

# HTTP Status Codes for FastAPI

## What Are HTTP Status Codes?

HTTP status codes are three-digit numbers sent by a server to tell a client (e.g., browser or app) what happened with their request. They indicate if the request succeeded, failed, or needs action. In FastAPI, they help communicate the result of API requests clearly.

## How They Work

- **Client Sends Request:** E.g., GET to fetch data or POST to create something.
- **Server Responds:** Sends a status code (e.g., 200 for success) and often data.
- **Client Acts:** Uses the code to decide what to do (e.g., show data or an error).

In FastAPI, some codes are automatic (e.g., 404, 422), while others can be set manually.

## Common HTTP Status Codes

- **200 OK:** Request succeeded, data returned (e.g., GET user data).
- **201 Created:** New resource created (e.g., POST to add a user).
- **400 Bad Request:** Invalid client input (e.g., wrong data format).
- **401 Unauthorized:** Client not authenticated (e.g., no valid login).
- **403 Forbidden:** Client authenticated but lacks permission (e.g., non-admin accessing admin data).
- **404 Not Found:** Resource or endpoint doesn't exist (e.g., wrong URL).
- **500 Internal Server Error:** Server crashed (e.g., bug in code).

## Extra Status Codes

- **204 No Content:** Request succeeded, no data returned (e.g., DELETE).
- **405 Method Not Allowed:** Wrong HTTP method used (e.g., POST to a GET-only endpoint).
- **422 Unprocessable Entity:** Validation error (e.g., wrong data type in FastAPI).

## **Why They Matter**

Status codes ensure clear communication between client and server, help debug issues, and follow REST API standards. FastAPI makes them easy with automatic and custom options.