

Express Static Slides - What are Routes?

What will be covered -

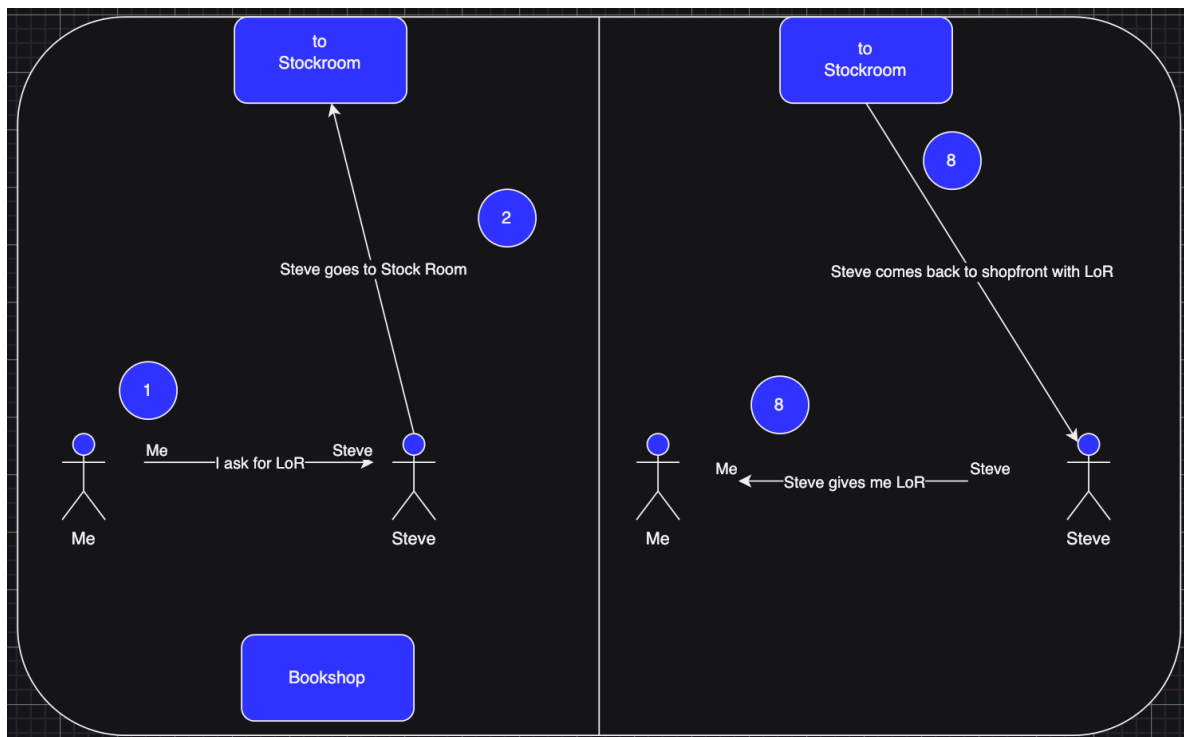
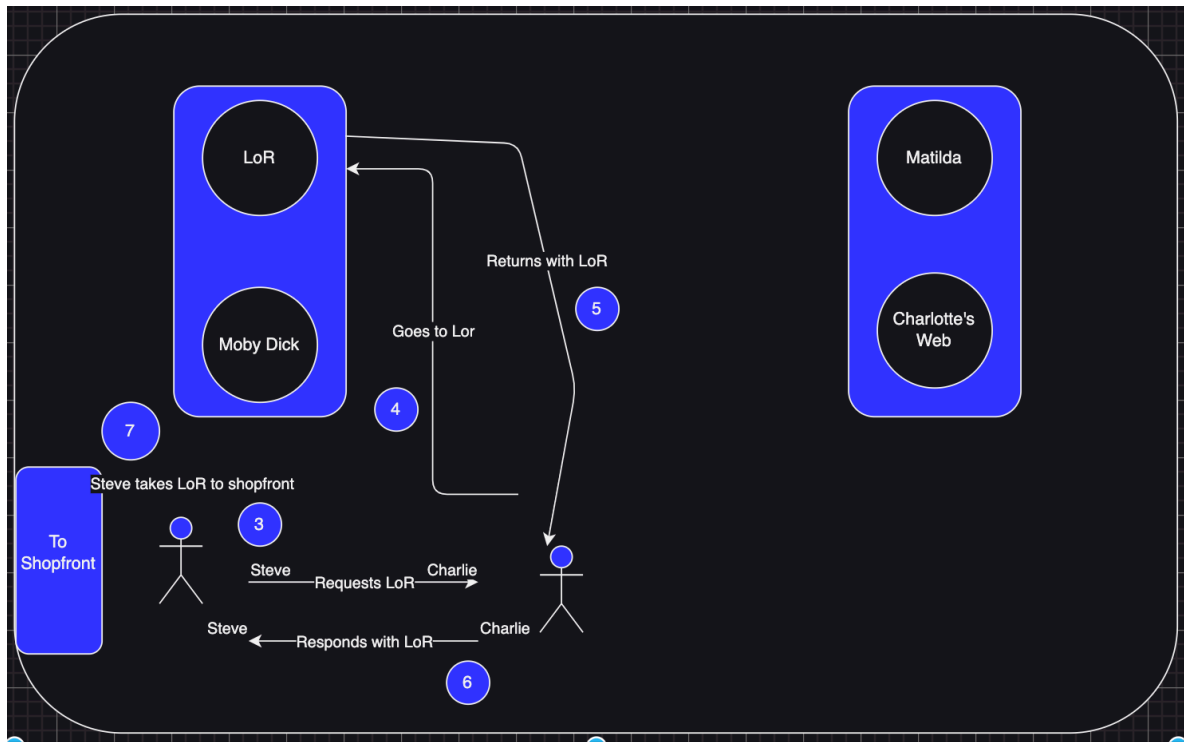
1. What is a user
2. What is a client
3. What is a server
4. What is a route
5. What is a database
6. What is Express

Me in the Bookshop

This is an analogy for what happens when you visit a website;

I visit a bookshop. I meet Steve, the shopkeeper in the shopfront. Charlie is in the stockroom, dealing with things in there.

1. I ask Steve the shopkeeper for a copy of LoR (I interact with a web page e.g. button click)
2. Steve the shopkeeper goes to the stockroom (A request is made by the client to the server)
3. Steve asks Charlie to get a copy of LoR (the request reaches the server)
4. Charlie walks to the shelf where LoR is kept (an API route is followed to a particular controller, where a DB operation is performed).
5. Charlie returns with LoR



The above diagram is a analogy for how the internet works, and how we interact with websites/web applications (apps)

What is a User?

A user is us. A person using the website/web app. In the example, 'Me' is the user.

What is a client?

A client is a computer that sending a request, for example your computer when you access the internet.

Your computer requires data to be able to navigate a website/app, and so sends requests to a server to get data.

For example, if you want to see a particular book, a request with the data that you input (book title) will be sent to a server and a will receive a response.

Your access to the website will now change based upon the response that the client (your computer) receives from the server.

In this example, Steve is the client.

What is a Server?

A server is a computer that accepts requests from a client and returns a response to a client.

A server 'listens' for requests for a client.

Once a request is received, the request data will be sent down a particular 'route' in the code to the required destination.

The server can then use the request data to perform an operation, such as send data to and/or from a database.

The server can then package any data required and send it back to the client.

In this example, Charlie is the server.

What is a Route?

A route is a pathway written in code;

"`Https://michaels-awesome-books-website/books/lordoftherings` "

Here, we see that the address of the website is 'Michaels-awesome-books-website'.

The route that the request for 'Lord of the Rings' needs to travel down is '/books/lordoftherings'

At the end of this route, as per our example, a database operation is run to

'GET' the book.

The the data of the book is then sent back by the server to the client via a response.

In the example above, the route is the path that Charlie walks down to get 'The Lord of the Rings'.

What is a Database?

A database is a place where data is stored.

It is essentially an electronic filing system where data is stored.

The data could be anything from login details, books titles, user likes on a post, and many more!

A data base is accessed with what are called CRUD operation;

Create

Read

Update

Delete

Each CRUD operation will be performed by a server.

At the end of a particular route, such as '/books/lordoftherings', the CRUD operation Read is executed.

The server sends a request the the database to READ the book, which means to get the data enetered for the book.

The server receives the data and then sends this data to the client in a response.

The user can now see the data displayed on the website.

In this example, the shelves are the database and the database entry is the particular book.

What is Express?

Express is a Node-based Javascript API framework.

Basically, Express is a set of pre-written code that can helps to more easily write code for an API that will run in a server.

We can create the server, set it to listen for requests, create routes, perform CRUD operations on a database and return responses.