API Documentation Mobile City Memory

These web services can be reached via the URL "/services/" + the respective web service name. The parameters have to be added in the given order, separated by forward slashes.

Example: http://localhost/services/locations/52.12456/14.24363

Bold parameters are required, *cursive parameters* optional.

These services return data in JSON.

For PUT-Actions, the parameters should be sent in JSON-Format, except where noted differently.

locations/

GET

This lists all the locations saved in the database.

URL-Parameters

None

Return data

List of locations:

id	ID of location	
latitude	Latitude of the location	
longitude	Longitude of the location	
altitude	Optional: Altitude of the location in meters	
title	Title of the location	
description	Optional: Description of the location	
dbpedia_link	Optional: Link to a DBPedia-Page describing the location	
created	Date and time of creation	
modified	Date and time of modification	

POST

Authentication Required

This creates a new location in the database.

Parameters

latitude	Latitude of the location
longitude	Longitude of the location
title	Title of the location
altitude	Optional: Altitude of the location in meters
description	Optional: Description of the location
dbpedia_link	Optional: Link to a DBPedia-Page describing the
	location

Return data

Depending on whether the authentication succeeded or failed, either a 201 Created or a 403 Forbidden status code. If authentication succeeds, the following header data will be returned.

Location	locations/location_id	URI of the newly created location
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locations/story_count/

GET

This lists all the locations saved in the database. It also includes a list of IDs of saved stories to these locations.

URL-Parameters

None

Return data

List of locations:

id	ID of location	
latitude	Latitude of the location	
longitude	Longitude of the location	
altitude	Optional: Altitude of the location in meters	
title	Title of the location	
description	Optional: Description of the location	
dbpedia_link	Optional: Link to a DBPedia-Page describing the location	
created	Date and time of creation	
modified	Date and time of modification	
stories	List of IDs of attached stories	

locations/stories/title

GET

This lists all the locations saved in the database. It also includes a list of IDs of saved stories to these locations, their title and their location.

URL-Parameters

None

Return data

List of locations:

id	ID of location			
latitude	Latitude of the location			
longitude	Longitude of th	Longitude of the location		
altitude	Optional: Altitude of the location in meters			
title	Title of the location			
description	Optional: Description of the location			
dbpedia_link	Optional: Link to a DBPedia-Page describing the location			
created	Date and time of creation			
modified	Date and time of modification			
stories	List of stories:			
	id	ID of the story		
	title	Title of the story		
	location	ID of the location		

locations/lat/maxlat/lon/maxlon/

GET

This retrieves all locations in a certain area.

URL-Parameters

lat	Lower latitude bound, if maxlat is present, otherwise latitude around which
	locations will be returned
	Format: [0-9] {1,3}.[0-9] {1,10}
maxlat	Upper latitude bound
	Format: [0-9] {1,3}.[0-9] {1,10}
lon	Lower longitude bound, if maxlon is present, otherwise longitude around which
	locations will be returned
	Format: [0-9] {1,3}.[0-9] {1,10}
maxlon	Upper longitude bound
	Format: [0-9] {1,3}.[0-9] {1,10}

If maxlat and maxlon are not present, the area searched for locations will be determined by [lat - 0,01, lat + 0,01, lon - 0,01, lon + 0,01]. If both parameters are present, locations will be searched in the area determined by all four parameters.

This behaviour is the same in all the commands with latitude and longitude parameters.

Return data

List of locations:

id	ID of location	
latitude	Latitude of the location	
longitude	Longitude of the location	
altitude	Optional: Altitude of the location in meters	
title	Title of the location	
description	Optional: Description of the location	
dbpedia_link	Optional: Link to a DBPedia-Page describing the location	
created	Date and time of creation	
modified	Date and time of modification	

locations/lat/maxlat/lon/maxlon/stories/story_count/

GET

This retrieves all locations in a certain area, which have at least one story attached to it. This also includes the count of stories attached to the locations.

URL-Parameters

lat	Lower latitude bound, if maxlat is present, otherwise latitude around which		
iat	· · · · · · · · · · · · · · · · · · ·		
	locations will be returned		
	Format: [0-9] {1,3}.[0-9] {1,10}		
maxlat	Upper latitude bound		
	Format: [0-9] {1,3}.[0-9] {1,10}		
lon	Lower longitude bound, if maxlon is present, otherwise longitude around which		
	locations will be returned		
	Format: [0-9] {1,3}.[0-9] {1,10}		

maxlon	Upper longitude bound
	Format: [0-9] {1,3}.[0-9] {1,10}

List of locations:

id	ID of location	
latitude	Latitude of the location	
longitude	Longitude of the location	
altitude	Optional: Altitude of the location in meters	
title	Title of the location	
description	Optional: Description of the location	
dbpedia_link	Optional: Link to a DBPedia-Page describing the location	
created	Date and time of creation	
modified	Date and time of modification	
stories	List of IDs of attached stories	

locations/lat/maxlat/lon/maxlon/stories/title/

GET

This retrieves all locations in a certain area, which have at least one story attached to it. This also includes the title of the stories attached to these locations.

URL-Parameters

lat	Lower latitude bound, if maxlat is present, otherwise latitude around which
	locations will be returned
	Format: [0-9] {1,3}.[0-9] {1,10}
maxlat	Upper latitude bound
	Format: [0-9] {1,3}.[0-9] {1,10}
lon	Lower longitude bound, if maxlon is present, otherwise longitude around which
	locations will be returned
	Format: [0-9] {1,3}.[0-9] {1,10}
maxlon	Upper longitude bound
	Format: [0-9] {1,3}.[0-9] {1,10}

Return data

List of locations:

id	ID of location			
latitude	Latitude of the location			
longitude	Longitude of th	Longitude of the location		
altitude	Optional: Altitude of the location in meters			
title	Title of the location			
description	Optional: Description of the location			
dbpedia_link	Optional: Link to a DBPedia-Page describing the location			
created	Date and time of creation			
modified	Date and time of modification			
stories	List of stories:			
	id	ID of the story		
	title	Title of the story		
	location	ID of the location		

locations/lat/maxlat/lon/maxlon/stories/

GET

This retrieves all locations in a certain area, which have at least one story attached to it. This also all story information that is available.

URL-Parameters

lat	Lower latitude bound, if maxlat is present, otherwise latitude around which	
	locations will be returned	
	Format: [0-9] {1,3}.[0-9] {1,10}	
maxlat	t Upper latitude bound	
	Format: [0-9] {1,3}.[0-9] {1,10}	
lon	Lower longitude bound, if maxlon is present, otherwise longitude around which	
	locations will be returned	
	Format: [0-9] {1,3}.[0-9] {1,10}	
maxlon	on Upper longitude bound	
	Format: [0-9] {1,3}.[0-9] {1,10}	

Return data

List of locations

id	ID of location			
latitude	Latitude of the location			
longitude	Longitude of the location			
altitude	Optional: Altitu	Optional: Altitude of the location in meters		
title	Title of the loca	ation		
description	Optional: Desc	ription of the location		
dbpedia_link	Optional: Link to a DBPedia-Page describing the location			
created	Date and time of creation			
modified	Date and time of modification			
stories List of stories:				
	id	ID of the story		
	title	Title of the story		
	location	ID of the location		
	abstract	Abstract of the story		
	author	ID of the user that created the story		
	time_start	Start point of story		

	time_end	Optional: End point of story
	text	Optional: Text of story
	created	Date and time of creation
	modified	Date and time of modification
	categories	List of IDs of attached categories

locations/id/

GET

This retrieves information for one particular location.

URL-Parameters

id	ID of the location to be retrieved
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Return data

List of locations:

id	ID of location	
latitude	Latitude of the location	
longitude	Longitude of the location	
altitude	Optional: Altitude of the location in meters	
title	Title of the location	
description	Optional: Description of the location	
dbpedia_link	Optional: Link to a DBPedia-Page describing the location	
created	Date and time of creation	
modified	Date and time of modification	

PUT

Authentication Required

This updates the respective location in the database.

URL-Parameters

id	ID of the location to be updated
Parameters	

title	Optional: Title of the location		
latitude	Optional: Latitude of the location		
Iongitude Optional: Longitude of the location			

Return data

Depending on whether the authentication succeeded or failed, either a $200\,$ OK or a $403\,$ Forbidden status code.

id	ID of location	
latitude	Latitude of the location	
longitude	Longitude of the location	
title	Title of the location	

locations/id/stories/story_count/

GET

This retrieves information for one particular location. This also includes the count of stories attached to the location.

URL-Parameters

id	ID of the location to be retrieved		
Return data	Return data		
id	ID of location		
latitude	Latitude of the location		
longitude	Longitude of the location		
altitude	Optional: Altitude of the location in meters		
title	Title of the location		
description	Optional: Description of the location		
dbpedia_link	Optional: Link to a DBPedia-Page describing the location		
created	Date and time of creation		
modified	Date and time of modification List of IDs of attached stories		
stories			

locations/id/stories/title/

ID of the location to be retrieved

GET

id

This retrieves information for one particular location. This also includes the title of the stories attached to the location.

URL-Parameters

Return data				
id	ID of location			
latitude	Latitude of the location			
longitude	Longitude of th	Longitude of the location		
altitude	Optional: Altitu	de of the location in meters		
title	Title of the location			
description	Optional: Description of the location Optional: Link to a DBPedia-Page describing the location Date and time of creation			
dbpedia_link				
created				
modified	Date and time of modification			
stories	List of stories:			
	id	ID of the story		
	title	Title of the story		
	location	ID of the location		

locations/id/stories/

GET

This retrieves information for one particular location. This also all story information that is available.

URL-Parameters

Ī	id	ID of the location to be retrieved
- 1		is of the location to selecticited

Return data

id	ID of location			
latitude	Latitude of the location			
longitude	Longitude of the location			
altitude	Optional: Altitu	Optional: Altitude of the location in meters		
title	Title of the loc	ation		
description	Optional: Desc	ription of the location		
dbpedia_link	Optional: Link	to a DBPedia-Page describing the location		
created	Date and time	of creation		
modified	Date and time	of modification		
stories	List of stories:			
	id	ID of the story		
	title	Title of the story		
	location	ID of the location		
	abstract	Abstract of the story		
	author	ID of the user that created the story		
	time_start	Start point of story		
	time_end	Optional: End point of story		
	text	Optional: Text of story		
	created	Date and time of creation		
	modified	Date and time of modification		
	categories	List of IDs of attached categories		

stories/

GET

This retrieves all the saved stories with or without a location.

URL-Parameters

None

Return data

List of stories:

id	ID of the story
title	Title of the story
location	ID of the location
abstract	Abstract of the story
author	ID of the user that created the story
time_start	Start point of story
time_end	Optional: End point of story
text	Optional: Text of story
created	Date and time of creation
modified	Date and time of modification
categories	List of IDs of attached categories

POST

This creates a new story in the database.

Parameters

title	Title of the story	
author	Longitude of the location	
text	Title of the story	
abstract	Abstract of the story	
time_start	Startpoint of the story	
time_end	Optional: Endpoint of the story	
type	Type of the story	
location	Optional: ID of the location this story is attached to.	

Return data

Depending on whether the authentication succeeded or failed, either a 201 Created or a 403 Forbidden status code. If authentication succeeds, the following header data will be returned.

Location	stories/ story_id	URI of the newly created story
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stories/title/

GET

This retrieves all the saved stories and their title.

URL-Parameters

None

Return data

id	ID of story
title	Title of the story
location	Optional: ID of the location this story is attached to.

stories/id/

GET

This retrieves information for one particular story.

URL-Parameters

id	ID of the story to be retrieved

Return data

id	ID of the story
title	Title of the story
location	ID of the location
abstract	Abstract of the story
author	ID of the user that created the story
time_start	Start point of story
time_end	Optional: End point of story
text	Optional: Text of story
created	Date and time of creation
modified	Date and time of modification
categories	List of IDs of attached categories
assets	List of IDs of assets attached to this story

PUT

Authentication Required

This updates the respective story in the database.

URL-Parameters

id	ID of the story to be updated
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Parameters

title	Optional: Title of the story
text	Optional: Text of the location
time_start	Optional: Startpoint of the story
time_end	Optional: Endpoint of the story
category	Optional: Type of the story
location	Optional: ID of the location this story is attached to.

Return data

Depending on whether the authentication succeeded or failed, either a 200 OK or a 403 Forbidden status code.

id	ID of the story
title	Title of the story
location	ID of the location
abstract	Abstract of the story
author	ID of the user that created the story
time_start	Start point of story
time_end	Optional: End point of story
text	Optional: Text of story
created	Date and time of creation
modified	Date and time of modification
categories	List of IDs of attached categories
assets	List of IDs of assets attached to this story

DELETE

Authentication Required

This will delete the respective story.

URL-Parameters

id	ID of the story to be deleted

Return data

Depending on whether the authentication succeeded or failed, either a 200 OK or a 403 Forbidden status code.

stories/title/query/title/

GET

This retrieves a list of stories where the title contains the query string. This can be used for auto-completion or similar.

URL-Parameters

query	Query string which should the story title should contain.
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List of stories:

id	ID of story
title	Title of the story

stories/text/query/title/

GET

This retrieves a list of stories where the text or the title contains the query string. This can be used for auto-completion.

URL-Parameters

query	Query string which should the story text or title should contain.
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Return data

List of stories:

id	ID of story
title	Title of the story

stories/title/query/

GET

This retrieves a list of stories where the title contains the query string. This can be used for search. This includes all the information of the stories.

URL-Parameters

query	Query string which should the story title should contain.

Return data

List of stories

id	ID of the story	
title	Title of the story	
location ID of the location		
abstract	Abstract of the story	
author	r ID of the user that created the story	
time_start	time_start Start point of story	
time_end Optional: End point of story		
text Optional: Text of story		
created	Date and time of creation	
modified	Date and time of modification	
categories	List of IDs of attached categories	
assets List of IDs of assets attached to this story		

stories/text/query/

GET

This retrieves a list of stories where the text or the title contains the query string. This can be used for search. This includes all the information of the stories.

Parameters

query	Query string which the story text or title should contain.
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Return data

List of stories

id	ID of the story	
title	Title of the story	
location ID of the location		
abstract	Abstract of the story	
author	ID of the user that created the story	
time_start	ne_start Start point of story	
time_end	Optional: End point of story	
text Optional: Text of story		
created	Date and time of creation	
modified	ified Date and time of modification	
categories	List of IDs of attached categories	
assets	assets List of IDs of assets attached to this story	

stories/id/assets/

GET

This retrieves all additional media that is attached to a particular entry.

URL-Parameters

id	ID of the story, for which the media information should be retrieved

Return data

List of assets:

.	(Lais) ((assa) (Lais) as (lais)			
type	"vid", "img", "txt", or "aud"			
	Determines whether this media file is a video, audio or image file			
created	Date of cre	Date of creation		
modified	Date of mo	Date of modification		
alt	Alternative	Alternative text for media file		
description	Description	Description of this asset		
width	Width of m	Width of media file if applicable		
height	Height of m	Height of media file if applicable		
resolution	Resolution of media file if applicable			
device	Device of m	Device of media file if applicable		
length	Length of n	Length of media file if applicable		
is_readable	Determines	Determines whether the file is screen readable		
sources	List of sources for media file:			
	mime	MIME-Type of the source file		
	source	URL to source file		

POST

Authentication Required

This creates a new asset for the respective story.

Parameters

pe Type of the media file, e.g. "vid", "img", or "aud"
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alt	Alternative text for media file	
description Optional: description of the media file		
width Optional: Width of media file if applicable		
height Optional: Height of media file if applicable		
resolution Optional: Resolution of media file if applicable		
device Optional: Device of media file if applicable		
length	Optional: Length of media file if applicable	
is_readable Optional: Determines whether the file is screen readable		

Depending on whether the authentication succeeded or failed, either a 201 Created or a 403 Forbidden status code. If authentication succeeds, the following header data will be returned.

Location	assets/ asset_id	URI of the newly created asset
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assets/

GET

This lists all assets.

Return data

List of assets:

type	"vid", "img", "txt", or "aud"			
	Determines	s whether this media file is a video, audio or image file		
created	Date of cre	Date of creation		
modified	Date of mo	Date of modification		
alt	Alternative	Alternative text for media file		
description	Description	Description of this asset		
width	Width of m	Width of media file if applicable		
height	Height of m	Height of media file if applicable		
resolution	Resolution	Resolution of media file if applicable		
device	Device of m	Device of media file if applicable		
length	Length of n	Length of media file if applicable		
is_readable	Determines	Determines whether the file is screen readable		
sources	List of sour	ces for media file:		
	mime	MIME-Type of the source file		
	source	URL to source file		

POST

Authentication Required

This creates a new asset without a story attached to it.

Parameters

type	Type of the media file, e.g. "vid", "img", or "aud"	
alt	Alternative text for media file	
description	Optional: description of the media file	
width	Optional: Width of media file if applicable	
height	Optional: Height of media file if applicable	
resolution	Optional: Resolution of media file if applicable	
device	Optional: Device of media file if applicable	

length	Optional: Length of media file if applicable	
is_readable	Optional: Determines whether the file is screen readable	

Depending on whether the authentication succeeded or failed, either a 201 Created or a 403 Forbidden status code. If authentication succeeds, the following header data will be returned.

Location assets/asset id URI of the newly created asset	
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assets/asset_id

GET

This retrieves one specific media file that is attached to the story.

URL-Parameters

asset_id	ID of the media entry

Additional Request Headers

For this method, the Accept header must be set. The server will try to serve the file matching the requested MIME-Type. If this is not possible, a $406\,$ Not Acceptable status code will be sent, followed by the accepted Content-Types.

Accept	Desired MIME-Type of the media file.
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PUT

Authentication Required

This updates the respective asset.

Parameters

type	Type of the media file, e.g. "vid", "img", or "aud"	
alt	Alternative text for media file	
description	Optional: description of the media file	
width	Optional: Width of media file if applicable	
height	Optional: Height of media file if applicable	
resolution	Optional: Resolution of media file if applicable	
device	Optional: Device of media file if applicable	
length	Optional: Length of media file if applicable	
is_readable	Optional: Determines whether the file is screen readable	

Return data

Depending on whether the authentication succeeded or failed, either a 200 OK or a 403 Forbidden status code.

DELETE

Authentication Required

This will delete the media entry and all of its sources.

URL-Parameters

id ID of the media entry to be deleted	
--	--

Return data

Depending on whether the authentication succeeded or failed, either a $200\,$ OK or a $403\,$ Forbidden status code.

assets/asset_id/sources

PUT

Authentication Required

This uploads a new media source to this asset.

Parameters

mime	The MIME-Type of the file
file	The actual media file

User authentication

The following section describes methods for basic user authentication. In order to post or update stories, the source of the information needs to be authenticated. This can be done in two ways:

1. User authentication

Choosing this method, users will have to register and log-in before they can create new stories. The following methods regarding **sessions** and **users** are used for this. After having logged-in the session ID can be used as an authentication token for posting or updating stories. Authentication then is done by sending an additional request header field containing the authentication token like this:

Authorization: Token 9944b09199c62bcf9418ad846dd0e4bbdfc6ee4b

Additionally, session authentication mode can be used. The session ID will then be saved as a cookie on the client. Since this violates REST principles, it is not used by default and has to be indicated by setting the **session**-parameter to **True** when logging in.

Note that these authentication modes need to be used for every request marked with Authentication Required. Otherwise a 401 Unauthorized status code will be returned.

Please note, that HTTPS should always be used when using this method, since the Token and the user credentials will be transmitted unencrypted otherwise.

User registration is handled using the default Django admin backend.

2. Moderated mode

If this mode is active, users will not have to register and log-in before posting stories. Instead, new stories posted by the users will be assigned a temporary ID so they can be updated later on and as soon as they are finished, they are sent to the backend editing system. Here they can be moderated and put into the database.

The currently active authentication mode is determined by the setting AUTHENTICATION_MODE in the local_settings.py.

user_authentication	User authentication mode is active
moderation	Moderated mode is active

sessions/

POST

This is used to create a new logged-in session for a user registered in the database. It will return a session key, which can be used later to create new locations and stories.

URL-Parameters

None

Parameters

user	Username
password	Password
session	Optional: True or False, depending on whether the session should be saved as a
	cookie. Defaults to False.

Return data

Depending on whether the authentication succeeded or failed, either a 201 Created or a 403 Forbidden status code. If authentication succeeds, the following header data will be returned.

Location	sessions/session_id	Location of the newly created session
If authentication fails, an ID and a message will be sent, explaining why the authentication failed.		

fail_id	ID of reason the authentication failed	
	1	Wrong credentials supplied
	2	User is banned for posting malicious content
message	Message explaining the ID	

sessions/id/

Authentication Required

GET

This will retrieve the user details of the currently logged in user. The user ID can be used to change the password or other user details.

URL-Parameters

id	ID of the session
Poturn data	

Return data

user_id	ID of the logged in user	
user_name	User name of the logged in user	
first_name	First name of the user	
last_name	Last name of the user	
email	E-mail address of the user	

DELETE

This is used to destroy the respective session and to log-out the user.

URL-Parameters

id	ID of the session to be destroyed.
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If the session was found, a 204~No Content status code will be returned. If the session was not found, a 404~Not Found status code will be returned.

users/

POST

This is used to register a new user. The user will not be logged in unless a new session is requested as stated above.

URL-Parameters

None

Parameters

first_name	First name of the user
last_name	Last name of the user
user_name	User name
email	E-mail address of the user
password	Password

Return data

If the user was created successfully, a 201 Created status code will be returned. The following header data will be sent. If the user could not be created, a 500 Internal Server Error will be returned.

Location	users/ user_id	Location of the newly created user
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users/id/

Authentication Required

PUT

This is used to update the user profile. Most of the parameters are optional, only the user id and password are required at all times.

URL-Parameters

id	ID of the user to be updated.		
Parameters			
_			

first_name	First name of the user	
last_name	Last name of the user	
user_name	User name	
email	E-mail address of the user	
password	Password	
new_password	New password to be set for the user	

Return data

If the user could be authenticated, then the server will update the user profile and return a 204 No Content status code. If the user could not be authenticated, a 401 Unauthorized will be returned.

Moderated mode

When using the moderated mode, stories will not be posted to the database directly. Instead they are displayed in the backend editing system, where they can be moderated and then put in the database. However, some of the APIs should still be usable without user authentication, for example creating a new location or updating a previously entered own story. For this, Django's Cross Site Request Forgery mechanism will be used. See more here:

https://docs.djangoproject.com/en/1.6/ref/contrib/csrf/.