ITIS-6177-System Integration

Microsoft Azure Text Translator API

Technical Documentation

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Introduction:

The Translator service's text translation feature is a cloud-based REST API that makes use of neural machine translation technology to offer rapid and accurate source-to-target text translation in real time for all languages that are supported.

Text translation features:

The following methods are supported by the Text Translation feature:

Languages:
Provides a list of the languages that can be used for dictionary lookup, transliteration, and translation.

Translate:
Translates a single source-language text into several target-language texts with just one request.

Transliterate:
Converts characters or letters of a source language to the corresponding characters or letters of a target language.

Detect:
Returns the identified language's source code along with a boolean variable indicating whether text translation and transliteration are supported for the detected language.

Dictionary lookup:
Returns equivalent words for the source term in the target language.

Dictionary example:
Returns grammatical structure and context examples for the source term and target term pair.

Implementation:

1.languages

This is used to get all the languages supported by API.

Method: Get

GET Request URL: http://137.184.102.57:3002/languages

Response:

Code	Description
200	Success
400	Bad Request. Might be invalid input
500	Internal Server Error

Testing in Postman for GET request:

2.translate

Method: POST

POST Request URL: http://137.184.102.57:3002/translate

Parameters required for POST request:

from(mandatory): from language

to(mandatory): translate to language

text(mandatory): text that is required to translate

Response:

Code	Description
200	Success
400	Bad Request. Might be invalid input
500	Internal Server Error

Testing in Postman for POST request:

Response when one input is missing for POST request:
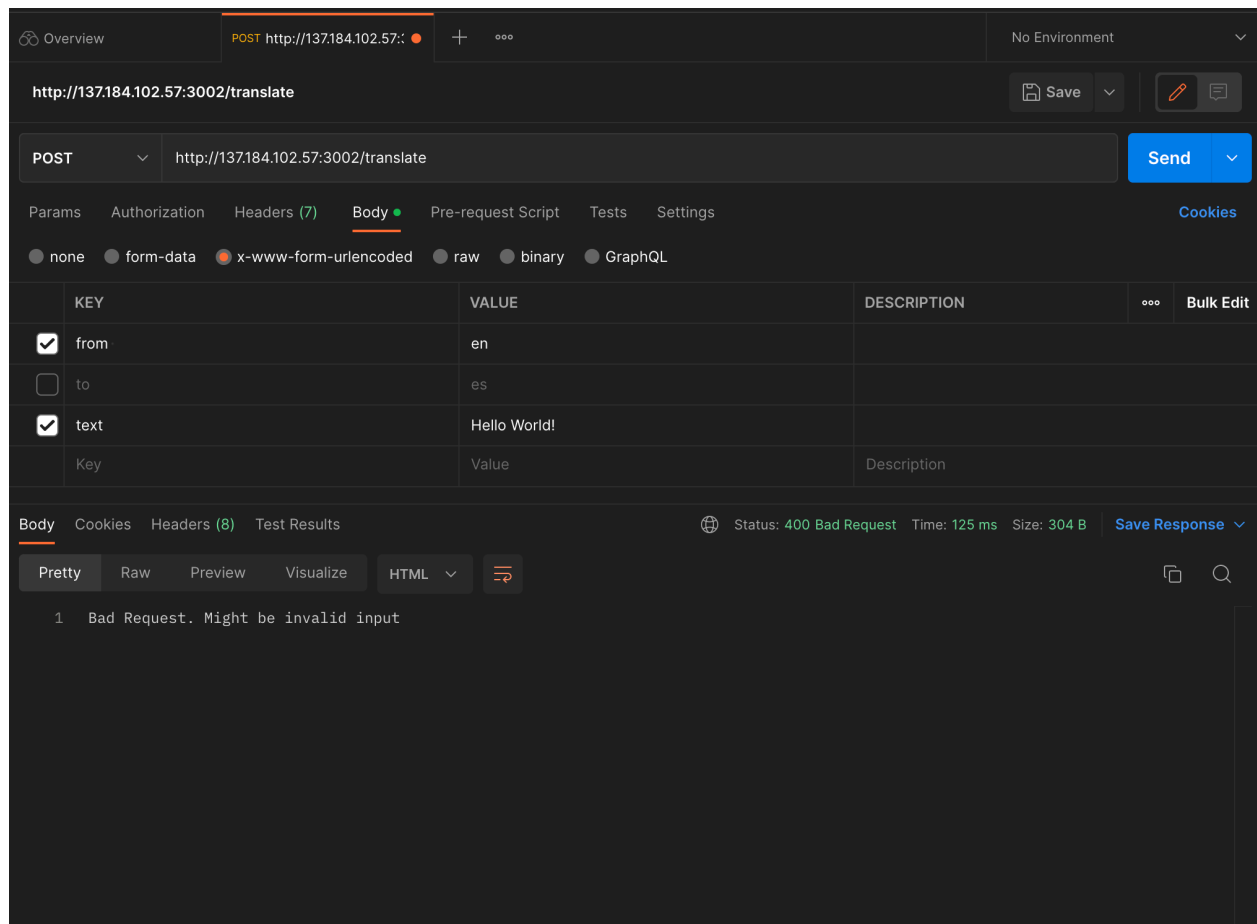
3.transliterate

Map source language script or alphabet to a target language script or alphabet.

Method: POST

POST Request URL: http://137.184.102.57:3002/transliterate

Parameters required for POST request:

language(mandatory): source language
fromScript(mandatory): source script
toScript(mandatory): target script
text(mandatory): source text to transliterate
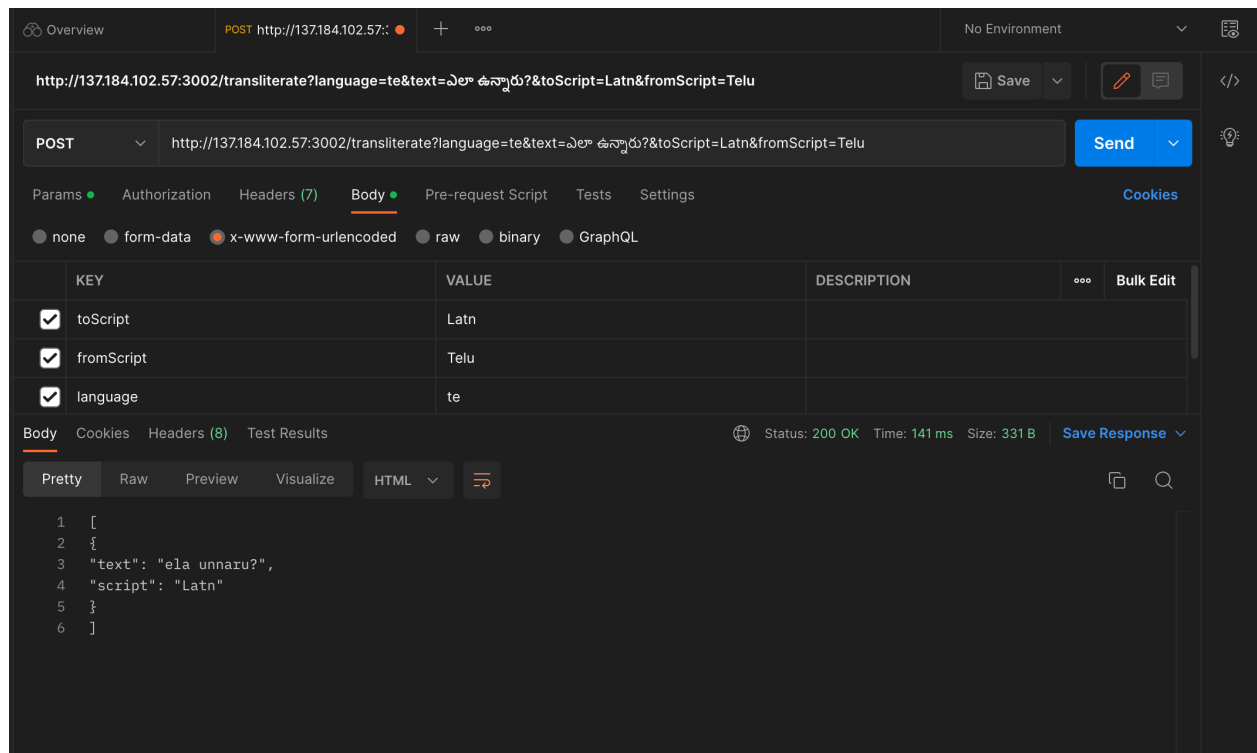
4.detect

Language detection without translation

Method: POST

POST Request URL: http://137.184.102.57:3002/detect

Parameters required for POST request:

text(mandatory): to check whether the given text can be translated or not

Testing in Postman for POST request:
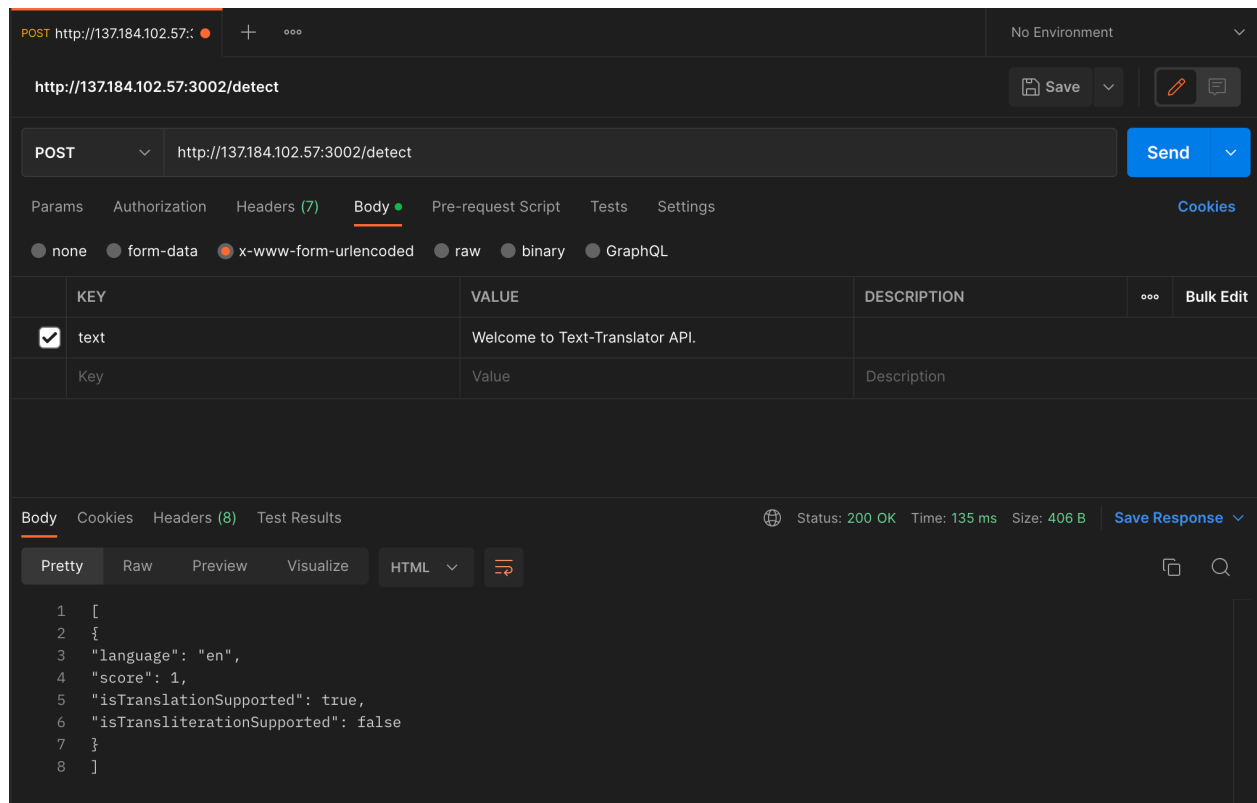
5.breaksentence

Sentence length without translation

Method: POST

POST Request URL: http://137.184.102.57:3002/breaksentence

Parameters required for POST request:

text(mandatory): text input to get the sentence length

Response:

Code	Description
200	Success
400	Bad Request. Might be invalid input
500	Internal Server Error

Testing in Postman for POST request:
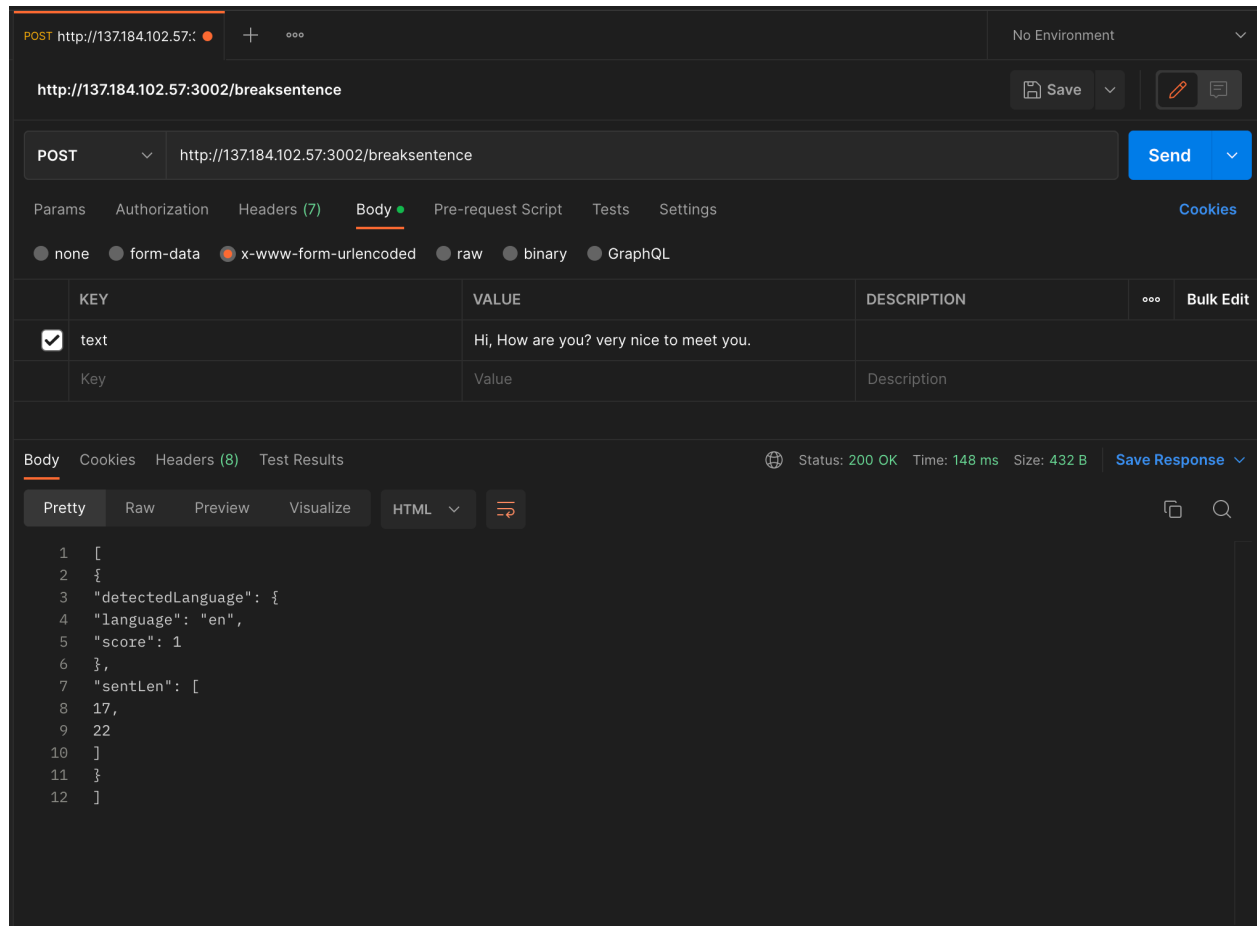
6. dictionarylookup

Dictionary lookup (alternate translations)

Method: POST

POST Request URL: http://137.184.102.57:3002/dictionarylookup

Parameters required for POST request:

from: source language
to: target language
text: text to be translated and lookup

Response:

Code	Description
200	Success
400	Bad Request. Might be invalid input
500	Internal Server Error

Testing in Postman for POST request:

7. sentencelength

Translates the given text to target language and gets the length of the sentence

Method: POST

POST Request URL: http://137.184.102.57:3002/sentencelength

Parameters required for POST request:

To(mandatory): target language
text(mandatory): text that to get the sentence length

Response:

Code	Description
200	Success
400	Bad Request. Might be invalid input
500	Internal Server Error

Testing in Postman for POST request:

Executing with Swagger:

Link to open the swagger link: http://137.184.102.57:3002/docs/.

Click on any of them below to test the API.

1. languages

Click on try it out to get the list of all the languages.

Click on execute to get the results below

Responses

Response content type: application/json

Curl

```
curl -X 'GET' \
  'http://137.184.102.57:3002/languages' \
  -H 'accept: application/json'
```

Request URL

```
http://137.184.102.57:3002/languages
```

Server response

Code	Details
200	Response body

```
{
    "translation": {
        "af": {
            "name": "Afrikaans",
            "nativeName": "Afrikaans",
            "dir": "ltr"
        },
        "am": {
            "name": "Amharic",
            "nativeName": "አማርኛ",
            "dir": "ltr"
        },
        "ar": {
            "name": "Arabic",
            "nativeName": "العربية",
            "dir": "rtl"
        },
        "as": {
            "name": "Assamese",
            "nativeName": "অসমীয়া",
            "dir": "ltr"
        },
        "az": {
            "name": "Azerbaijani"
```

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Response headers

```
access-control-allow-origin: *
connection: keep-alive
content-length: 81869
content-type: text/html; charset=utf-8
date: Sat,03 Dec 2022 21:41:58 GMT
etag: W/"13fcd-iccKhbexJlvJLijAgAcQJDCWUZc"
keep-alive: timeout=5
x-powered-by: Express
```

Responses

Code	Description
200	Success
400	Bad Request. Might be invalid input
500	Internal Server Error

2. translate

Click on try it out to translate the text.

/translate

Translate the text from the specified source language into the desired target language.

Parameters

Try it out

Name	Description
reqBody object (body)	request body **Example Value** | Model

```
{
  "from": "en",
  "to": "es",
  "text": "Hello World!"
}
```

Parameter content type

application/json

Responses

Response content type: application/json

Code	Description
200	Success
400	Bad Request. Might be invalid input
500	Internal Sever Error

click on execute to translate the text.

Responses

Response content type: application/json

Curl

```
curl -X 'POST' \
  'http://137.184.102.57:3002/translate' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
  "from": "en",
  "to": "es",
  "text": "Hello World!"
}'
```

Request URL

```
http://137.184.102.57:3002/translate
```

Server response

Code	Details
200	**Response body**

```
[
  {
    "translations": [
      {
        "text": "¡Hola mundo!",
        "to": "es"
      }
    ]
  }
]
```

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Response headers

```
access-control-allow-origin: *
connection: keep-alive
content-length: 147
content-type: text/html; charset=utf-8
date: Sat,03 Dec 2022 21:45:56 GMT
etag: W/"93-BwNnqGy7XR+HNlDnwR8FFAqN95s"
keep-alive: timeout=5
x-powered-by: Express
```

Responses

Code	Description
200	Success
400	Bad Request. Might be invalid input
500	Internal Sever Error

3. transliterate

Click on try it out to transliterate the text.

click on execute to transliterate the text.

4. detect

Click on try it out to detect the text.

click on execute to detect the text.

Responses   Response content type application/json ▾

Curl

```
curl -X 'POST' \
  'http://137.184.102.57:3002/detect' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
  "text": "Welcome to Text-Translator API."
}'
```

Request URL

```
http://137.184.102.57:3002/detect
```

Server response

Code	Details
200	Response body

```
[
  {
    "language": "en",
    "score": 1,
    "isTranslationSupported": true,
    "isTransliterationSupported": false
  }
]
```

Response headers

```
access-control-allow-origin: *
connection: keep-alive
content-length: 145
content-type: text/html; charset=utf-8
date: Sat,03 Dec 2022 21:58:00 GMT
etag: W/"91-zqllmKV9nWvX2vSfFJuDmMDhEfw"
keep-alive: timeout=5
x-powered-by: Express
``` |

Responses

Code	Description
200	success
400	Bad Request. Might be invalid input
500	Internal Sever Error

5. breaksentence

Click on try it out to get the sentence length of the text after a break.

| POST | /breaksentence | ⌃ |

Sentence length without translation

Parameters		Try it out

Name	Description

reqBody
object
(body)
	request body
	
	Example Value | Model
	
	``
	{
	  "text": "Hi, How are you? very nice to meet you."
	}
	``
	
	Parameter content type
	application/json ▾

Responses   Response content type application/json ▾

Code	Description
200	success
400	Bad Request. Might be invalid input
500	Internal Sever Error

click on execute to get the sentence length of the text after a break.

Responses

Response content type: `application/json`

Curl

```
curl -X 'POST' \
  'http://137.184.102.57:3002/breaksentence' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
  "text": "Hi, How are you? very nice to meet you."
}'
```

Request URL

```
http://137.184.102.57:3002/breaksentence
```

Server response

Code	Details
200	**Response body**

```
[
  {
    "detectedLanguage": {
      "language": "en",
      "score": 1
    },
    "sentLen": [
      17,
      22
    ]
  }
]
```

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Response headers

```
access-control-allow-origin: *
connection: keep-alive
content-length: 171
content-type: text/html; charset=utf-8
date: Sat,03 Dec 2022 21:57:08 GMT
etag: W/"ab-YOYwM5ORkN4W9fGsHNBwu3ovDM8"
keep-alive: timeout=5
x-powered-by: Express
```

Responses

Code	Description
200	success
400	Bad Request. Might be invalid input
500	Internal Sever Error

6. dictionarylookup

Click on try it out to lookup the text.

POST /dictionarylookup ⌃

Dictionary lookup (alternate translations)

Parameters   Try it out

Name   Description

reqBody   request body
object
(body)   Example Value | Model

              {
                "from": "en",
                "to": "es",
                "text": "Hello"
              }

              Parameter content type

              application/json   ⌄

Responses   Response content type application/json ⌄

Code   Description

200   success

400   Bad Request. Might be invalid input

500   Internal Sever Error

click on execute to get the dictionary lookup of the text.

Responses   Response content type application/json ⌄

Curl

curl -X 'POST' \
  'http://137.184.102.57:3002/dictionarylookup' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
  "from": "en",
  "to": "es",
  "text": "Hello"
}'

Request URL

http://137.184.102.57:3002/dictionarylookup

Server response

Code   Details

200   Response body

              [
                {
                  "normalizedSource": "hello",
                  "displaySource": "Hello",
                  "translations": [
                    {
                      "normalizedTarget": "hola",
                      "displayTarget": "Hola",
                      "posTag": "NOUN",
                      "confidence": 0.9027,
                      "prefixWord": "",
                      "backTranslations": [
                        {
                          "normalizedText": "hello",
                          "displayText": "Hello",
                          "numExamples": 15,
                          "frequencyCount": 11878
                        },
                        {
                          "normalizedText": "hi",
                          "displayText": "Hi",
                          "numExamples": 15,
                          "frequencyCount": 8090
                                                    Download

              Response headers

              access-control-allow-origin: *
              connection: keep-alive
              content-length: 3744
              content-type: text/html; charset=utf-8
              date: Sat,03 Dec 2022 21:53:55 GMT
              etag: W/"ea0-ncDRfHv/NYFqQ79bLoLMMaMU6A4"
              keep-alive: timeout=5
              x-powered-by: Express

7. sentencelength

Click on try it out to get the sentencelength

click on execute to get the length the text.

**Responses**   Response content type [application/json ▾]

Curl

```
curl -X 'POST' \
  'http://137.184.102.57:3002/sentencelength' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
  "to": "es",
  "text": "I am going to school."
}'
```

Request URL

```
http://137.184.102.57:3002/sentencelength
```

Server response

Code	Details
200	**Response body**

```
[
  {
    "detectedLanguage": {
      "language": "en",
      "score": 1
    },
    "translations": [
      {
        "text": "Voy a la escuela.",
        "to": "es",
        "sentLen": {
          "srcSentLen": [
            21
          ],
          "transSentLen": [
            17
          ]
        }
      }
    ]
  }
]
```
                                                    [📋] [**Download**]

Response headers

```
access-control-allow-origin: *
connection: keep-alive
content-length: 466
content-type: text/html; charset=utf-8
date: Sat,03 Dec 2022 21:52:28 GMT
etag: W/"ld2-QYVngsLBGBiIbmegwRtP3TOIQ/I"
keep-alive: timeout=5
x-powered-by: Express
```

Responses

Code	Description
200	success
400	Bad Request. Might be invalid input

References:

https://learn.microsoft.com/en-us/azure/cognitive-services/translator/text-translation-overview

https://learn.microsoft.com/en-us/azure/cognitive-services/translator/text-translation-overview#text-translation-features

https://github.com/MicrosoftTranslator/Text-Translation-Code-Samples/tree/main/NodeJS-Code-Samples