HTTP Response Code Categories

HTTP status codes are divided into five categories based on the first digit of the code:

1. **1xx - Informational**

2. These codes indicate that the server has received the request and is continuing to process it. They are rarely seen by users because they generally aren't used in practice for regular HTTP communication.

3. **2xx - Successful**

These codes indicate that the request was successfully received, understood, and accepted by the server.

4. **3xx - Redirection**

These codes indicate that further action is needed to fulfill the request, usually involving redirection to another URL.

5. **4xx - Client Error**

These codes indicate that the client has made an error, and the request cannot be processed as expected.

6. **5xx - Server Error**

These codes indicate that the server failed to fulfill a valid request. The issue lies on the server side.

Common HTTP Response Codes

1xx - Informational (Rarely used in practice)

- **100 Continue**: The server has received the request headers and is waiting for the body. The client can continue sending the request.
- **101 Switching Protocols**: The server is switching protocols as requested by the client (e.g., upgrading from HTTP/1.1 to HTTP/2).

- **102 Processing**: The server is processing the request, but no response is available yet (used in WebDAV).

2xx - Successful

- **200 OK**: The request has succeeded. This is the most common success response.
- **201 Created**: The request has been fulfilled and resulted in the creation of a new resource (often used in POST requests).
- **202 Accepted**: The request has been accepted for processing, but the processing has not been completed.
- **204 No Content**: The request was successful, but there is no content to send in the response (e.g., a successful DELETE request).
- **206 Partial Content**: The server is delivering part of the resource due to a range request (useful for large files like videos or images).

3xx - Redirection

- **301 Moved Permanently**: The requested resource has been permanently moved to a new URL. The client should update its references.
- **302 Found (Temporary Redirect)**: The resource is temporarily located at a different URL, and the client should continue to use the original URL for future requests.
- **303 See Other**: The response to the request can be found under a different URL. It is often used after a POST request to redirect the client to a new page.
- **304 Not Modified**: The resource has not been modified since the last request. This is used in caching scenarios.
- **307 Temporary Redirect**: Similar to 302, but the method used for the request (e.g., POST) should not be changed when redirecting.
- **308 Permanent Redirect**: Similar to 301, but the method used for the request should not be changed when redirecting.

4xx - Client Error

- **400 Bad Request**: The server cannot process the request due to malformed syntax or invalid request.
- **401 Unauthorized**: Authentication is required and has failed or has not been provided.

- **402 Payment Required**: Reserved for future use. It's not often used but was intended for payment-related issues.
- **403 Forbidden**: The server understood the request but refuses to authorize it. The client has no permission to access the resource.
- **404 Not Found**: The server cannot find the requested resource. This is the most common error when the URL is incorrect.
- **405 Method Not Allowed**: The method used (e.g., GET, POST) is not allowed for the specified resource.
- **406 Not Acceptable**: The resource is capable of generating content that is not acceptable according to the Accept headers sent in the request.
- **407 Proxy Authentication Required**: Similar to 401, but authentication is required for a proxy.
- **408 Request Timeout**: The server did not receive a complete request in time.
- **409 Conflict**: The request could not be completed due to a conflict with the current state of the resource (e.g., when creating a resource that already exists).
- **410 Gone**: The resource is no longer available and will not be available again. This is a more permanent version of the 404.
- **411 Length Required**: The server refuses to accept the request without a valid Content-Length header.
- **412 Precondition Failed**: One or more conditions in the request headers were not met.
- **413 Payload Too Large**: The request is larger than the server is willing or able to process.
- **414 URI Too Long**: The URI provided is too long for the server to process.
- **415 Unsupported Media Type**: The request's media type is not supported by the server.
- **416 Range Not Satisfiable**: The server cannot fulfill the range specified by the client.
- **417 Expectation Failed**: The server cannot meet the expectations of the client specified in the Expect header.
- **418 I'm a teapot**: An April Fools' joke response code defined in RFC 2324. It's not actually used in real-world applications.
- **429 Too Many Requests**: The user has sent too many requests in a given amount of time (rate-limiting).

5xx - Server Error

- **500 Internal Server Error**: A generic error message when the server encounters an unexpected condition.
- **501 Not Implemented**: The server does not support the functionality required to fulfill the request.
- **502 Bad Gateway**: The server, while acting as a gateway or proxy, received an invalid response from an upstream server.
- **503 Service Unavailable**: The server is currently unavailable (due to overload or maintenance).
- **504 Gateway Timeout**: The server, while acting as a gateway or proxy, did not receive a timely response from an upstream server.
- **505 HTTP Version Not Supported**: The server does not support the HTTP protocol version used in the request.
- **507 Insufficient Storage**: The server is unable to store the representation needed to complete the request (used in WebDAV).
- **508 Loop Detected**: The server detected an infinite loop while processing the request (used in WebDAV).
- **510 Not Extended**: The server requires further extensions to fulfill the request.

Summary of Common Response Codes

Code	Meaning	Category
200	OK	Successful
201	Created	Successful
204	No Content	Successful
301	Moved Permanently	Redirection
302	Found (Temporary Redirect)	Redirection
400	Bad Request	Client Error
401	Unauthorized	Client Error
403	Forbidden	Client Error
404	Not Found	Client Error
405	Method Not Allowed	Client Error
500	Internal Server Error	Server Error
502	Bad Gateway	Server Error

503   Service Unavailable   Server Error