NodeJS Part 6
Sessions & Cookies

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Agenda

1. Stateless VS Stateful
2. Cookies & Sessions
3. Session Authentication
4. Task

1. Introduction

- Stateless

1. Introduction

- Stateless

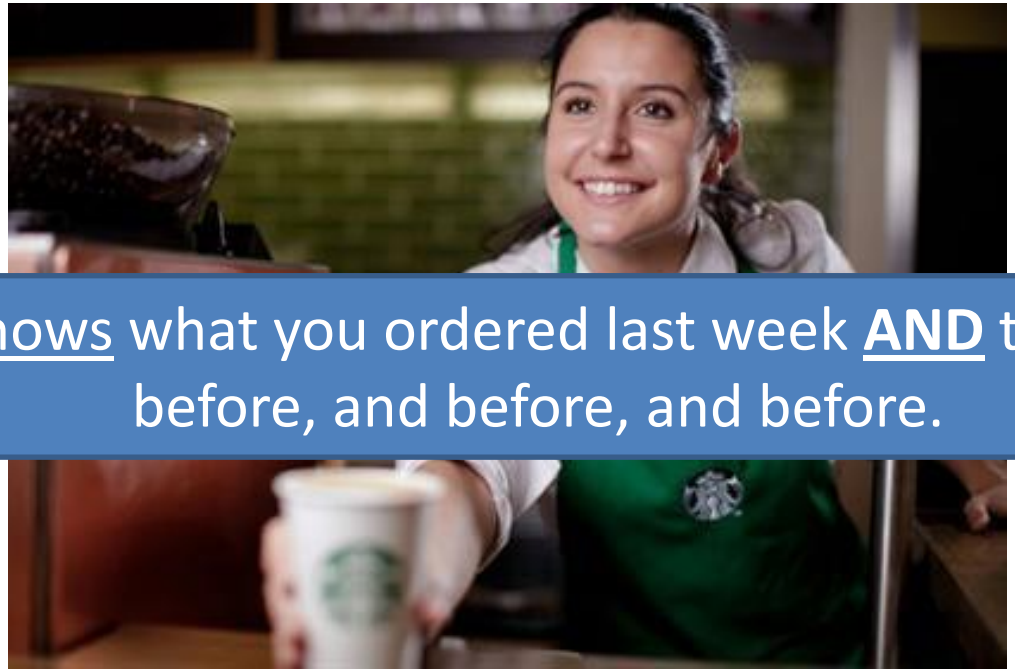
She does not know what you ordered last week.

1. Introduction

- Stateful

1. Introduction

- Stateful



She knows what you ordered last week **AND** the week before, and before, and before.

1. Introduction

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- **Transaction:** One pair of Requests and Responses („One coffee please“ – „There you go – here it is“)
- **Session:** A set of transactions
  - „One coffee please“ – „There you go – here it is“)
  - „One latte please“ – „Okay – here it is“)
  - „One espresso please“ – „Okay.“)

2. Cookies & Sessions

- **Cookies:** is an ID that is sent in the HTTP-Header and identifies a session (saved mostly client-side).
- **Session:** A set of transactions, saved server-side mostly in the memory, as a file or on the database.

- No JavaScript necessary. When a browser receives a reponse, it automatically saves the cookie in all future requests.
- Getting rid of cookies: delete them in browser configs.

3. Session Authentication (1/4)

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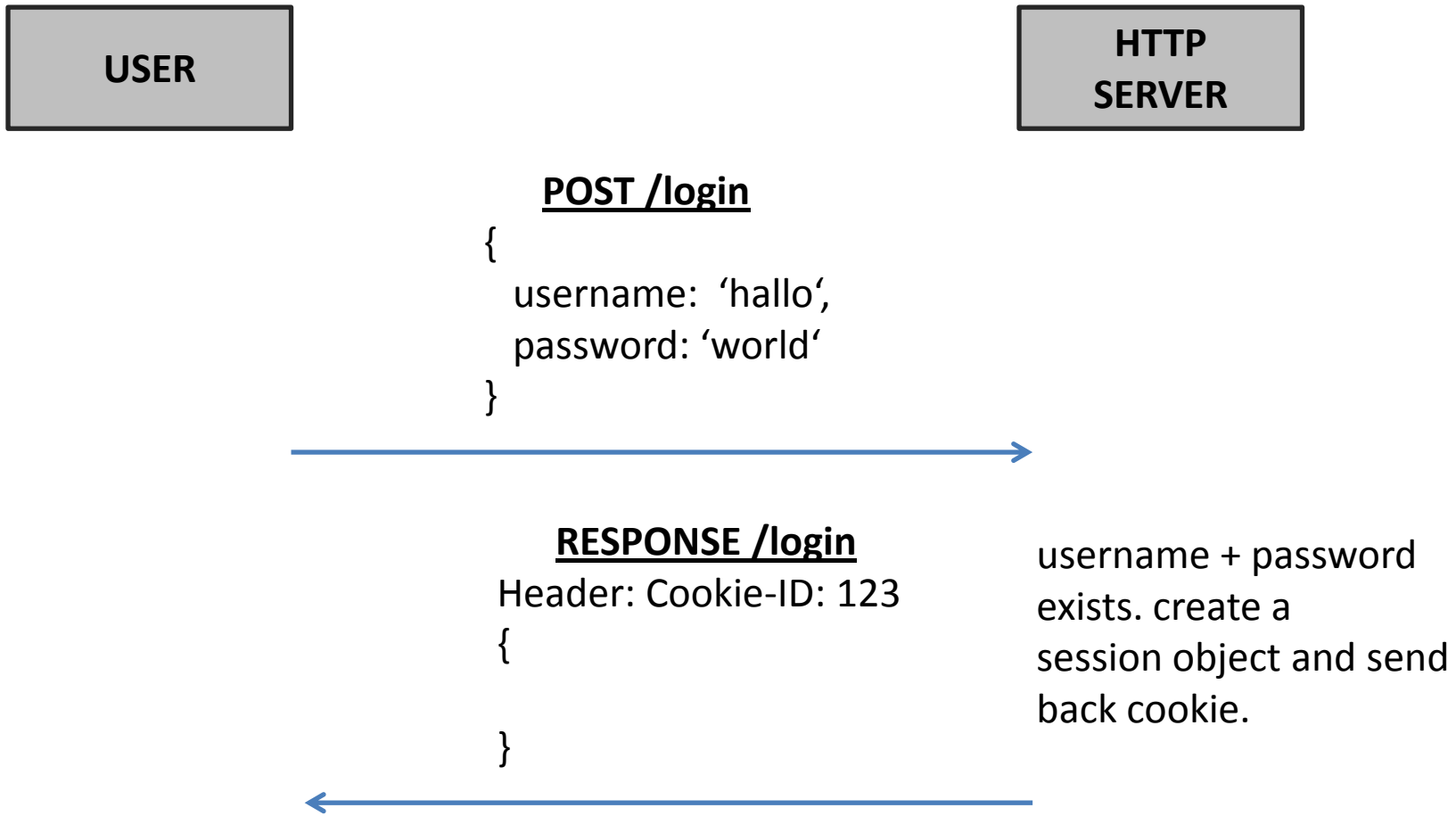
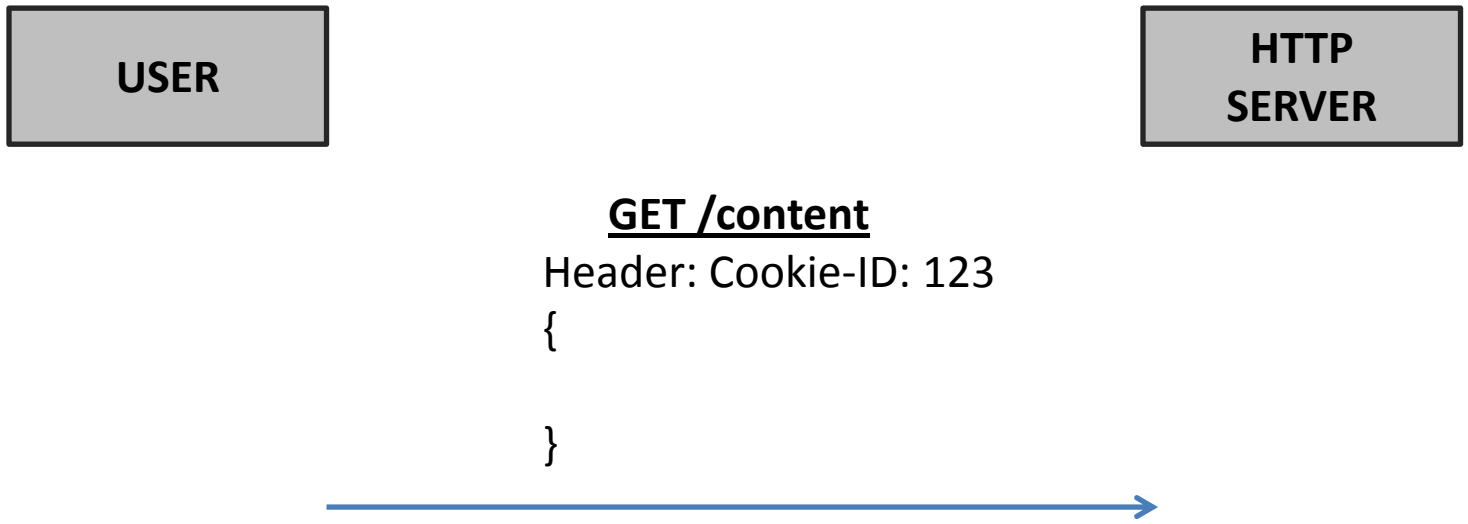
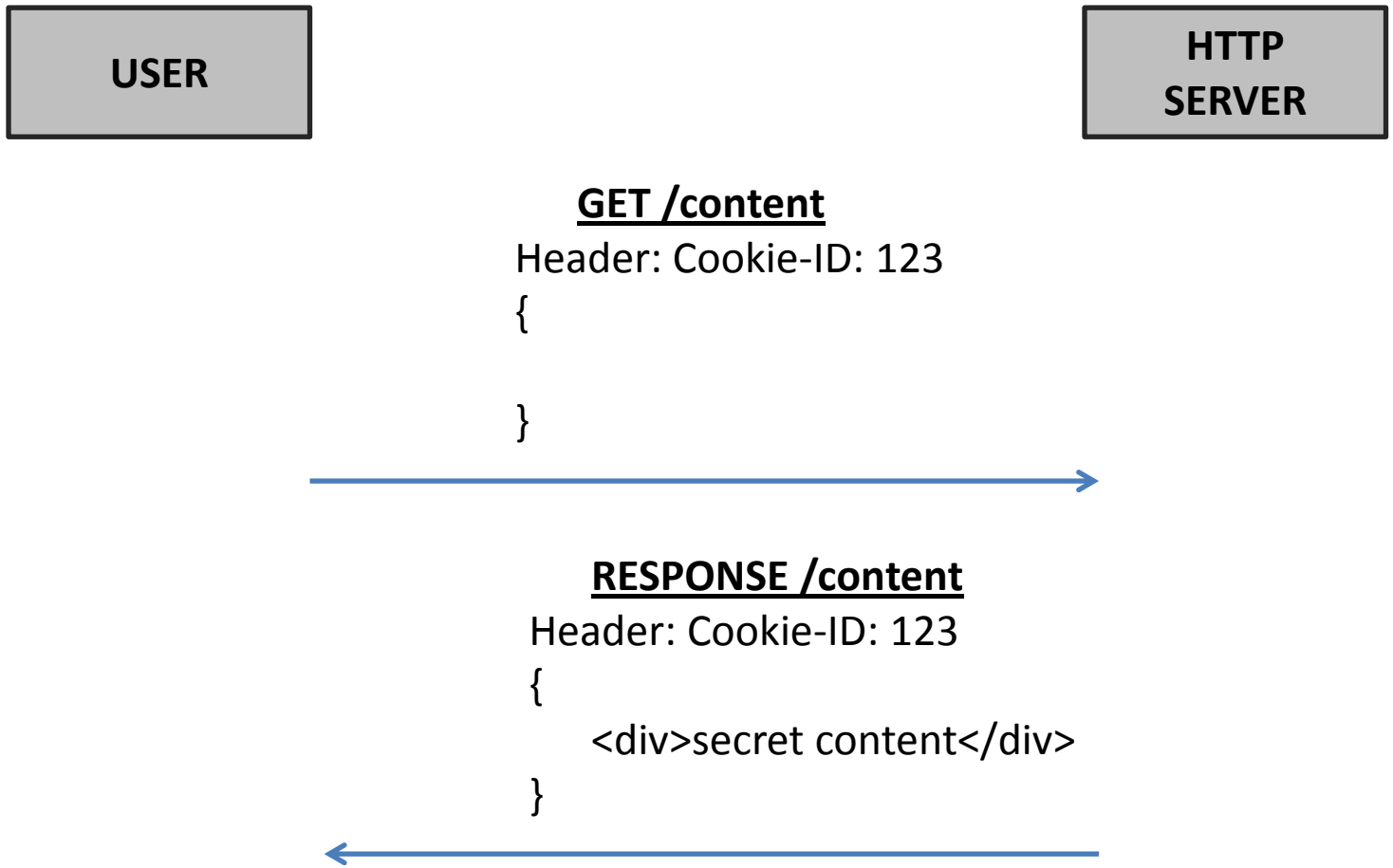


3. Session Authentication (3/4)



3. Session Authentication (4/4)



4. Task

4. Task

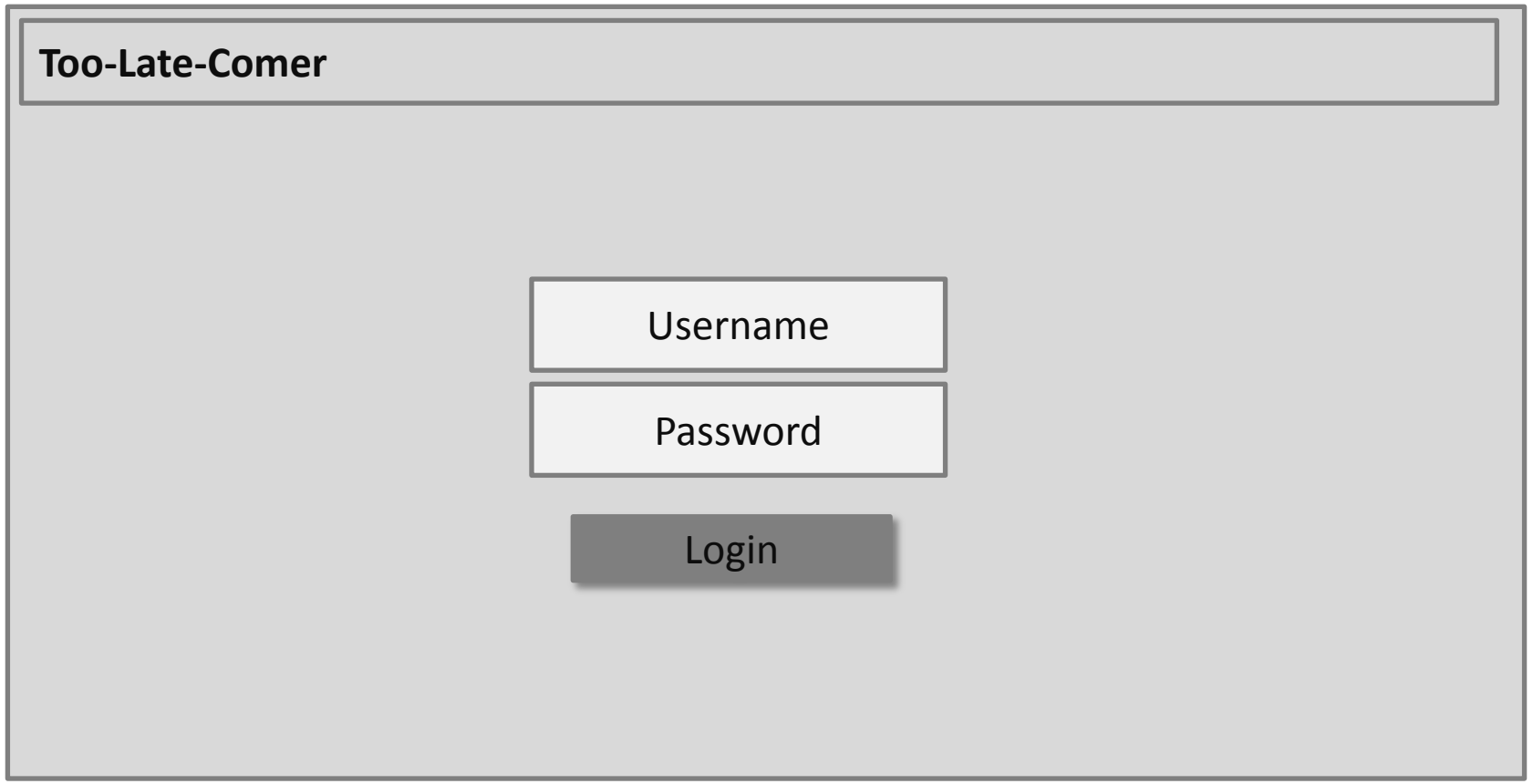
Create a small Too-late-comer website with
Webpack, Jquery, Bootstrap and MongoDB.
The user can keep track of students who come too late.

1) It has three navigation points.
    1) Logout
    2) New Later-Comer (a form where a new too-late comer can be saved)
    3) History (shows a history of people coming too late)

    By default, 3) is the landing page

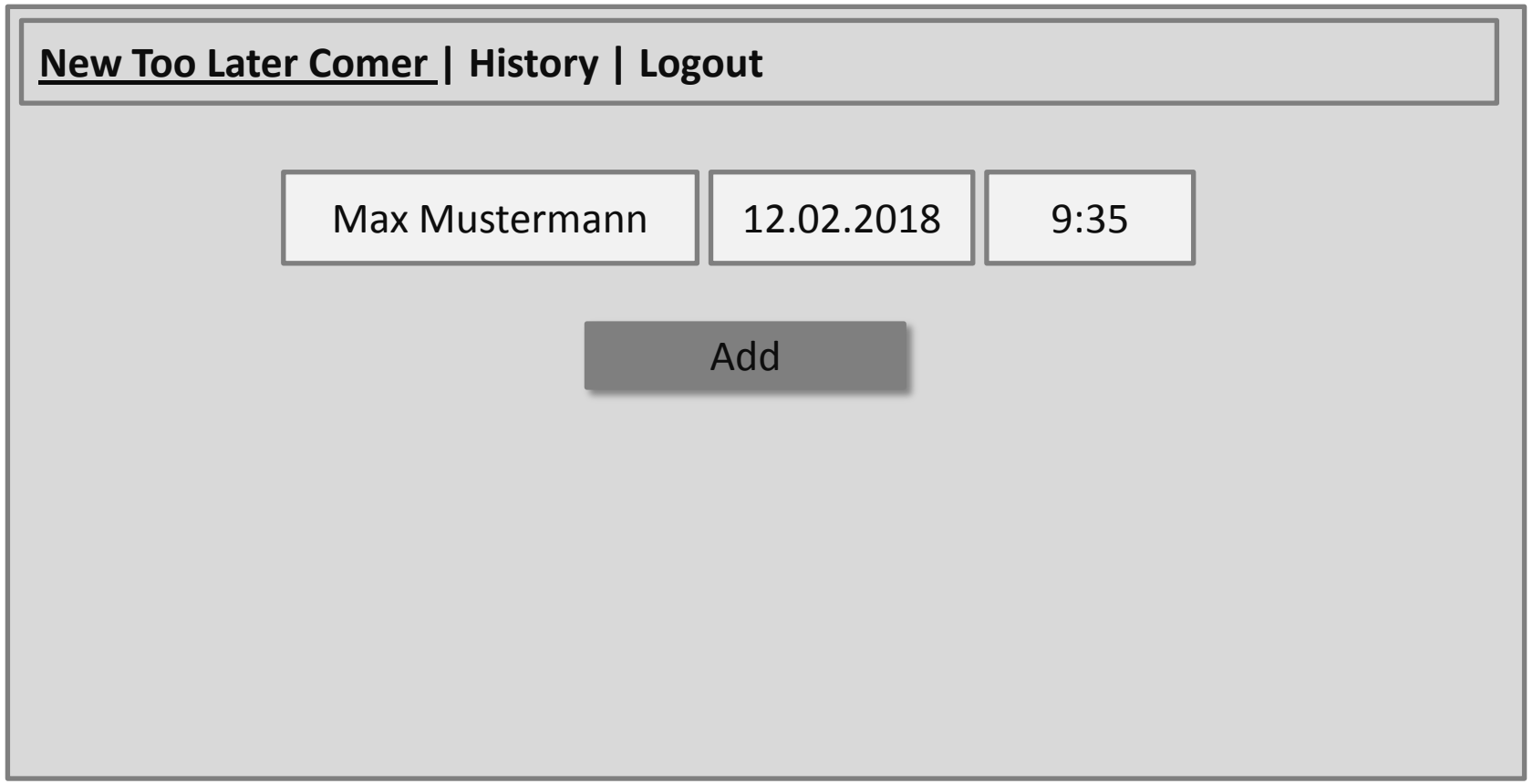
4. Task

1) New Too Later Comer GUI



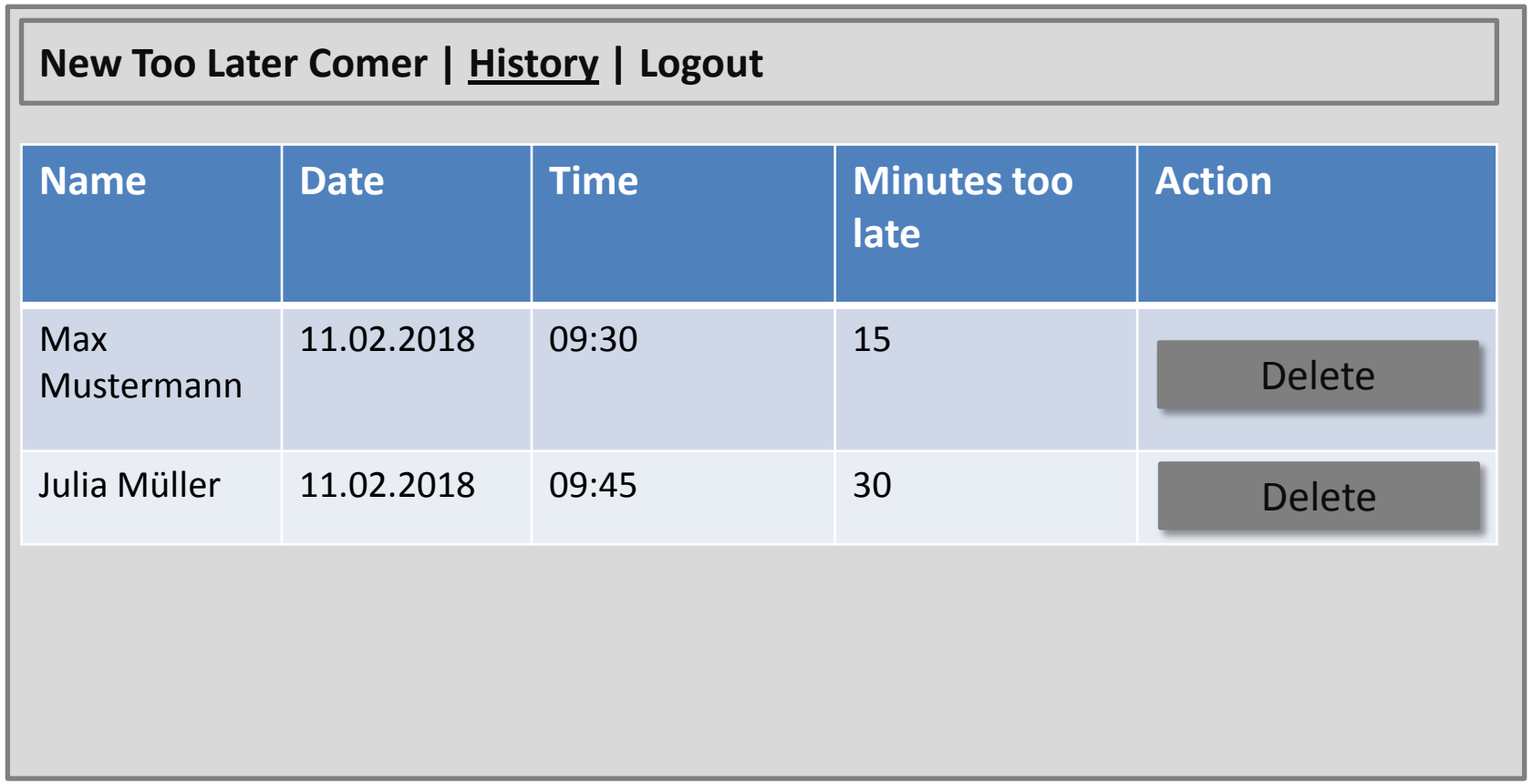
4. Task

1) New Too Later Comer GUI



4. Task

1) History



4. Task

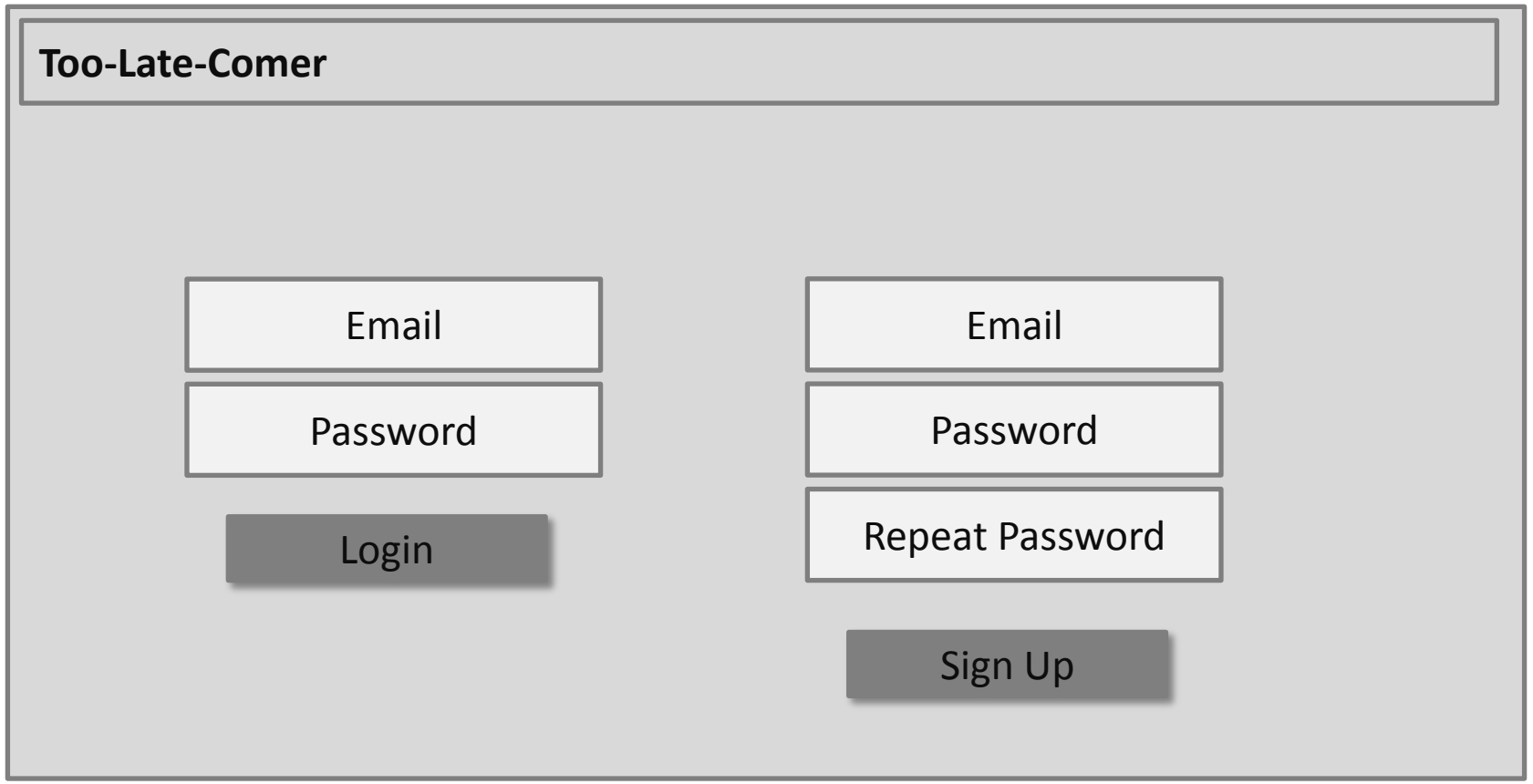
1) Login/Logout

4. Task

2. Extend the /login POST that it looks up username and password on a DB of your choice -> Mongo or MySQL. Also add an information that logs WHEN the user has logged in -> date and time.

4. Task

3. Add a signup form to the start page



4. Task

3. Implement an signup process on the backend:

a) Change your user model that username will be replaced by email. Add a field activationCode (varchar/string) and a field active (boolean) to your database.

b) Create a POST route /signup that accepts an email, a password and the repeated password. Check if the body parameters exist and if the password equals the repeated password. Otherwise, return an error.

c) Create a new record on the database with an activationCode of a randomstring with length 20 and active set to false

d) When the user is created, send an email to the email address using the code on the next slide. In the mail, the user should see a text like:

„Thanks for your registration. Please verify your account by clicking on the following link: http://localhost:3000/?activate=${ACTIVATIONLINK} „

4. Task

```
//nodemailer.js

var nodemailer = require('nodemailer');

function sendMail(recipientAddress, subject, body) {
	var smtpConfig = {
		host: 'smtp.gmail.com',
		port: 465,
		secure: true,
		auth: {
			user: 'devugeesshop1234@gmail.com',
			pass: 'devugees2018'
		}
	};
	var transporter = nodemailer.createTransport(smtpConfig);
	var mailOptions = {
		from: ' " TooLate App" <devugeesshop1234@gmail.com>',
		to: recipientAddress,
		subject: subject,
		text: body,
		html: body
	};
	transporter.sendMail(mailOptions, function(err, info) {
		if(err) console.log('mail was not delivered');
	});
}

module.exports.sendMail = sendMail;
```

4. Task

3. Implement the activation process on the backend:

a) Create a GET route /activate with one parameter **activationLink**. Look for a user on the database with the **activationLink** and if one is found, set active to true. Return a success result (i.e. error = 0) if that worked.

4. Task

4. Implement the activation process on the frontend:

a) When the page loads, check if your URL looks like this:

   http://localhost:3000/?activate=123456

b) Take a look at window.location.href and parse out 123456. Then, send this information to the backend and if the activation was successfull, tell the user by showing an alert message „Your account is active now“.

5. Task

Make a copy of toolate-app and create a JWT version of it -> toolate-app-jwt.

Note: When the user logs out, its sufficient to remove the token from the localStorage.