

Express.js Visualizations

Coding Boot Camp

Module 11





What is “localhost”?

Localhost

- In computer networking talk, localhost refers to “this computer” or even more accurately “the computer I’m working on.”
- It is a ubiquitous domain name that references an ephemeral server running on your computer rather than a remote server
 - Technically, the IP address is: 127.0.0.1



What is a port?

Port

- “A port is a virtual point where network connections start and end. Ports are software-based and managed by a computer's operating system.”
- “Each port is associated with a specific process or service.”
- It would be lame if a computer could only handle a single network connection, AKA a server
 - Ports let us define where a network connection service will run



Why and how do we use localhost and ports?

Localhost and Port

- How do you make a request to a remote server (API)?
 - You need to know the endpoint, or URL
- What's the URL to your computer?
 - Technically there *is* a URL to your computer, it's your **public IP address**
 - However, we do not want to open up our computer to the world-wide internet
 - Instead of using our public IP address to make requests, our computers will provision a domain name called "localhost" which resolves to IP 127.0.0.1
 - That is to say that you can use either for your requests, but a vast majority of people just use "localhost"
- When you are running a server on your computer, you also need to specify the port in the URL
 - `http://localhost:3001`



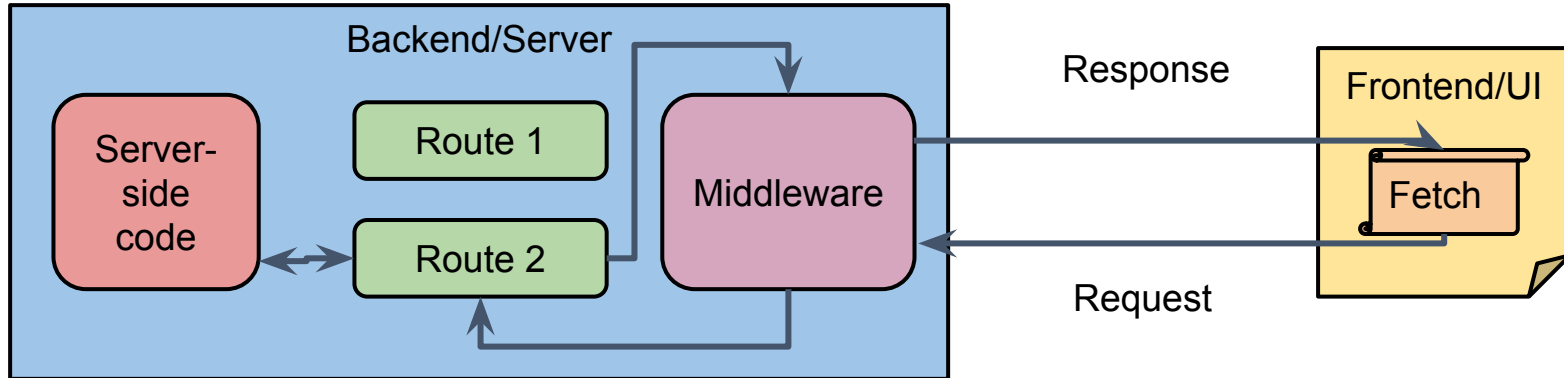
Until we get to React, localhost will only refer to the “backend” web server



What is middleware?

Middleware

- “Middleware makes it easier for software developers to implement communication and input/output, so they can focus on the specific purpose of their application”
 - “It can be described as "software glue".”
- Middleware is code that executes either before a request is processed in a route's code block, or after the response leaves a route's code block
- **Middleware typically provides metadata for a how a request should be handled, where static files can be served from, and how a response should be formatted**



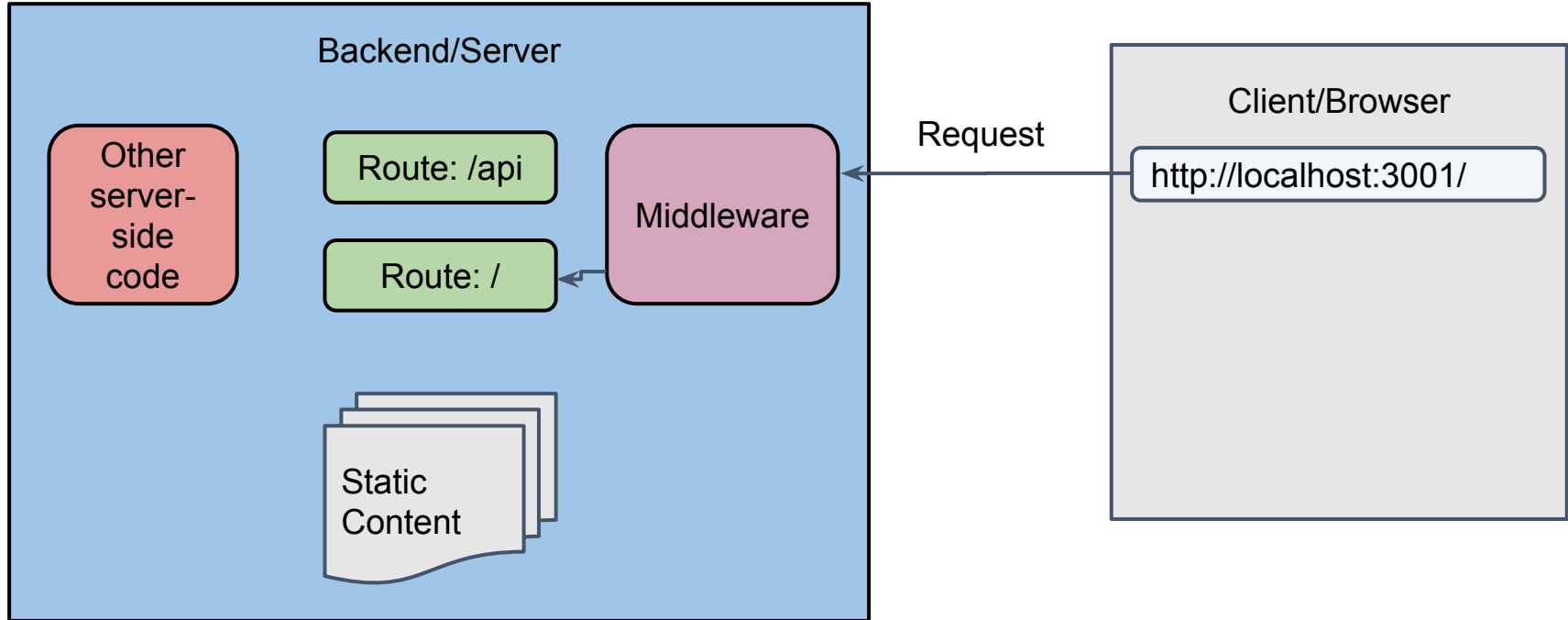


How does static content get sent to the client?

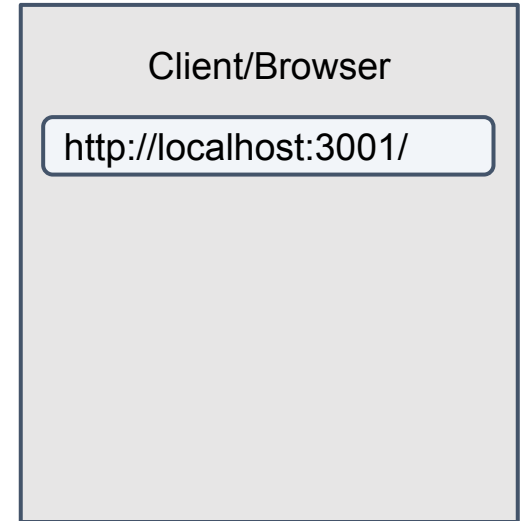
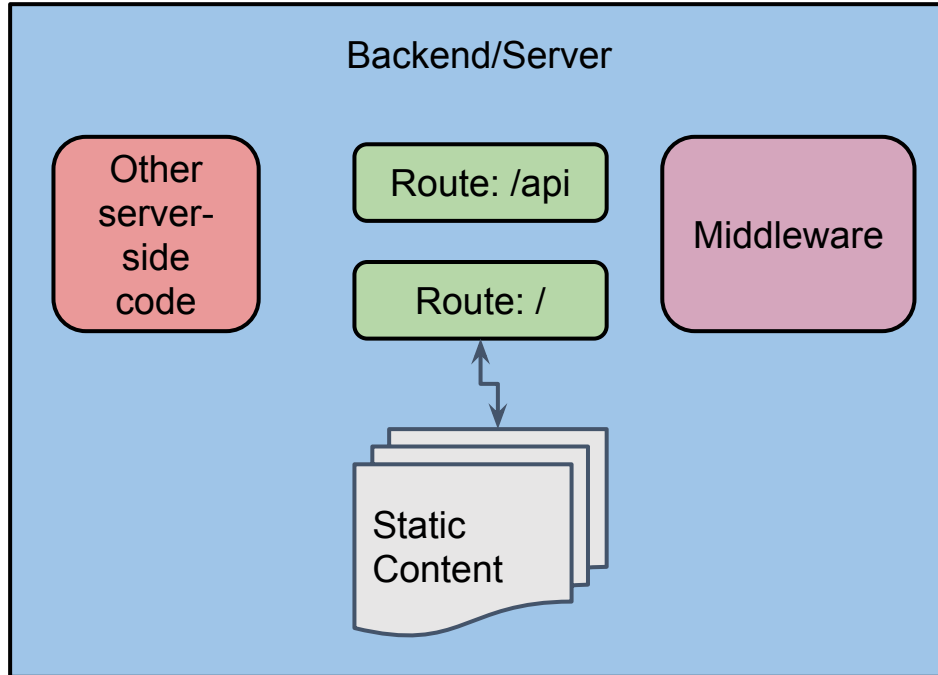
AND

How does the static content on the client make requests to the server?

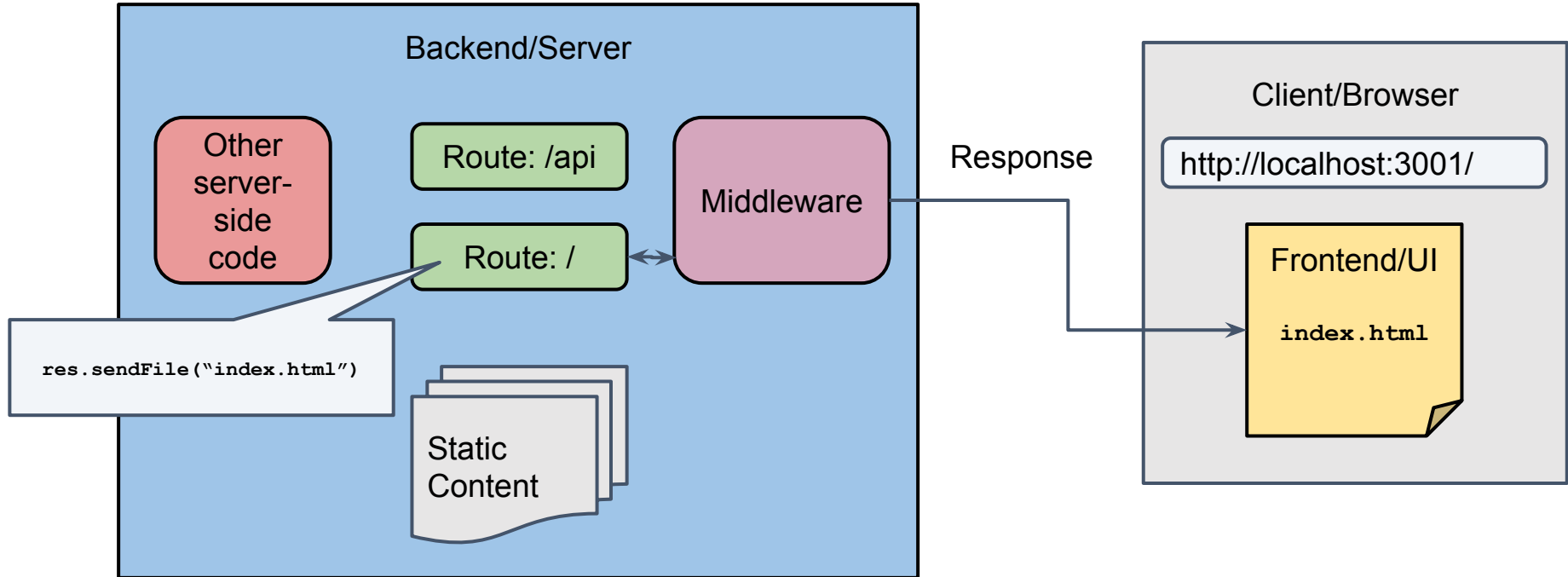
Client Requests Website Homepage



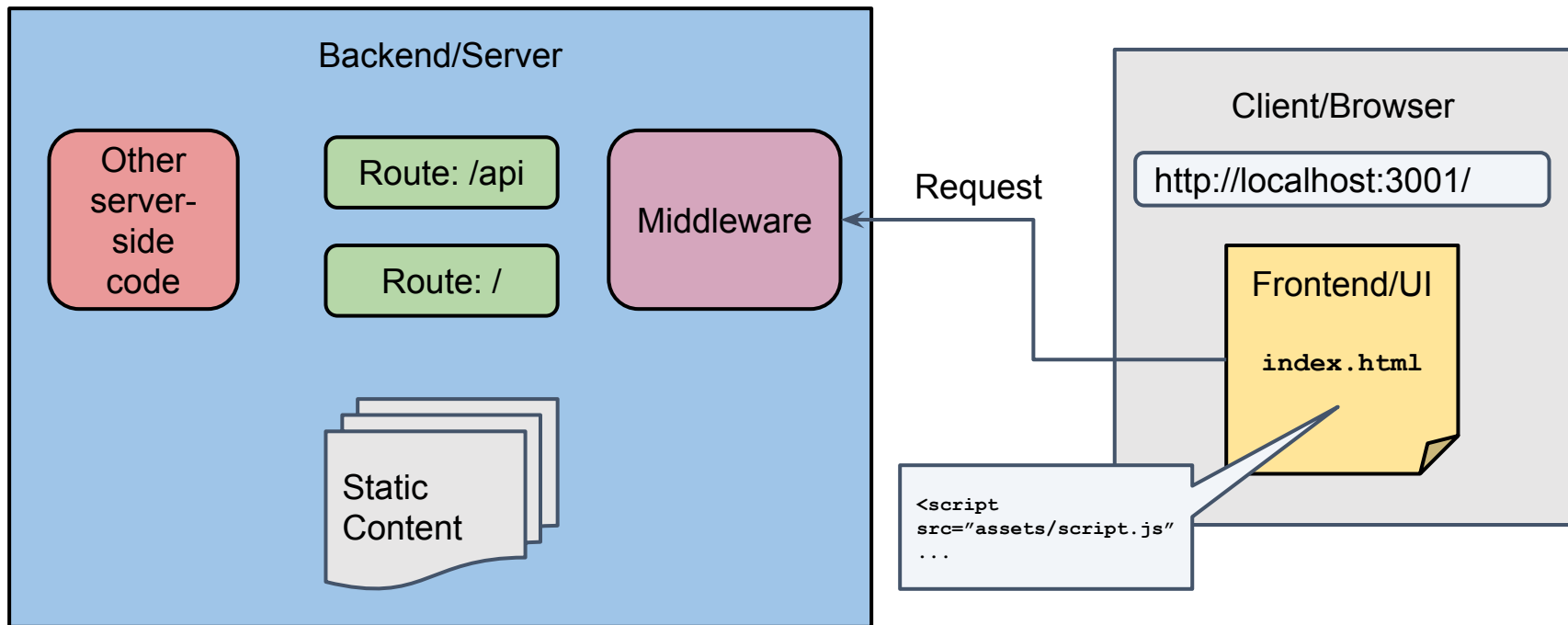
The Route Codeblock Looks in Static Folder for Response



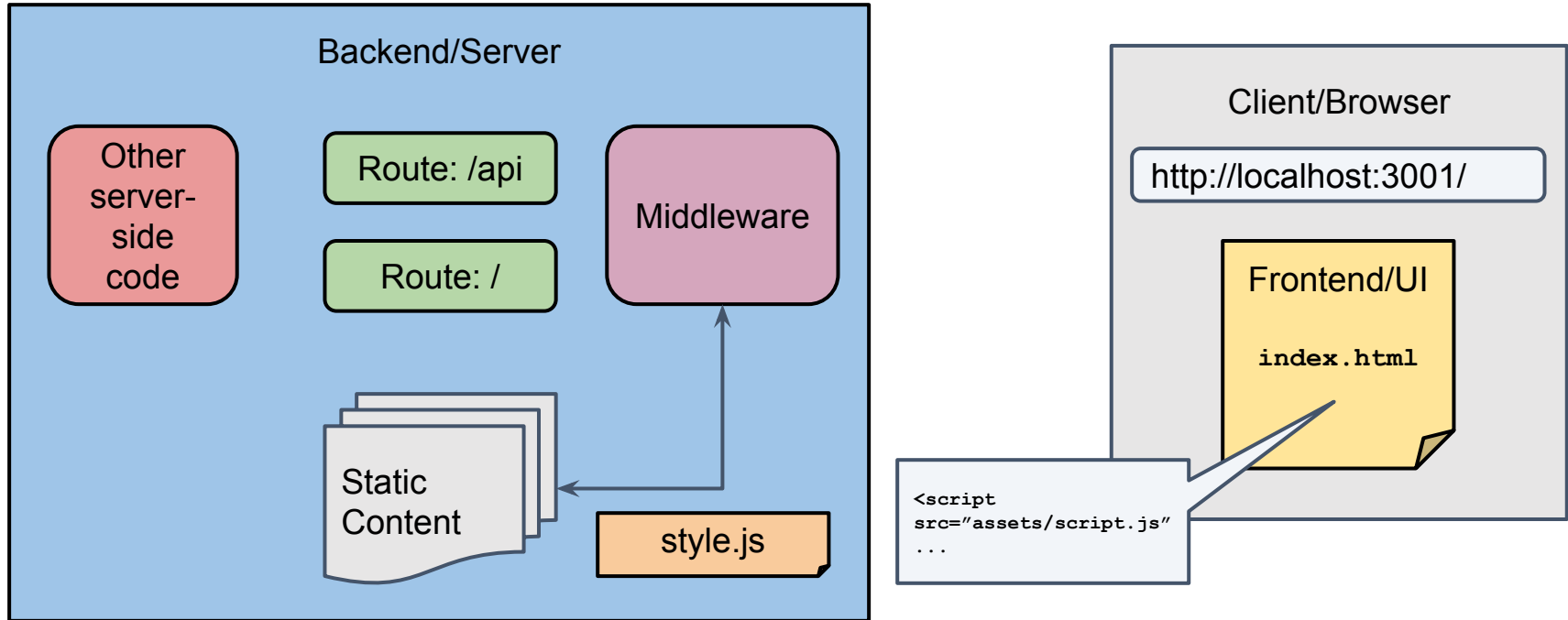
The HTML File for the Homepage is Sent to the Client



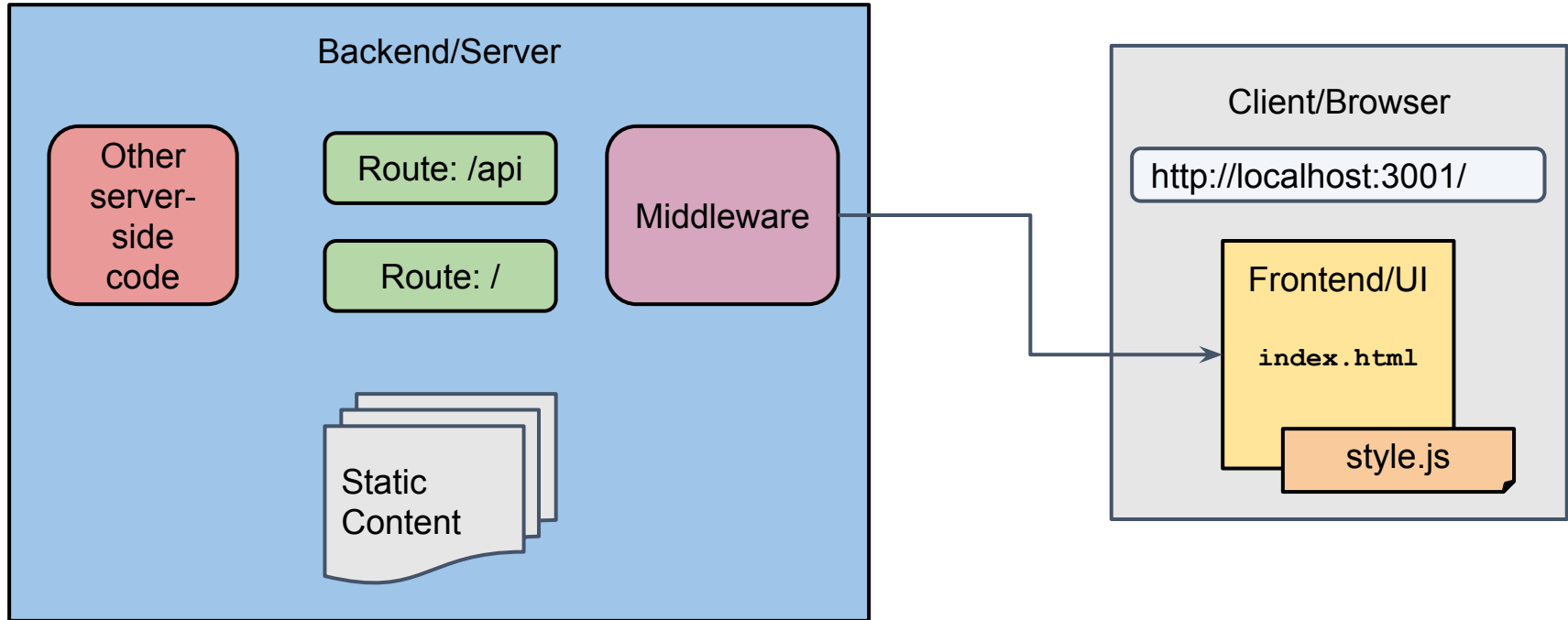
The Client Looks in the HTML to for Other Static Files



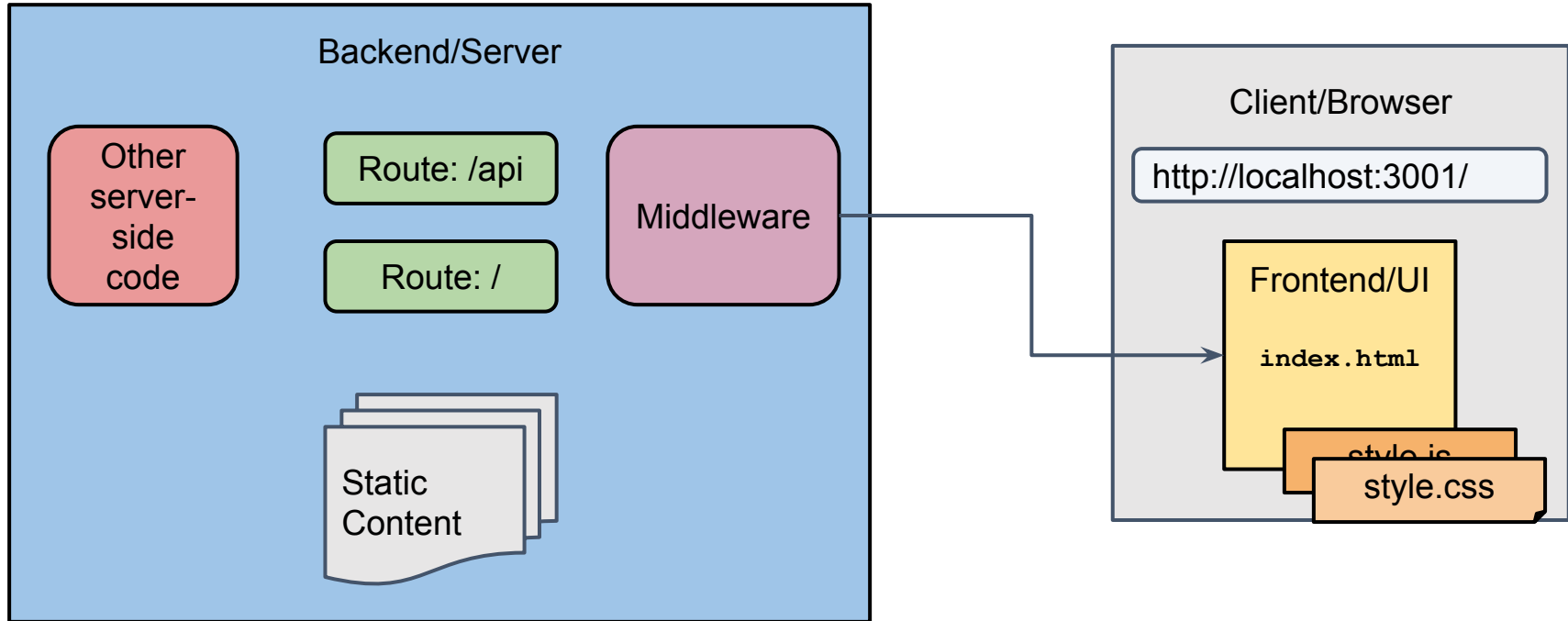
The Middleware Tells the Server to Look in the Static Folder



The Static Files Are Sent to the Client



The Remaining Static Files Are Sent to the Client





Instructor Demonstration

Time to Code