



TUNIS BUSINESS SCHOOL
UNIVERSITY OF TUNIS

IT 325 Web Service

TU API



by

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<https://tuapifinalversion.herokuapp.com/>

<https://github.com/RamiMechergui/tuapifinalversion>

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THE LIST OF TECHNOLOGIES USED :

TECH : FRONTEND



Bootstrap

BACKEND



Flask

DATABASE





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1-Getting started with the TU API :

1.1- Overview

The TU API is used to get data about **Tunisian Universities** . Our API returns JSON-encoded responses, and uses standard HTTP response codes and authentication.(Source of Data www.mes.tn)

1.2- How to use TU API

Method 1 :

First of all , you have to sign up , as show below :

Join Today, TU API

Username

Rami Mechergui

Email

ramimechergui@tbs.u-tunis.tn

Password

••••••••

Confirm Password

••••••••

Sign Up

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And then Login :



Log In

Email

ramimechergui@tbs.u-tunis.tn

Password

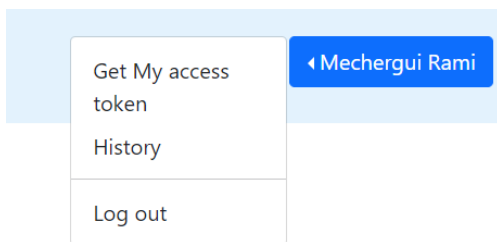
••••••••

☐ Remember Me

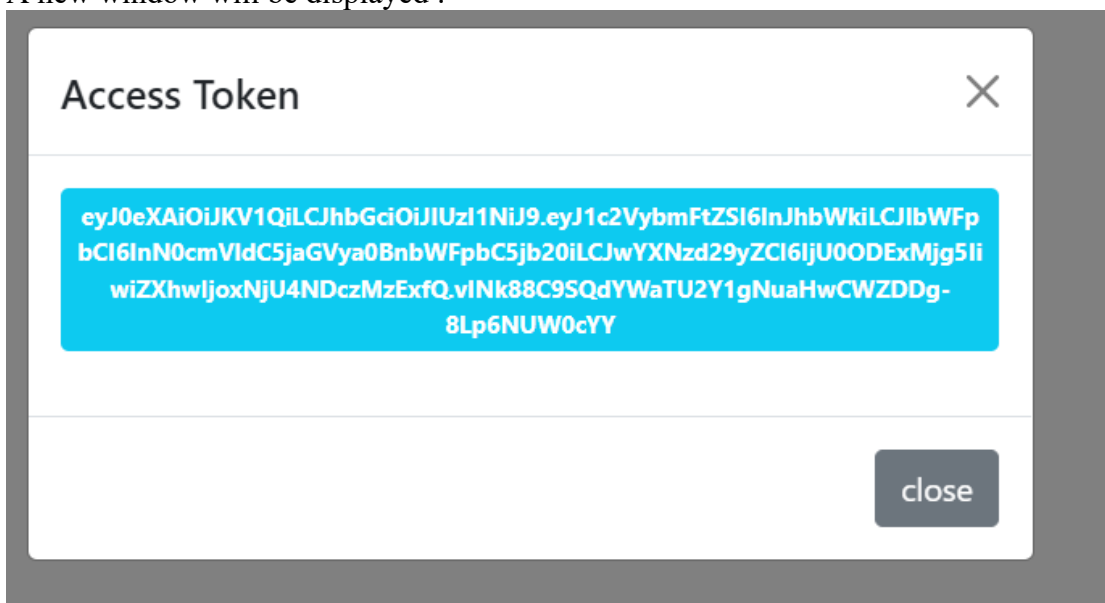
Login

Need An Account? [Sign Up Now](#)

After Signing Up press on Get My access token:



A new window will be displayed :



Method 2 :

You have to send a form based request



http://127.0.0.1:5000/GetToken

POST http://127.0.0.1:5000/GetToken

Params Authorization Headers (9) Body Pre-request Script Tests Settings Cookies

none form-data x-www-form-urlencoded raw binary GraphQL

	KEY	VALUE	DESCRIPTION	...	Bulk Edit
<input checked="" type="checkbox"/>	email	ramimechergui@tbs.u-tunis.tn →			
<input checked="" type="checkbox"/>	password	5481121			
	Key	Value	Description		

Endpoint : /GetToken

http verb : POST

Valid Response :

```
{
  "Access Token": "eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJ1c2VybmFtZSI6Ikl1Y2hlcmdlaSBSYWlpIiwiaWlhaWwiOiJyYW1pbWVjaGVyZ3VpQHRicy51LXR1bmlzLnRuIiwicGFzc3dvcmQiOiI1NDgxMTI4OSIsImV4cCI6MTY1ODcxMzI3Nn0.fDWi0ItRQb52NPoaFyesUAtoTWSNKW_KK6BvAvQeUaw"
}
```

Error code 403 (Forbidden)

```
{
  "Response": "wrong email or password"
}
```

Note : All API requests without a valid token in the header will fail .

If token is not provided : Error code 401 (Unauthorized)

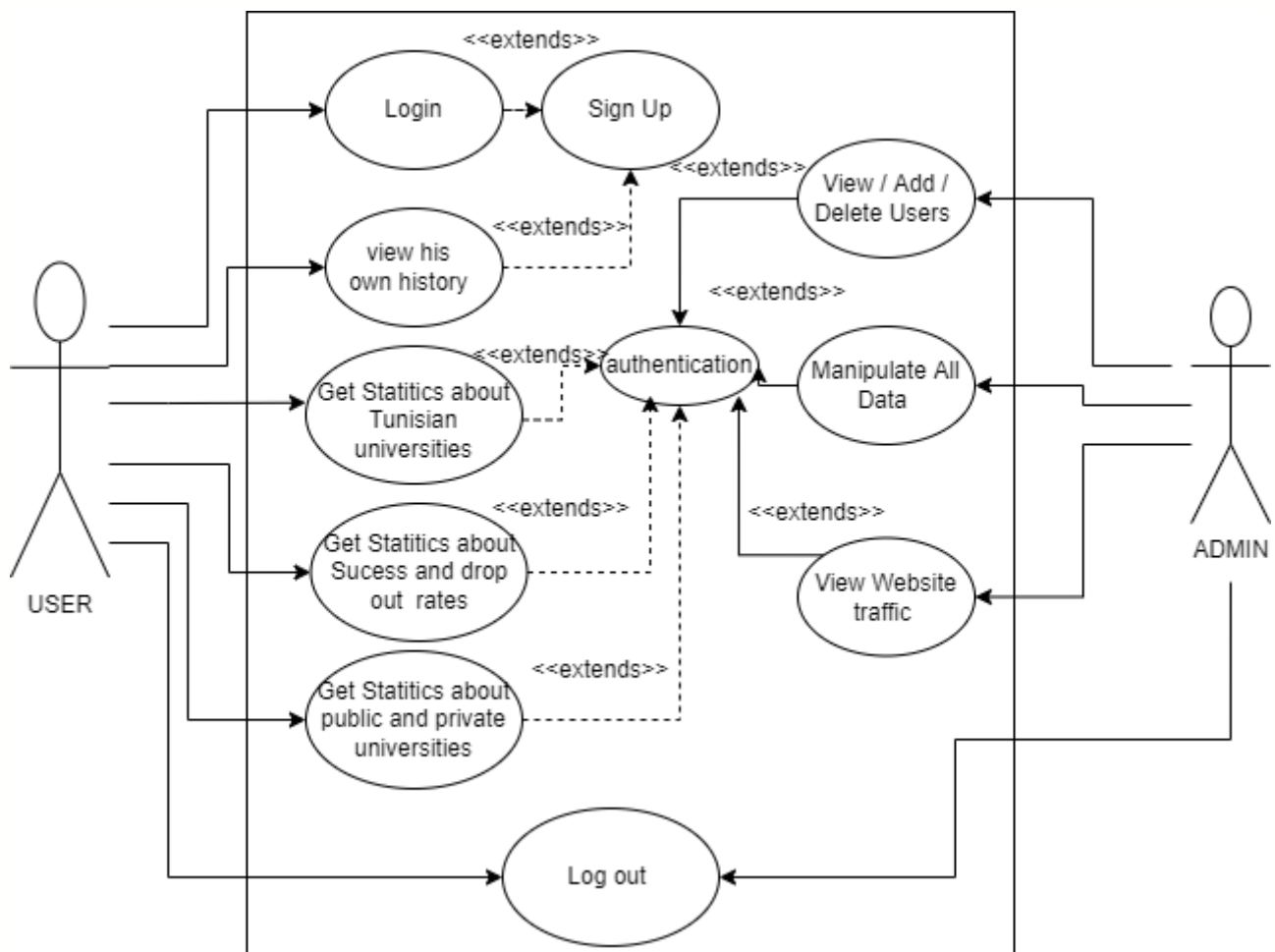
```
{
  "message": "Token is missing"
}
```

If token is invalid : Error code 401 (Unauthorized)

```
{
  "message": "Token is invalid !!"
}
```



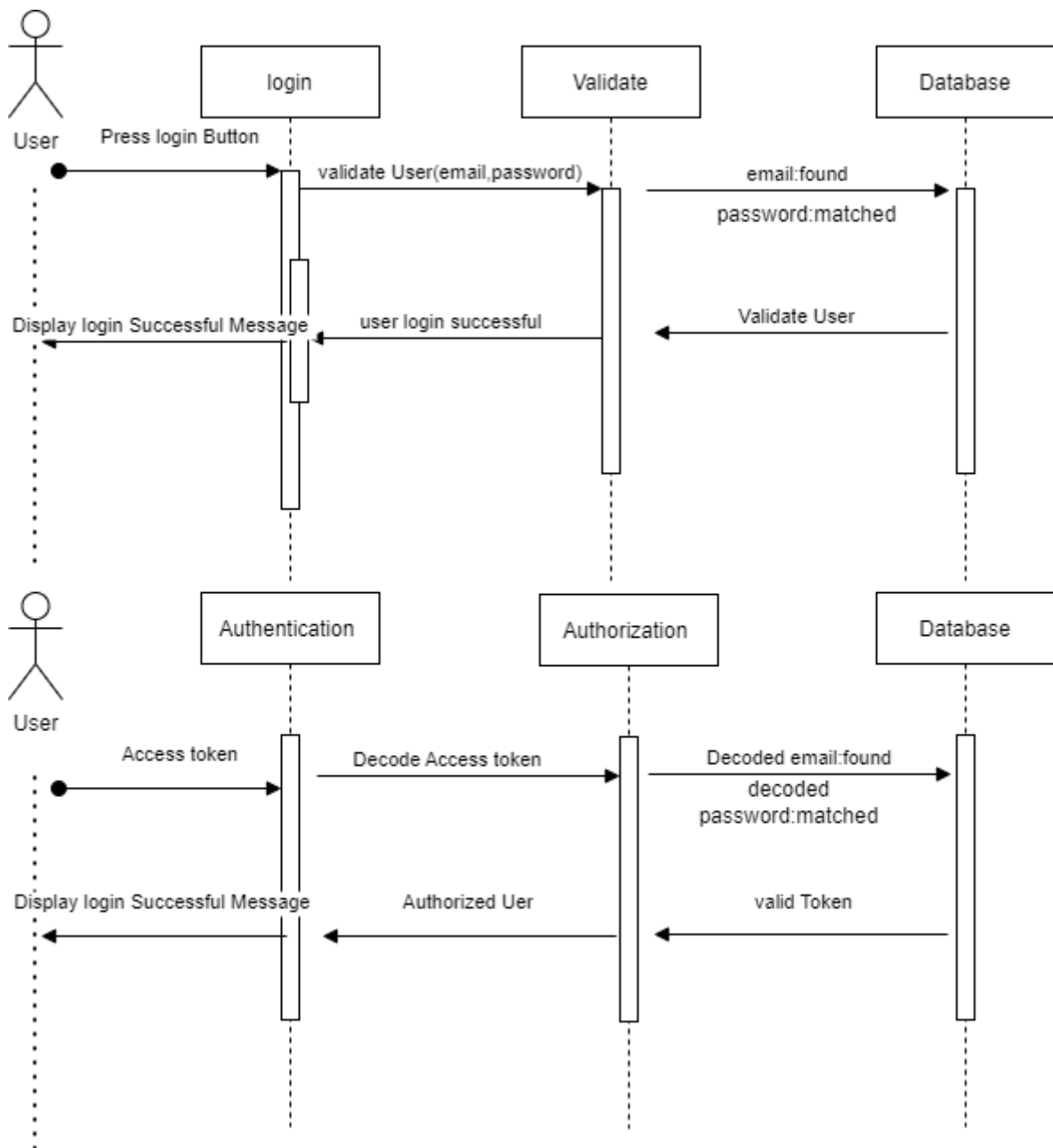
1.4 - Use case diagram



TU API USE CASE DIAGRAM



1.5 - Sequence diagram



TU API sequence diagram



2 - User Endpoints

http verb	Endpoint	Description	Response
GET	/user/list_of_universities	Returns the list of Tunisian universities	<pre>{ "List of tunisian univeristies": ["University of Ezzitouna", "University of Tunis", "University of Tunis el manar", "University of Carthage", "University of Manouba", "University of Jendouba", "University of Sousse", "University of Monastir", "University of Kairouan", "University of Sfax", "University of Gabes", "University of Gafsa", "Directorate General for Technology Studies (DGET)", "Virtual University",] }</pre>
GET	/user/list_of_universities/UniversityName	Returns the number of students with university from 2014 to 2020	<pre>{ "University of Ezzitouna": [{ "2014_2015": "2443" }, { "2015_2016": "2418" }, { "2016_2017": "2475" }, { "2017_2018": "2400" }, { "2018_2019": "2566" }, { "2019_2020": "2555" }] }</pre>
GET	/user/rates	Returns the list of rates that we gathered information about	<pre>{ "List of rates": ["Success", "Drop_out", "Number of Drop_outs"] }</pre>
GET	/user/rates/:Status	Returns the rates of specified status from 2014 to 2019	<pre>{ "Success": [{ "2014_2015": "66.1%"}, { "2015_2016": "70.2%"}, { "2016_2017": "70.8%"}, { "2017_2018": "72.9%"}, { "2018_2019": "71.1%"}, { "2019_2020": "Not yet" }] }</pre>



GET	/user/rates/<status>/<year1>-<year2>	Returns the rates of specified status in a specific year	<pre>{ "Success": { "2016_2017": "70.8%" } }</pre>
GET	/user/total_Cost_per_student	Returns the list of total expenditures from 2014 to 2019	<pre>{ "Total expenditures": [{ "2014_2015": "1340928 TND" }, { "2015_2016": "1276863 TND" }, { "2016_2017": "1431661 TND" }, { "2017_2018": "1486969 TND" }, { "2018_2019": "1644664 TND" }] }</pre>
GET	/user/total_Cost_per_student/<year1>-<year2>	Returns the total expenditure in a specific year	<pre>{ "Total expenditures": [{ "2015_2016": "1276863 TND" }] }</pre>
GET	/user/Total_Number_Of_Student	Returns the number of students in public and private from 2014 to 2020	<pre>{ "Total Number of students(Public & Private)": [{ "2014_2015": "322625" }, { "2015_2016": "294486" }, { "2016_2017": "282204" }, { "2017_2018": "272261" }, { "2018_2019": "267154" }, { "2019_2020": "269424" }] }</pre>
GET	/user/Prop-private-total-student	Returns the proportion of students in the private sector in relation to total number	<pre>{ "Proportion of students in the private sector in relation to total student": [{ "2014_2015": "9,4%" }, { "2015_2016": "10,4%" }, { "2016_2017": "11,1%" }, { "2017_2018": "11,5%" }, { "2018_2019": "12,5%" }, { "2019_2020": "12,9%" }] }</pre>
GET	/user/N-Of-Stu-per-100-student	Get the number of students per 100	<pre>{ "Number of students per 100 thousand inhabitants": [{ "2014_2015": "2892" }, { "2015_2016": "2622" },</pre>



		thousands inhabitant	<pre>{ "2016_2017": "2467", "2017_2018": "2351", "2018_2019": "2279", "2019_2020": "2301" }</pre>
--	--	-------------------------	---

In order to get Access to Admin Endpoints the secret key should be provided in the header :

Type
API Key

The authorization header will be automatically generated when you send the request.
[Learn more about authorization](#)

! Heads up! These parameters hold sensitive data. To keep this data secure while working in a collaborative environment, we recommend using variables. [Learn more about variables](#)

Keysecret_key
Value5791628bb0b13ce0c676dfde280ba245
Add toHeader

3-Admin Endpoints :

HTTP	Endpoint	Description	Response
DELETE	/admin/users/delete? email=example@gmail.com ***email of the user to delete	Delete a user with the specified email	<pre>{ "Response": "User Deleted Sucessfully" }</pre>
PUT	/admin/University_Name?year1=2015 &year2=2016 &New_Stat=2480 ** year1 ** year2 *New_Stat	Update the data of university table	<pre>{ "response": "Item modified Sucessfully" }</pre>
PUT	/admin/rates/Success? year1=2016& year2=2017& New_Stat=0	Update the data of rates table	<pre>{ "response": "Item modified Sucessfully" }</pre>

4-Error code Table

Code	Description
------	-------------



2xx	OK	Everything worked as expected
4xx	Bad request	The request was unacceptable, often due to missing a required parameter
401	Unauthorized	Unauthorized No valid API key provided
402	Request Failed	The parameters were valid but the request failed
403	Forbidden	The API key doesn't have permissions to perform the request
404	Not found	The requested resource doesn't exist
500,502,503,504	Server Error	Something went wrong on the server

Note :

This product is considered as an MVP with just enough features as a proof of work .



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