ITIS 6177 - System Integration
Final Project

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Microsoft Azure Text to Speech

Introduction:

Developed a web application that can interface with the Microsoft Azure Text to Speech API service using NodeJS express.

API Provided:

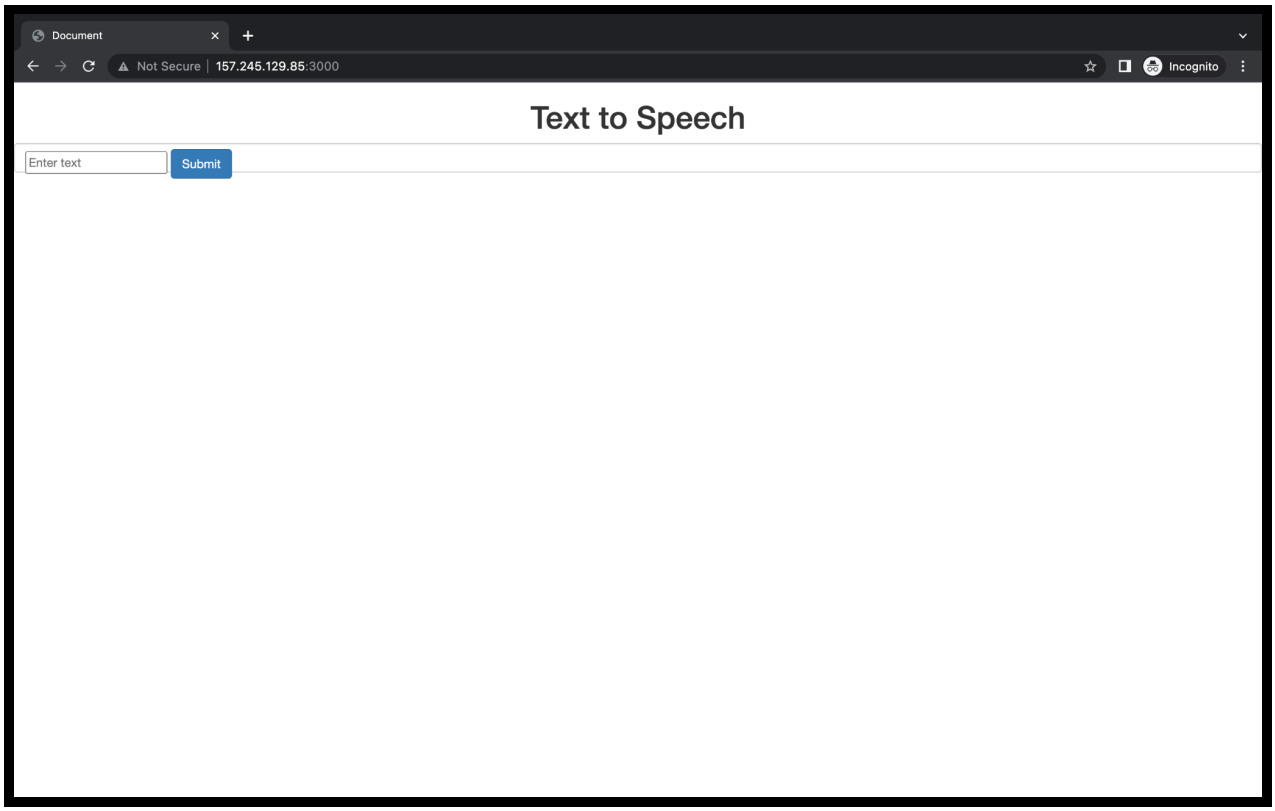
https://azure.microsoft.com/en-us/services/cognitive-services/text-to-speech/

Using this API I have created two end points that converts Text to Speech and Speech to Text.

1) **Text to Speech:**Text to Speech API converts the provided text into speech.The API converts text into audio formats.

Testing through UI:

Step 1: Please visit the website http://157.245.129.85:3000/ which redirects to Home page of the application.

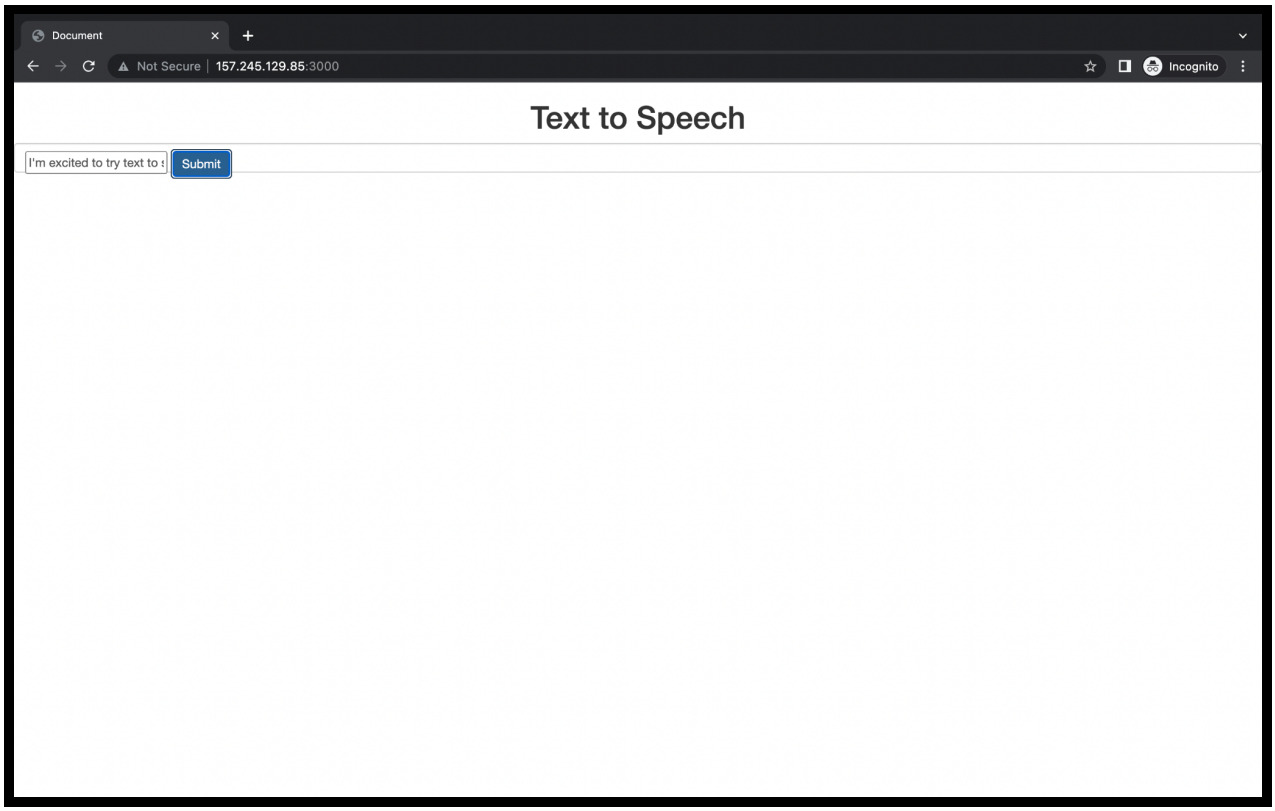


Step 2:

Please enter any input text which needs to be converted into the audio format.

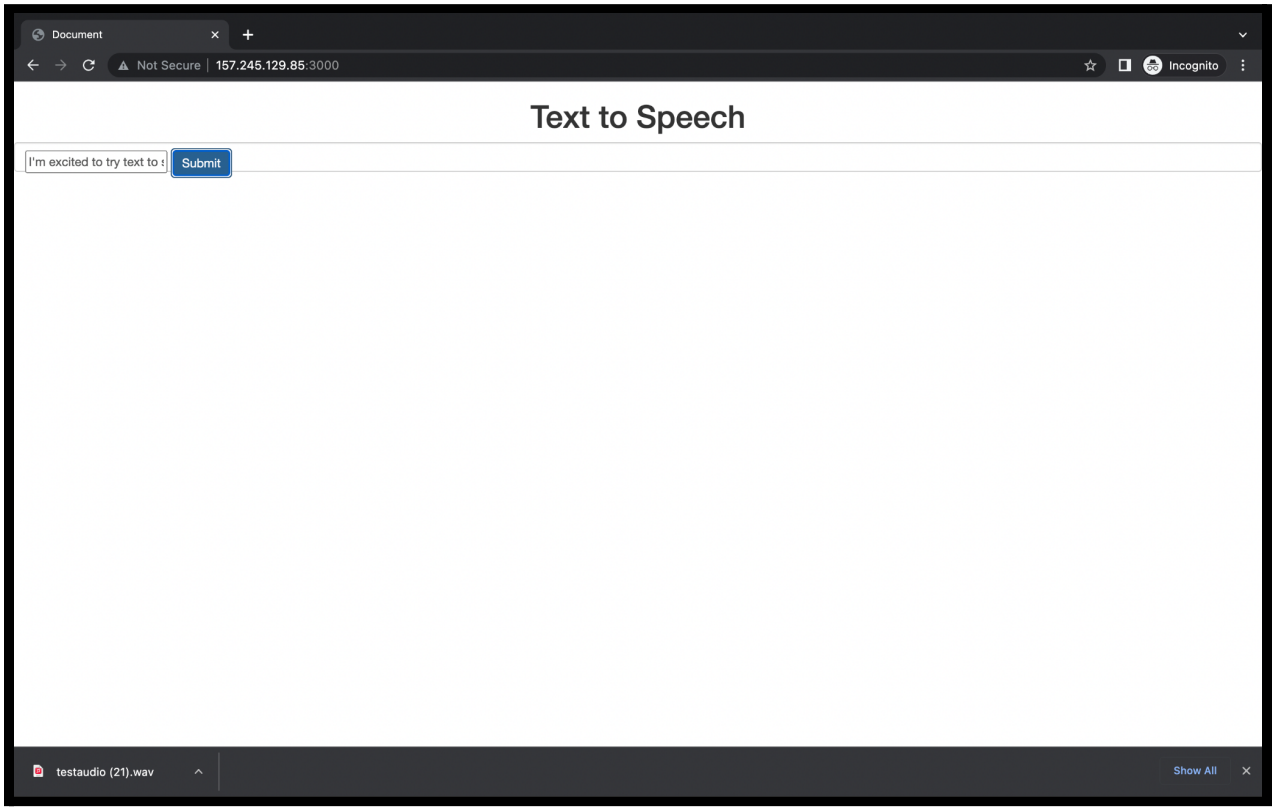
Sample Input:

I'm excited to try text to speech.



Step 3:

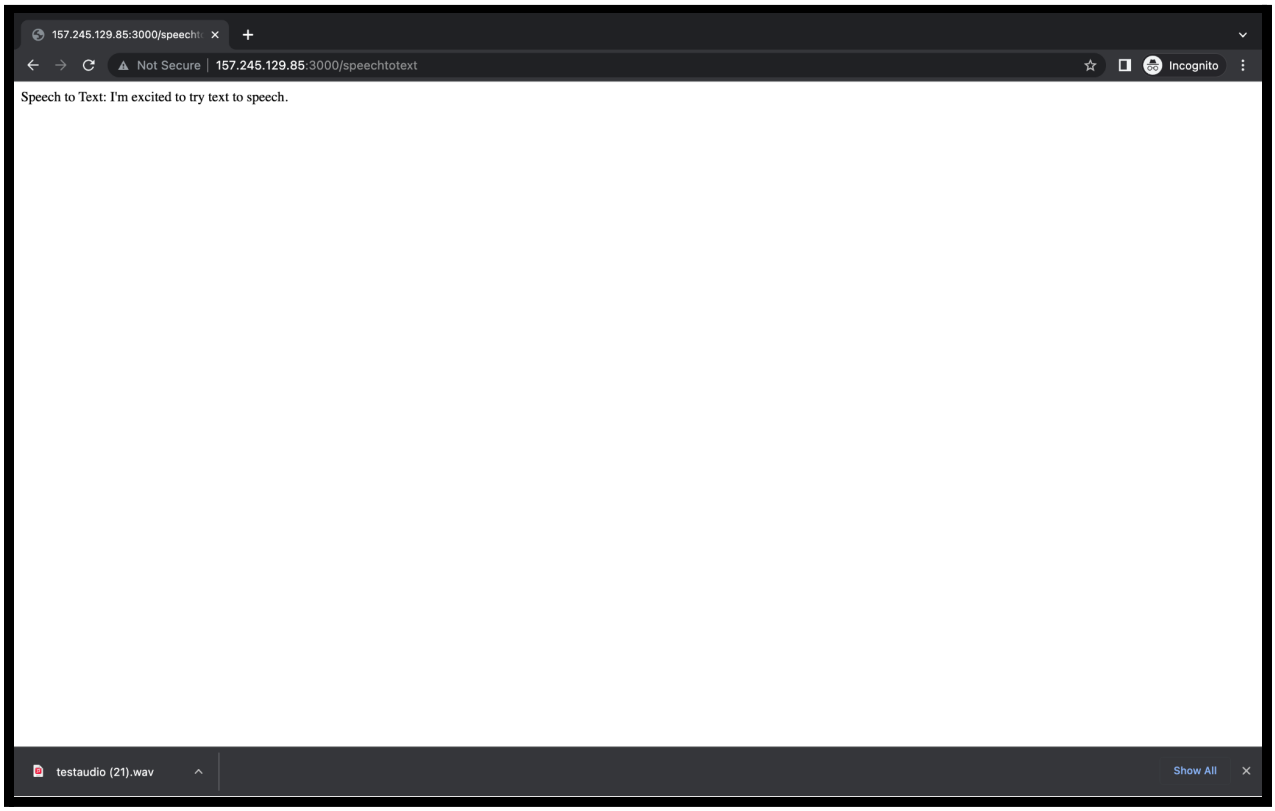
After entering the Text press the submit button to download the audio file.



As shown in the above screenshot testaudio.wav file got downloaded.

2) **Speech To Text:**

Now go to the end point http://157.245.129.85:3000/speechtotext which displays the JSON output of the text which is converted from the generated audio file(testaudio.wav).

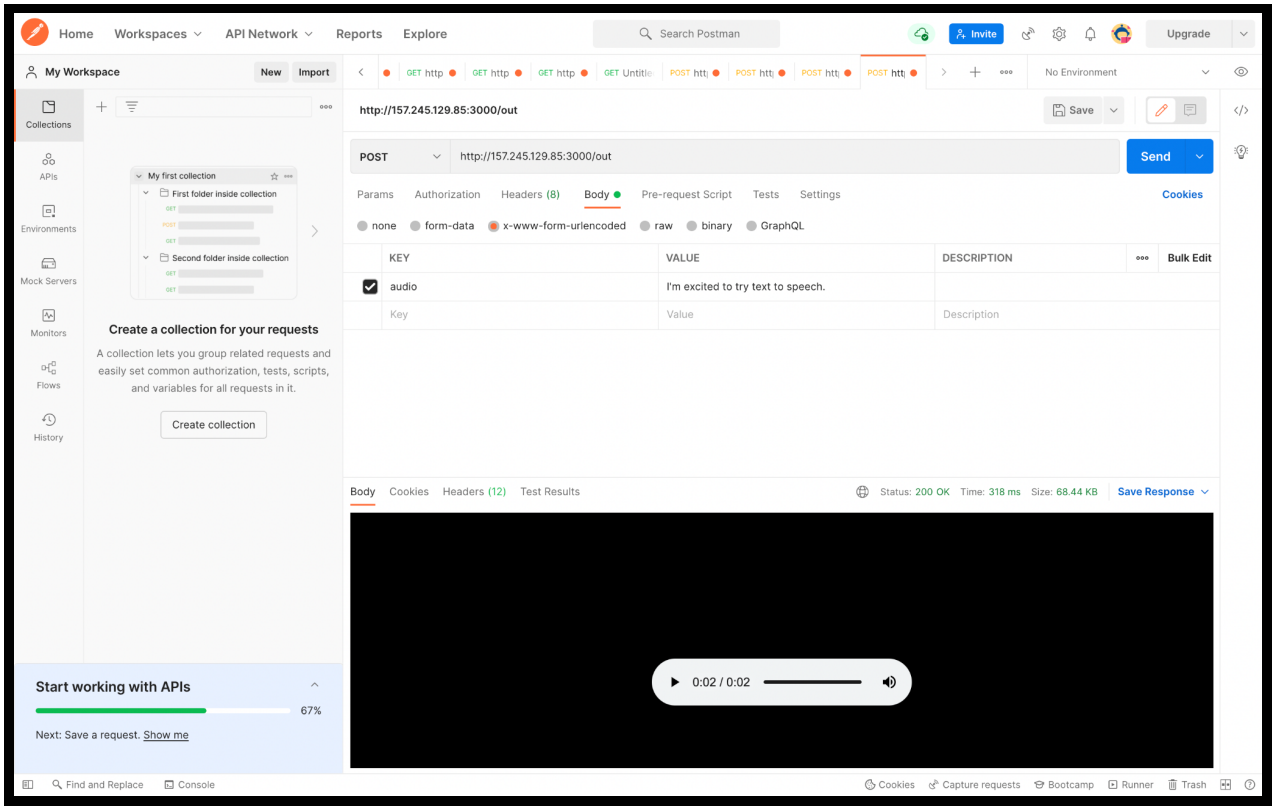


As shown in the above screenshot speech got converted to text.

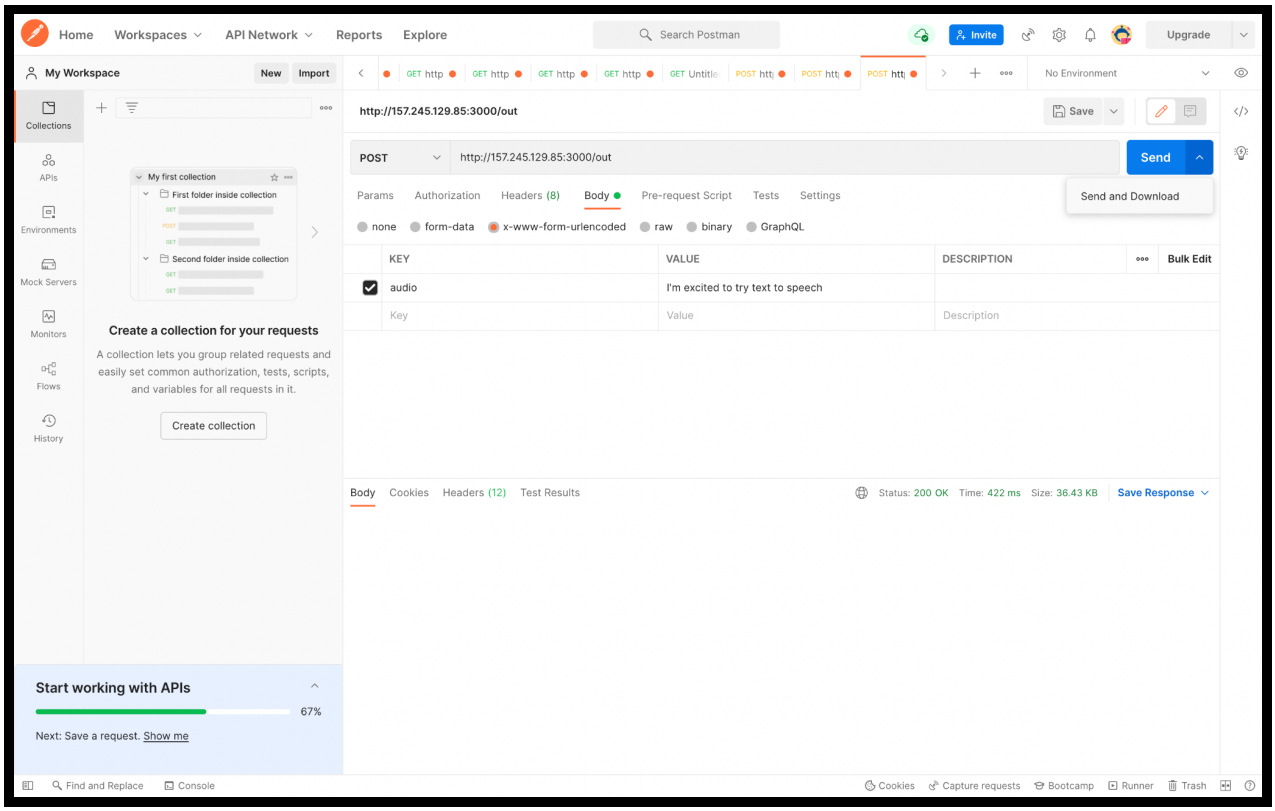
Testing through PostMan:

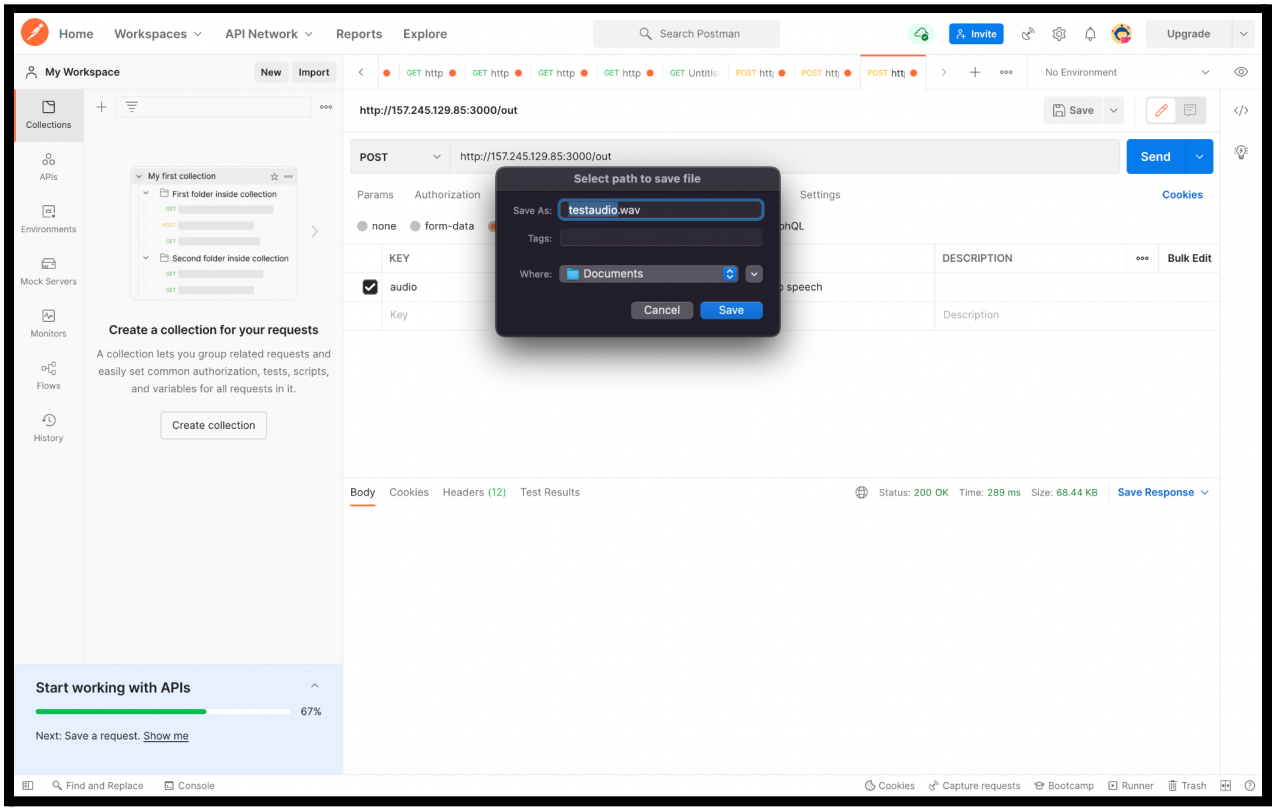
Text to Speech:

1) Go to http://157.245.129.85:3000/out
2) Select POST request and select x-www-form-urlencoded under body.
3) Provide KEY as “audio” and VALUE as “I'm excited to try text to speech.”
4) Click send to preview and play the audio file.



5) We can also download the file by clicking the send and download as shown in the figure.


Home
Workspaces
API Network
Reports
Explore
Search Postman
Invite
Upgrade
My Workspace
New
Import
Collections
APIs
Environments
Mock Servers
Monitors
Flows
History
No Environment
http://157.245.129.85:3000/out
Save
POST
http://157.245.129.85:3000/out
Send
Send and Download
Params
Authorization
Headers (8)
Body
Pre-request Script
Tests
Settings
none
form-data
x-www-form-urlencoded
raw
binary
GraphQL
KEY
VALUE
DESCRIPTION
Bulk Edit
audio
I'm excited to try text to speech
Key
Value
Description
Body
Cookies
Headers (12)
Test Results
Status: 200 OK
Time: 422 ms
Size: 36.43 KB
Save Response
My first collection
First folder inside collection
Second folder inside collection
Create a collection for your requests
A collection lets you group related requests and easily set common authorization, tests, scripts, and variables for all requests in it.
Create collection
Start working with APIs
67%
Next: Save a request. Show me
Find and Replace
Console
Cookies
Capture requests
Bootcamp
Runner
Trash


Home
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Mock Servers
Monitors
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History
No Environment
http://157.245.129.85:3000/out
Save
POST
http://157.245.129.85:3000/out
Send
Select path to save file
Save As:
testaudio.wav
Tags:
Where:
Documents
Cancel
Save
Params
Authorization
Settings
Cookies
none
form-data
KEY
DESCRIPTION
Bulk Edit
audio
speech
Key
Description
Body
Cookies
Headers (12)
Test Results
Status: 200 OK
Time: 289 ms
Size: 68.44 KB
Save Response
My first collection
First folder inside collection
Second folder inside collection
Create a collection for your requests
A collection lets you group related requests and easily set common authorization, tests, scripts, and variables for all requests in it.
Create collection
Start working with APIs
67%
Next: Save a request. Show me
Find and Replace
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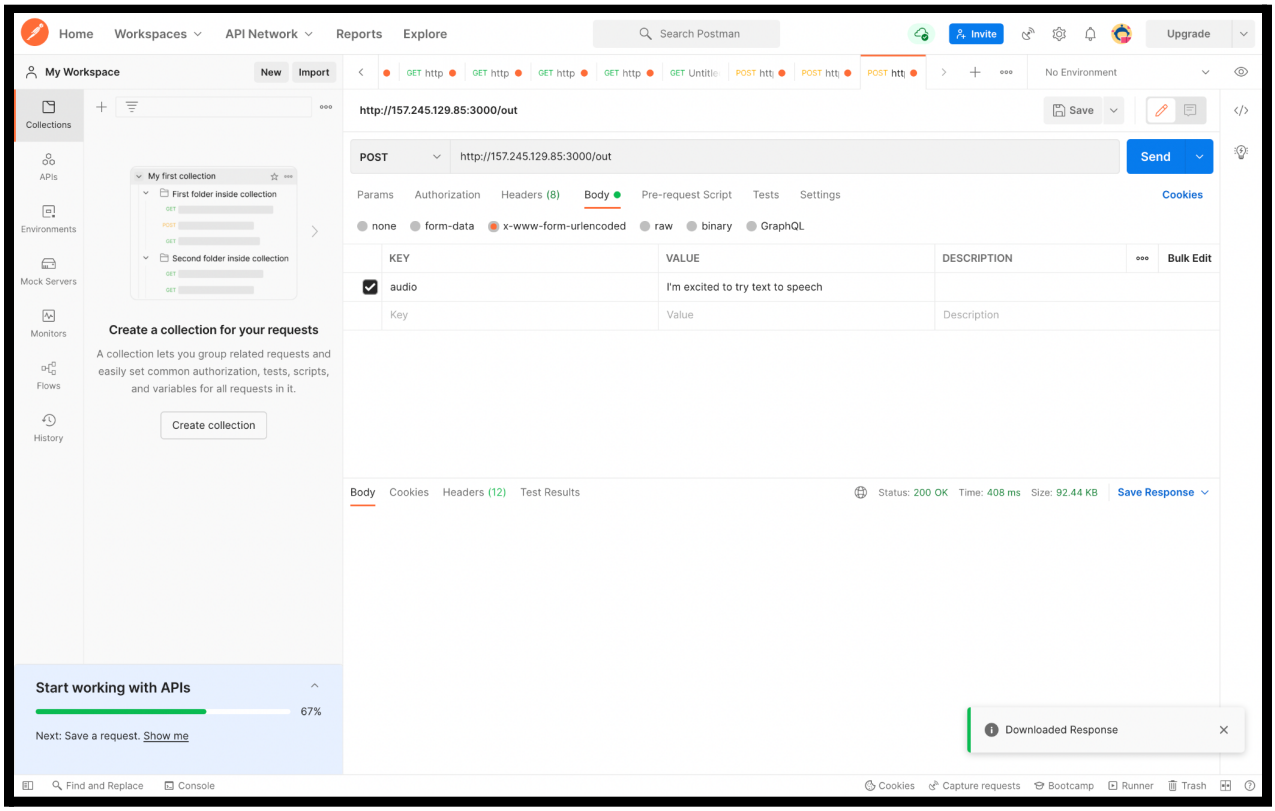
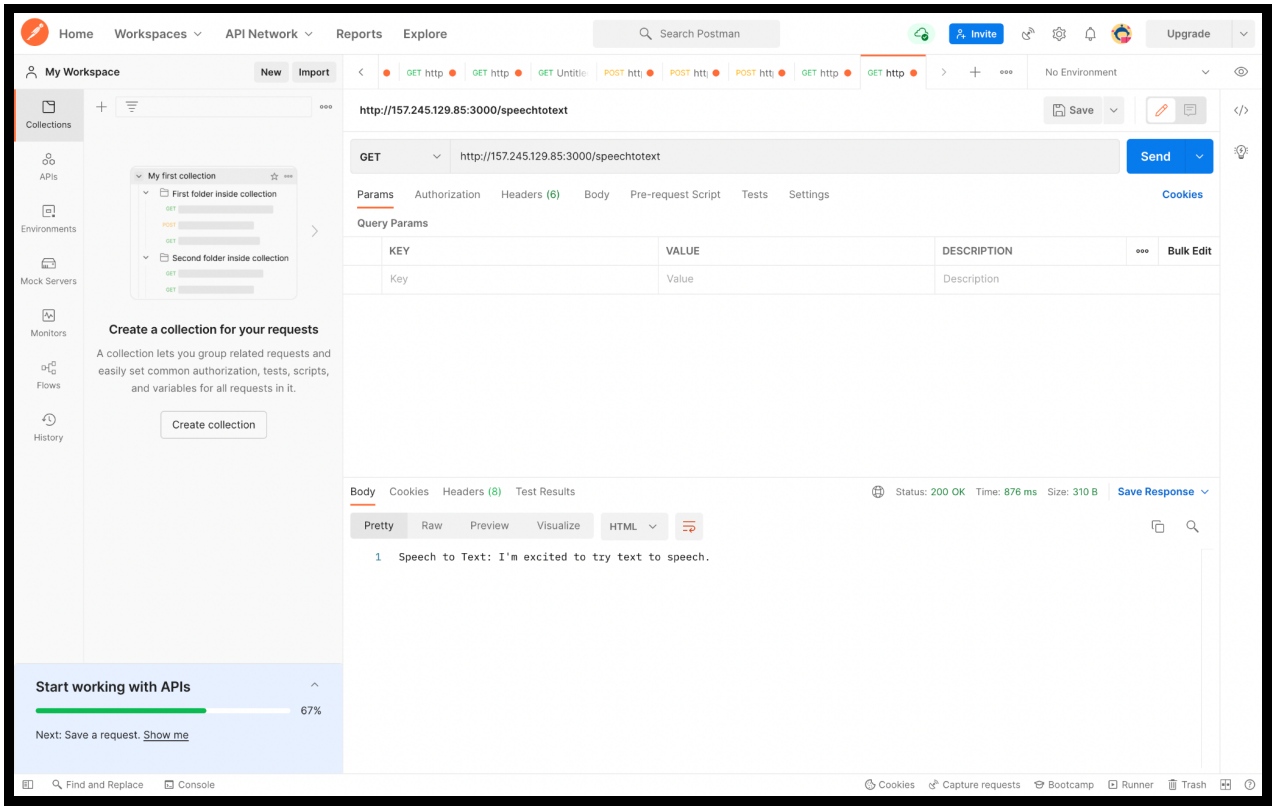
Trash



Now the file got downloaded in the system.

Speech To Text:

Go to the end point http://157.245.129.85:3000/speechtotext and select GET which displays the JSON output of the text which is converted from the generated audio file(testaudio.wav).



Tools Languages and Frameworks used:

NodeJs - The compiler of javascript
npm - Nodejs package manager
Express js - Running web server and API framework
MicroSoft AzureText to Speech - To convert users text to speech
dotenv - loads environment variables from a .env file into the process
Digitalocean - Deploying the project