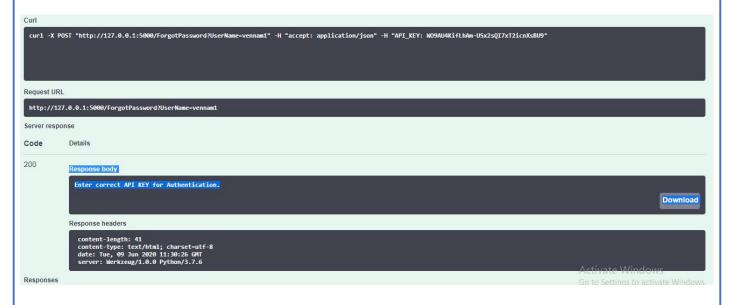


- Click on "Try it out"
- Enter Details correctly and click Execute

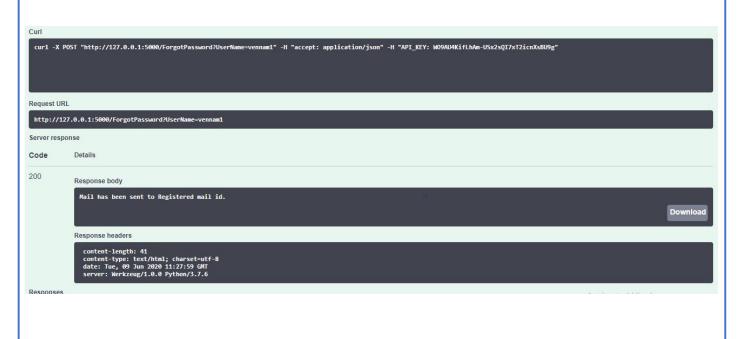


Case1: If username is valid and API key is not Valid

Response:



Case2: If username and API key are Valid



Case2: If username is not valid and API key is Valid:



5. POST/ChangePassword:

Method 1:(Without Swagger UI)

Parameters:

UserName: String
Header: API KEY
OTP: Number
NewPassword: String

Request URL

http://127.0.0.1:5000/ChangePassword?UserName=vennaaa&OTP=7878&NewPassword=test1

Case1: If username does not exists

Response:

vennaaa does not exist , kindly enter correct UserName.

Case2: If username or OTP wrong

Response:

Something went wrong check the OTP or UserName!!!!

Case3: If APIKEY wrong

Response:

Enter correct API KEY for Authentication.

December bandon

Case4: If everything correct

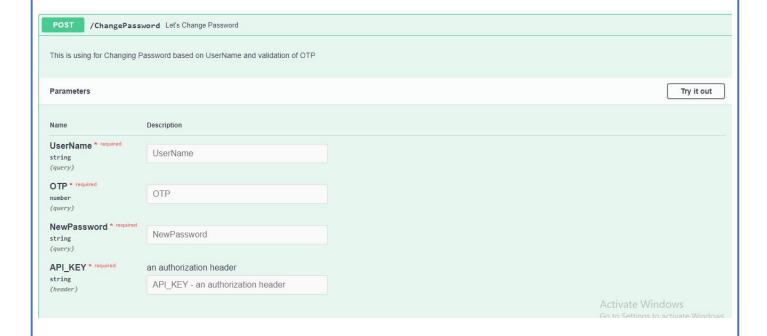
Response:

Password updated successfully in the database based on UserName.

Method 2:(With Swagger UI)

Parameters:

UserName: String Header: API KEY



- Click on "Try it out"
- Enter Details correctly and click Execute

Case1: If username does not exists

Response:

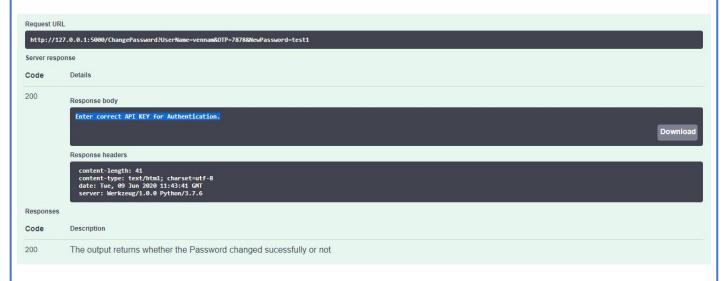


Case2: If username or OTP wrong

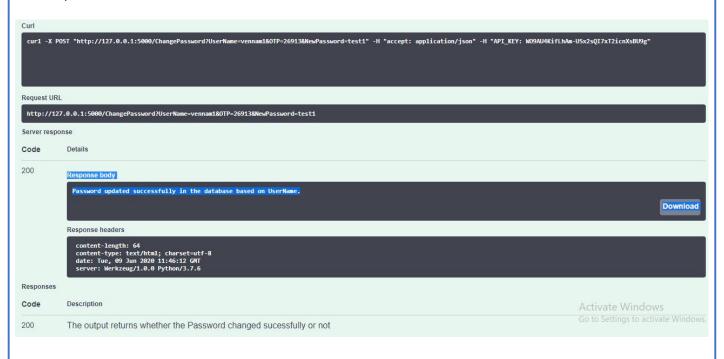


Case3: If API KEY wrong

Response:



Case4: If evrything correct



6. POST/DeleteUserName

Method 1:(Without Swagger UI)

Parameters:

UserName: String Header: API KEY Password: String

Request URL

http://127.0.0.1:5000/DeleteUserName?UserName=vennaa&Password=test1

Conver recenen

Case1: If username not available

Response:

```
{
    "Message": "UserName not available ."
}
```

Case2: If API KEY wrong

Response:

```
Response body

{
    "Message": "Enter API KEY for Authentication ."
}
```

Case 3: If user details are wrong:

```
{
    "Message": "Invalid UserName or Password , kindly check ."
}
```

Case4: If everything correct

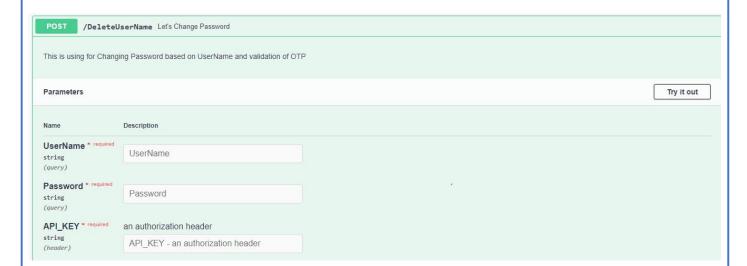
Response:

"Deleted UserName from database based on UserName."

Method 2:(With Swagger UI)

Parameters:

UserName : String Header : API KEY Password: String



- Click on "Try it out"
- Enter Details correctly and click Execute

Case1: If username not available



Case2: If API KEY wrong

Response:



Case 3: IF user details are wrong



Case4: If everything correct



7. GET/Admin:

Method 1:(Without Swagger UI)

Parameters:

UserName: String Password: String

Request URL

http://127.0.0.1:5000/Admin?UserName=venna&Password=ad

Case1: If admin details are wrong

Response:

```
Response body

{
    "Error": "Kindly enter correct admin UserName or admin Password ."
}
```

Case2: If other user details are correct

Response:

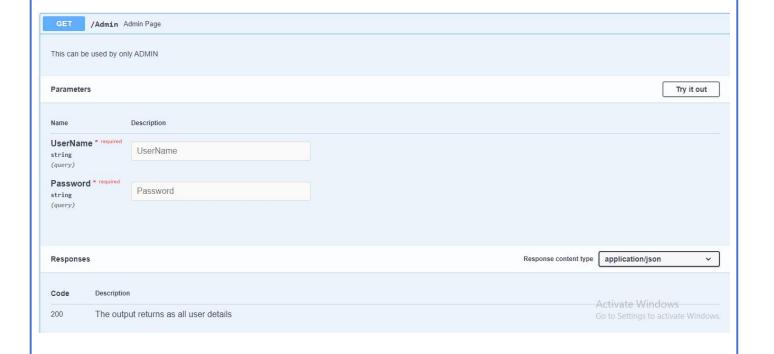
```
{
    "Error": "You are not admin for this API ."
}
```

Case3: If admin details are correct

Method 2:(With Swagger UI)

Parameters:

UserName: String Password: String



- Click on "Try it out"
- Enter Details correctly and click **Execute**

Case1: If admin details are wrong

Response:

```
Curl - X GET "http://127.0.0.1:5000/Admin?UserName-vennaRPassword-ad" - H "accept: application/json"

Request URL

http://127.0.0.1:5000/Admin?UserName-vennaRPassword-ad

Server response

Code Details

200

Response body

{
    "Error": "Kindly enter correct admin UserName or admin Password ."

Response headers

content-length: 00
    content
```

Case2: If other user details are correct



Case3: If admin details are correct