

Form Data

When you need to receive form fields instead of JSON, you can use **Form**.

!!! info To use forms, first install `python-multipart`.

E.g. ``pip install python-multipart``.

Import Form

Import **Form** from **fastapi**:

```
Python hl_lines="1" {!../../../docs_src/request_forms/tutorial001.py!}
```

Define Form parameters

Create form parameters the same way you would for **Body** or **Query**:

```
Python hl_lines="7" {!../../../docs_src/request_forms/tutorial001.py!}
```

For example, in one of the ways the OAuth2 specification can be used (called “password flow”) it is required to send a **username** and **password** as form fields.

The spec requires the fields to be exactly named **username** and **password**, and to be sent as form fields, not JSON.

With **Form** you can declare the same metadata and validation as with **Body** (and **Query**, **Path**, **Cookie**).

!!! info **Form** is a class that inherits directly from **Body**.

!!! tip To declare form bodies, you need to use **Form** explicitly, because without it the parameters would be interpreted as query parameters or body (JSON) parameters.

About “Form Fields”

The way HTML forms (`<form></form>`) sends the data to the server normally uses a “special” encoding for that data, it’s different from JSON.

FastAPI will make sure to read that data from the right place instead of JSON.

!!! note “Technical Details” Data from forms is normally encoded using the “media type” `application/x-www-form-urlencoded`.

But when the form includes files, it is encoded as ``multipart/form-data``. You’ll read about

If you want to read more about these encodings and form fields, head to the <https://fastapi.tiangolo.com/en/latest/advanced/form-data/>

!!! warning You can declare multiple **Form** parameters in a *path operation*, but you can’t also declare **Body** fields that you expect to receive as JSON, as the request will have the body encoded using `application/x-www-form-urlencoded` instead of `application/json`.

This is not a limitation of **FastAPI**, it's part of the HTTP protocol.

Recap

Use `Form` to declare form data input parameters.