

# Lingolette API manual

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## Prerequisites

### Authentication

The platform currently uses the SHA256 HMAC authentication algorithm. Three HTTP request headers participate in the authentication process: **x-random** is a random string (32 bytes minimum), **x-auth-id** is your internal identifier and **x-auth-key** is the hash computed based on the two above and your secret key. Your ID and secret will be provided to you by your Lingolette manager.

The hash is computed directly from the random string using your API secret key. You may use the following online tool to test your hash: <https://www.freeformatter.com/hmac-generator.html>.

### Versioning

You need to send a header **x-api-version** indicating desired API version code. This header is obligatory.

### API wrappers

We have started adding sample API wrappers for various programming languages: <https://github.com/lingolette/api-wrappers>.

## Data exchange

Requests are sent as HTTP POST with JSON payload, thus `Content-Type: application/json` header is expected. Endpoint URL is composed of a root URL and a collection name, for example `https://lingolette.com/api/org`. API method name to be called is passed directly in the payload:

```
{
  "method": "createUserSession",
  "data":
    {
      "userId": "ddd3c9c2-5797-4215-9390-362106f6442a"
    }
}
```

Data is returned as

```
{
  "isError": false,           // boolean showing if any error was intercepted
  "errMsg": null,            // possible execution error message
  "data":                     // data returned by the method itself
    {
      ...
    }
}
```

# Organizations

org (<https://lingolette.com/api/org>)

Organization is an entity to manage your users inside Lingolette and to create access tokens. Tokens are valid for 30 days.

Method	Description	Input data	Output data
listUsers	List all users of your organization	—	<pre>[{   id: uuid — user id used to access this user   name: str — user displayed name   targetLng: TLng — target language code   nativeLng: Lng — native language code   languageLevel: number — level user is at   createdAt: Date — date of user creation }]</pre>
listUsersExt	Removed in Q3 2024.		
getOverview	Organization overview. Users info includes progress.	—	<pre>{   users: [{     id: uuid — user id used to access this user     name: str — user displayed name     targetLng: TLng — target language code     nativeLng: Lng — native language code     languageLevel: number — level user is at     createdAt: Date — date of user creation     lastMeaningfulActivity: Date — date of last activity     completedExerciseCount: number — number of successfully     completed exercises     dictionarySize: number — active dictionary size   }],   admins: [{     id: uuid — user id     name: str — displayed name   }],   orgInfo: {     id: uuid — organization id     name: str — organization displayed name   } }</pre>

			<pre> allowLogin: bool — whether students can log in via our UI maxUsers: int — max students allowed in your org } </pre>
addUser	Add a new user to your organization	<pre> {   name: str — user displayed name   targetLng: TLng — target language code   nativeLng: Lng — native language code   languageLevel: number — level user is at } </pre>	<pre> {   id: uuid — user id used to access this user   name: str — user displayed name   targetLng: TLng — target language code   nativeLng: Lng — native language code   languageLevel: LngLevel — level user is at   createdAt: Date — date of user creation } </pre>
removeUser	Remove an existing user from your organization.	<pre> {   userId: uuid — user identifier } </pre>	'ok' string
createUserSession	Create a frontend session for one of your users	<pre> {   userId: uuid — user identifier } </pre>	<pre> {   token: str — access token } </pre>

After a session is created via `createUserSession` call it can be passed to the frontend as  
[https://lingolette.com/?token=SESSION\\_TOKEN](https://lingolette.com/?token=SESSION_TOKEN)

## Lessons

org/lesson (<https://lingolette.com/api/org/lesson>)

This collection provides methods for working with lessons.

Method	Description	Input data	Output data
createEphemeral	Creates a one-time lesson for a given user	<pre>{   content: str — input word or text   userId: uuid — user identifier   targetLng: TLng — target language code   mode: LessonMode — lesson mode   userPreferences: UserPreferences — temporary settings for this lesson }  UserPreferences = {   feedbackMode: ?FeedbackMode   formalityLevel: ?FormalityLevel   grammarFeatures: ?GrammarFeature (OR) }</pre>	<pre>{   url: string — URL to the chat (normally it's just the chat link) }</pre>

## Texts

text (<https://lingolette.com/api/text>)

This collection provides methods for working with text.

Method	Description	Input data	Output data
translate	Translates a word/text In case of a single word information about lemma and part of speech is fed back as well	<pre>{   text: str — input word or text   targetLng: TLng — target language code   nativeLng: Lng — native language code }</pre>	<pre>{   translation: string — chat identifier   lemma: ?string — optional lemma   pos: ?string — optional part of speech }</pre>
explain	Explains a word/phrase	<pre>{   text: str — input word or phrase   targetLng: TLng — target language code }</pre>	<pre>{   explanation: string — chat identifier }</pre>





## Chats

chat (<https://lingolette.com/api/chat>)

Chat is an entity to keep communication between a user and an AI-teacher.

Method	Description	Input data	Output data
load	Loads your current chat	—	<pre>{   id: uuid — chat identifier   messages: ChatMessage[] — chat messages   tokenCount: number — number of used tokens   targetLng: TLng — chat target language   descriptor: str — auxiliary chat descriptor }</pre>
clear	Clears your current chat	—	—
voiceInput	Takes voice input, transcribes it and sends both back to requester and into the chat	<pre>{   b64Data: string — voice input, base-64 enc.   chatId: uuid — chat identifier }</pre>	string

## Non-JSON API parts

binary (<https://lingolette.com/api/binary>)

Some content is not returned as JSON to improve end user experience. Usually in this case the data is [server-side events](#) (SSE).

Method	Description	Input data	Output data
startChat	Initiates a chat	<pre>{   timeStamp: Date — user local time   useVoiceOut: ?bool — use voice output?   articleId: ?str — optional article id for discussion   lessonId: ?str — optional lesson id to load }</pre>	server-side event  data: [ChatCommand, ...ChatCommandArguments]
postToChat	Takes an optional text message and produces synchronous audio/text output	<pre>{   input: str — text input   useVoiceOut: ?bool — use voice output?   useVoiceIn: ?str — use voice input? }</pre>	server-side event  data: [ChatCommand, ...ChatCommandArguments]

## Appendix A: types and enums

### LngLevel

Code	Description
0	Unset (level unknown)
1	A1
2	A2
3	B1
4	B2
5	C1
6	C2
7	None (no prior knowledge)

### ChatCommand

Code	Description
0	Close connection
1	Incoming text message, arg 1 — text message

2	Incoming voice-over, arg 1 — audio segment number, arg 2 — base64-encoded audio
3	Chat language changed, arg 1 — language code
4	Custom AI function called, documentation t.b.d
5	Error, arg 1 — reserved for future error code, arg 2 — textual error description
6	Feedback, arg 1 — message ID, arg 2 — success status, 3 — textual feedback
7	Sets ID to the last posted message
8	Set chat description if present

## LessonMode

Code	Description
0	Discuss a text
1	Talk on a topic

## FeedbackMode

Code	Description
0	Disabled
1	Inline, within teacher's replies

2	On a separate note
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## FormalityLevel

Code	Description
0	Informal
1	Formal

## GrammarFeatures

Code	Description
0x001	Present tense
0x010	Past tense
0x100	Future tense

## Appendix B: supported languages

All language codes are in ISO-639-1 format: <https://localizely.com/iso-639-1-list>

target languages (type *TLng*)

ca, de, en, es, fi, fr, he, it, ja, nb, ms, nl, pl, pt, ru, sv, tr, uk, zh (full mode)

ar, fa, el, ko, lt, ro, sr, th (test mode, voice input has higher error rate)

native languages (type *Lng*)

Any ISO-639-1 language.