

Biomedical Wearable Technologies for Healthcare and Wellbeing

Requesting data

A.Y. 2023-2024

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Outline

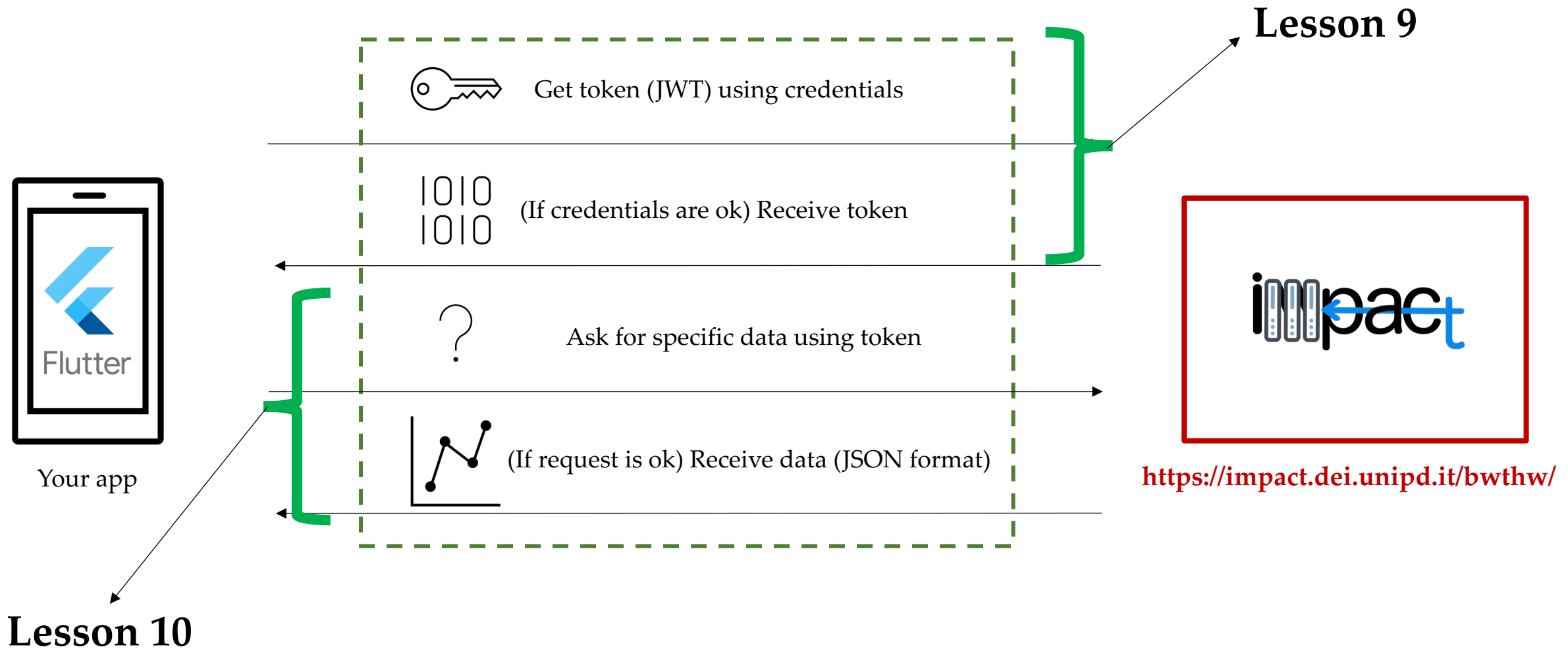
- **Recap**

- Requesting data from IMPACT

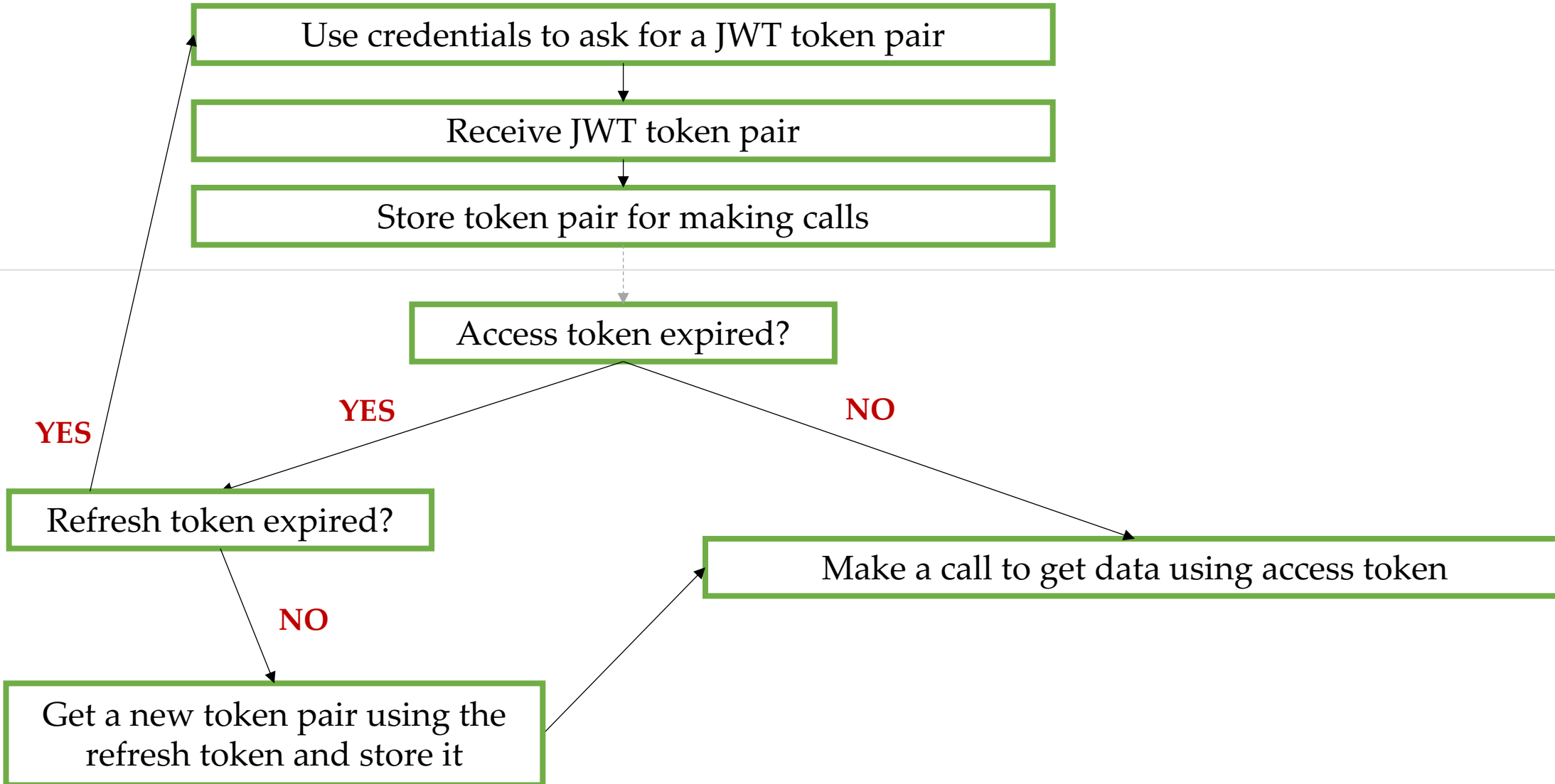
- Exercise

- Resources

Recap: The IMPACT backend



The entire flow in practice



Outline

- Recap
- **Requesting data from IMPACT**
- Exercise
- Resources

Requesting data: The IMPACT data

Biomedical Wearable Technologies for Healthcare and Wellbeing API ^{v1}

[Base URL: impact.dei.unipd.it/bwthw]

<https://impact.dei.unipd.it/bwthw/docs/swagger/?format=openapi>

Back-end for the course of Biomedical Wearable Technology for Healthcare and Wellbeing, Master's degree in Bioengineering, Department of Information Engineering (DEI), University of Padova.

[Contact the developer](#)

BSD License

data



GET

`/data/v1/calories/patients/{username}/daterange/start_date/{start_date}/end_date/{end_date}/`

Returns the list of calories data of a given daterange of a patient of the current study.

`data_v1_calories_patients_daterange_start_date_end_date_read`



GET

`/data/v1/calories/patients/{username}/day/{day}/` Returns the list of calories data of a given day of a patient of the current study.

`data_v1_calories_patients_day_read`



GET

`/data/v1/distance/patients/{username}/daterange/start_date/{start_date}/end_date/{end_date}/`

Returns the list of distance data of a given daterange of a patient of the current study.

`data_v1_distance_patients_daterange_start_date_end_date_read`



GET

`/data/v1/distance/patients/{username}/day/{day}/` Returns the list of distance data of a given day of a patient of the current study.

`data_v1_distance_patients_day_read`



GET

`/data/v1/exercise/patients/{username}/daterange/start_date/{start_date}/end_date/{end_date}/`

Returns the list of exercise data of a given daterange of a patient of the current study.

`data_v1_exercise_patients_daterange_start_date_end_date_read`



GET

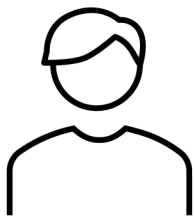
`/data/v1/exercise/patients/{username}/day/{day}/` Returns the list of exercise data of a given day of a patient of the current study.

`data_v1_exercise_patients_day_read`



Example: Obtaining step data

➤ For example, let's obtain the steps data of 2023, May, 4th



```
{
  "username": "Jpefaq6m58",
  "birth_year": 1994,
  "display_name": "Luca",
  "clinical_center": 1,
  "to_be_deleted": false
}
```

GET /data/v1/steps/patients/{username}/day/{day}/ Returns the list of steps data of a given day of a patient of the current study. data_v1_steps_patients_day_read

Returns the list of steps data of a given day of a patient of the current study.

PERMISSIONS

- Can be accessed only by authenticated users.
- Can be accessed only by 'superuser', 'data_administrator', 'study_administrator', 'clinician', 'patient', and 'researcher' with access.

ERRORS

- 400 if the user is a patient and tries to access to other patients' data.
- 400 if the user is a clinician that has not been assigned to a clinical center yet.
- 404 if the user does not exist.
- 400 if the user is a clinician that tries to access to the data of a patient that does not belong to the same clinical center of self.
- 400 if the given day does not comply to the format %Y-%m-%d.
- 400 if the user tries to access to data of a day that is after or corresponding to today.

Parameters Try it out

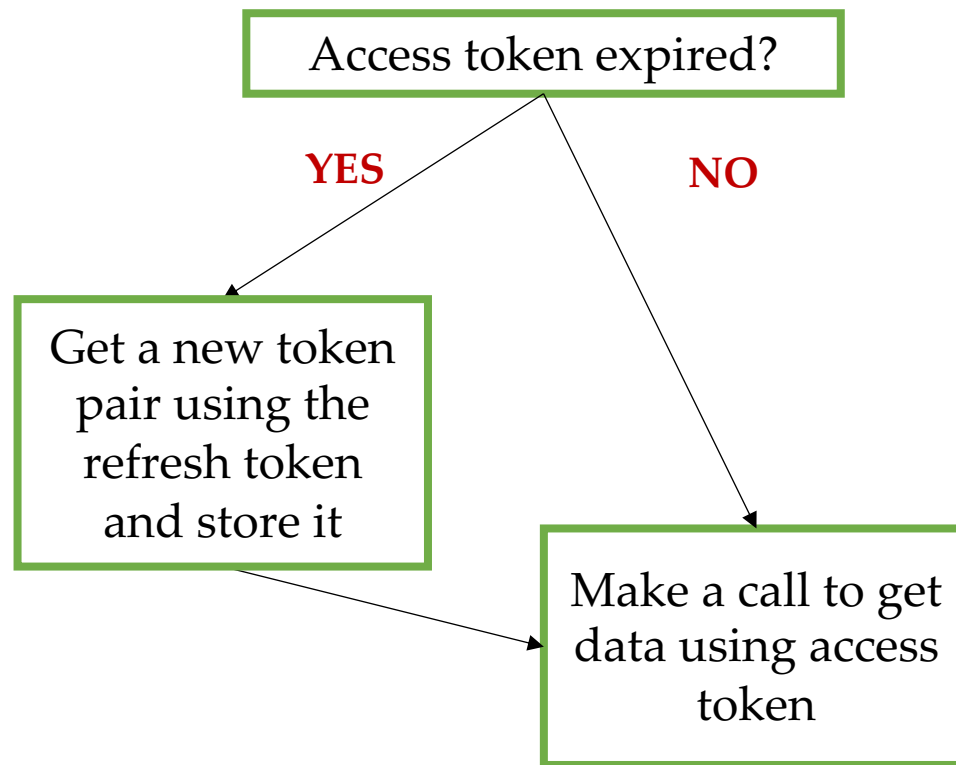
Name	Description
username <small>required</small> string (path)	The username of the patient to retrieve data from. <input type="text" value="username - The username of the patient to retrieve"/>
day <small>required</small> string (path)	The day associated to the data to retrieve. <input type="text" value="day - The day associated to the data to retrieve"/>

Responses Response content type: application/json

Code	Description
200	<pre>{ "status": "success", "code": 200, "message": "Request successful.", "data": { "date": "date", "data": [{ "time": "time", "value": "value", ... }] } }</pre>

Case of study - Live

- Let's implement (a subset of) the operations required to request the data



08:10

HomePage

Authorize the app

Unauthorize the app

Get the data

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- **Exercise**
- Resources

Exercise

- Get familiar with the example
- Try to integrate the request data flow in your project

Outline

- Recap
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- Exercise
- **Resources**

Resources

➤ IMPACT documentation

- <https://impact.dei.unipd.it/bwthw/docs/swagger/>

➤ HTTP Status Codes

- https://en.wikipedia.org/wiki/List_of_HTTP_status_codes

➤ Fetch data from the internet. Cookbook by the Flutter community

- <https://docs.flutter.dev/cookbook/networking/fetch-data>

➤ Send data to the internet. Cookbook by the Flutter community

- <https://docs.flutter.dev/cookbook/networking/send-data>