RSS Personal Reader

Taste of Code

with Miriam Tocino

:{) Codaisseur

Are You Ready?

Editor

Atom, Notepad++, Vim

Browser

Chrome, Firefox

Slack

https://kpntasteofcode.slack.com/

What Are You Building?

RSS Feed Reader

Using HTML, CSS
and JavaScript (jQuery)

🌟 Display a list of some news sites

🌟 Display links to the last 5 articles for each of these sites

🌟 Open articles in a different window when clicked on

Good afternoon!

RSS Personal Reader

NOS Nieuws

Kinderen staan vaker oog in oog met moordenaar van hun ouders

Overgelopen tante van Kim Jong-un runt wasserette in VS

575.000 toeristen via AirBnB in Amsterdam

Video: timelapse van geslaagde landing SpaceX op zee

Kom vooral niet kijken bij het NK asperge steken

Telegraaf Nieuws

Svitolina te sterk voor Ivanovic

Steekpartij na ruzie in Ridderkerk

Vergoeding voor Verbruggen

Frikandellen- vlaai een hit

De Sa verkast naar Bratislava

jaarlijks gemiddeld 3.800 euro aan Airbnb

jd neer in laatste training Monaco

re onweersbuien in hele land

Turkije: 104 IS-strijders gedood bij lucht- en grondaanvallen

Belgische stakende cipiers krijgen loonstrookje: 0 euro

NRC Nieuws

Intro to HTML

Content & Structure

What is HTML

HTML is a **markup language**
for writing web pages.

Any website you ever visited
was **made with html**.

Each new version of HTML is
adapted to new requirements of the web.

What is HTML

<DOCTYPE>
defines doc type

<html>
describes HTML doc

<head>
provides doc info

<title>
provides doc title

<body>
describes page content

<h1>
describes a heading

<p>
describes a paragraph

```html
<!DOCTYPE html>
<html>
  <head>
    <title>Taste of Code</title>
  </head>
  <body>
    <h1>Agenda</h1>

    <p>On the menu today:</p>

    <ul>
      <li>Structure with HTML</li>
      <li>Styling with CSS</li>
      <li>Happiness with Lunch</li>
    </ul>
  </body>
</html>
```

What is HTML

Agenda

On the menu today:

· Structure with HTML
· Styling with CSS
· Happiness with Lunch

Looking closer at tags

Most HTML elements **open** and **close**.

<h1> Taste of Code </h1>

OPENING TAG — ELEMENT CONTENT — CLOSING TAG

Looking closer at tags

HTML elements can have **attributes**.

ATTRIBUTE VALUE

ATTRIBUTE NAME

`<p lang="nl"> Text in Dutch. </p>`

OPENING TAG

ELEMENT CONTENT

CLOSING TAG

Looking closer at tags

Some HTML elements are **self-closing**.

They don't need a closing tag.

`<img src="img/logo.png" />`

|—— ATTRIBUTE NAME ——| |—— ATTRIBUTE VALUE ——|

|———————————— SELF-CLOSING TAG ————————————|

Intro to HTML

Exercises
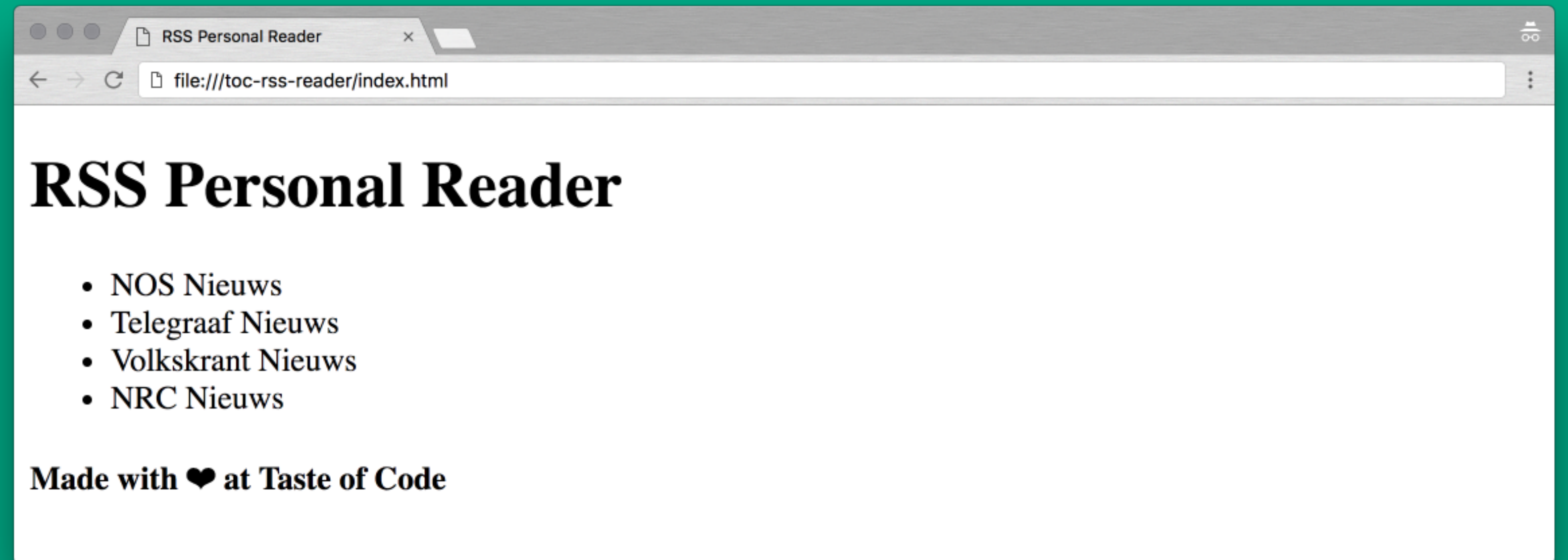
Link to Github

Intro to CSS

Style & Presentation

What is CSS

CSS is a **stylesheet language** that describes the presentation of an HTML document.

🌟 **text color**

🌟 **fonts style**

🌟 **background images**

🌟 **spacing between elements**

Your First CSS

color

sets the color of the text

```html
<!DOCTYPE html>
<html>
  <head>
    <title>Taste of Code</title>

    <style>
      h1 {
        color: red;
      }
    </style>

  </head>
  <body>
    <h1>Agenda</h1>
    …
  </body>
</html>
```

Your First CSS

Agenda

On the menu today:

· Structure with HTML
· Styling with CSS
· Happiness with Lunch

Looking closer at CSS rules

CSS associates **style rules with HTML tgs**.

SELECTOR

p {

font-family: Helvetica;

}

PROPERTY

VALUE

CSS DECLARATION

Intro to CSS

Exercises
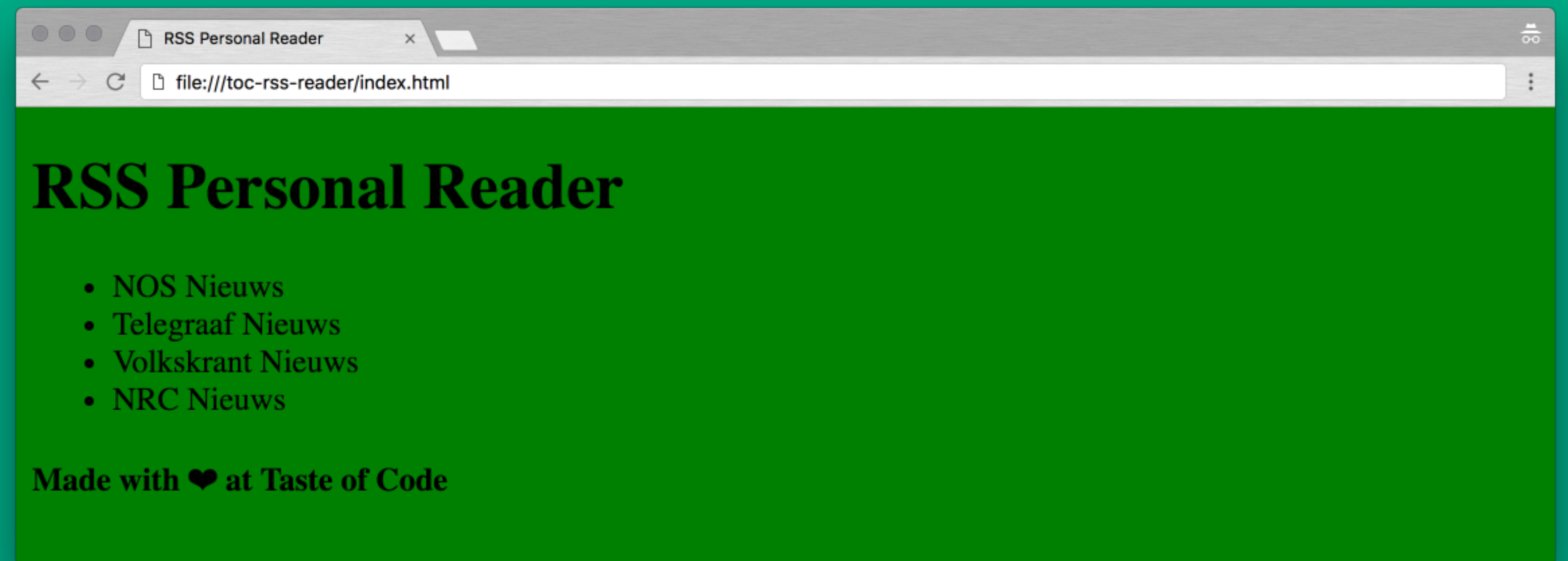
CSS Selectors

How to target specific HTML tags

CSS Selectors

Select any HTML element on your page by its **class name**

```html
<!DOCTYPE html>
<html>
  <head>
    <title>Taste of Code</title>

    <style>
      .main-title {
        color: red;
      }
    </style>

  </head>
  <body>
    <h1 class="main-title">Agenda</h1>
  </body>
</html>
```

CSS Selectors

Exercises

Link to Github

CSS Advanced Styling

Bringing space between elements

Height & Width

A screen consists of pixels.

height 5px

Hello!

width 10px
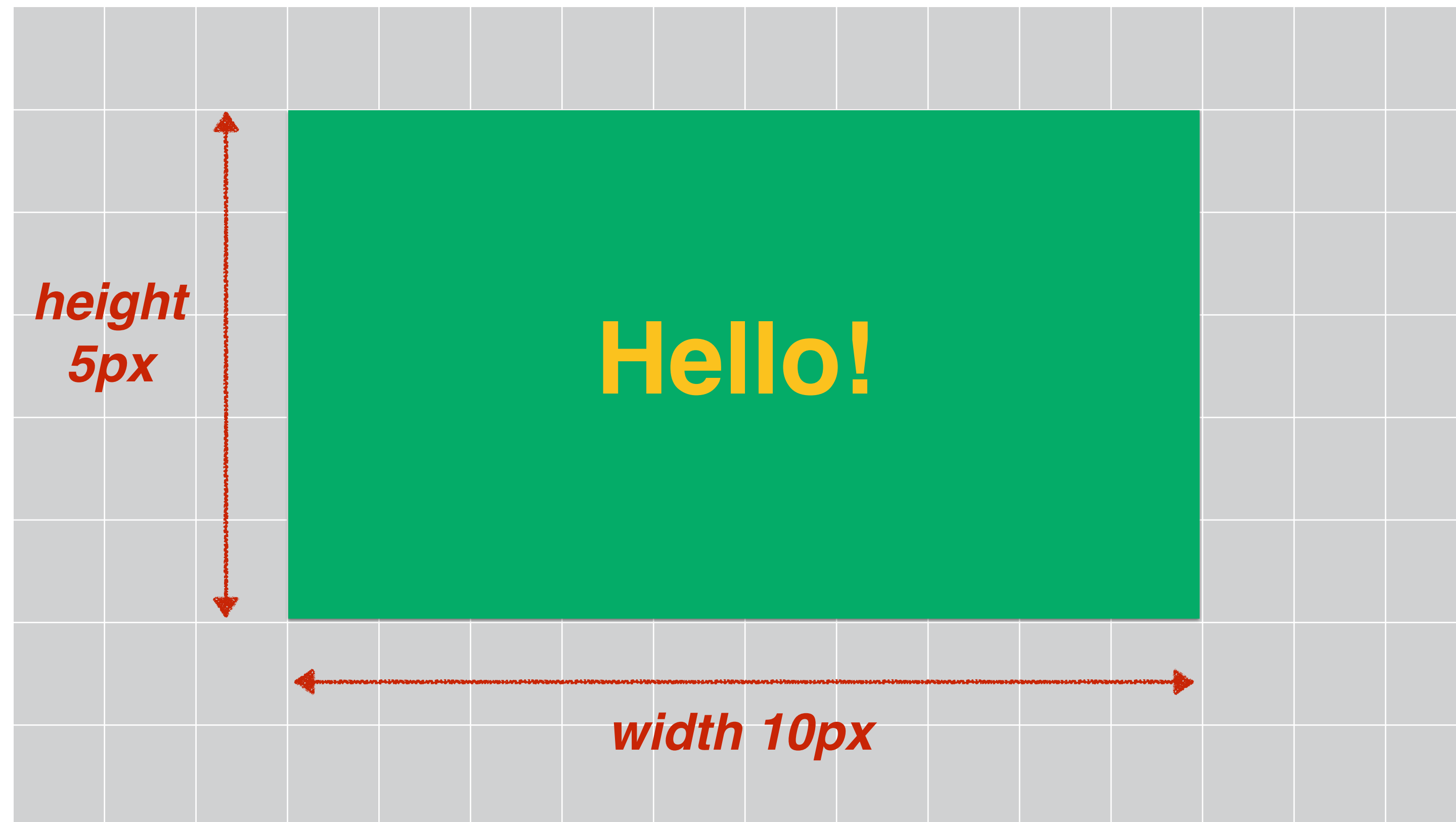
Padding & Margin

Width, Height, Padding & Margin

```css
p {
  padding: 30px;
  margin: 10px;
}

.main-title {
  padding: 10px;
}

.taste-of-code {
  width: 200px;
}
```

Using an external CSS file

Use the HTML <link> tag

Its **href** attribute tells the browser where the CSS file is stored.

index.html

```
<!DOCTYPE html>
<html>
 <head>
   <title>RSS Personal Reader</title>
   <link rel="stylesheet" type="text/css" href="styles.css">
 </head>
  <body>
   …
  </body>
</html>
```

CSS Advanced Styling

Exercises
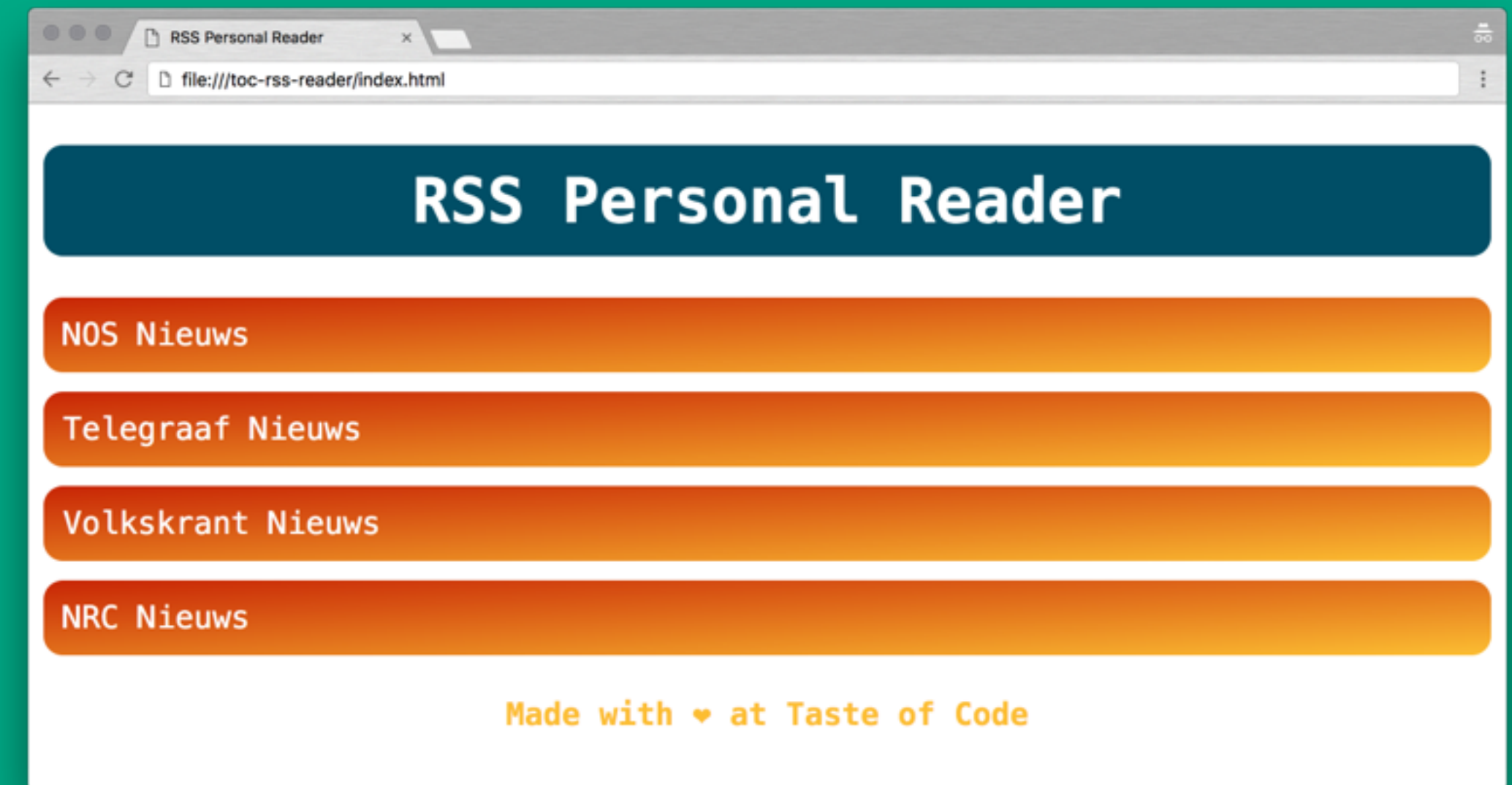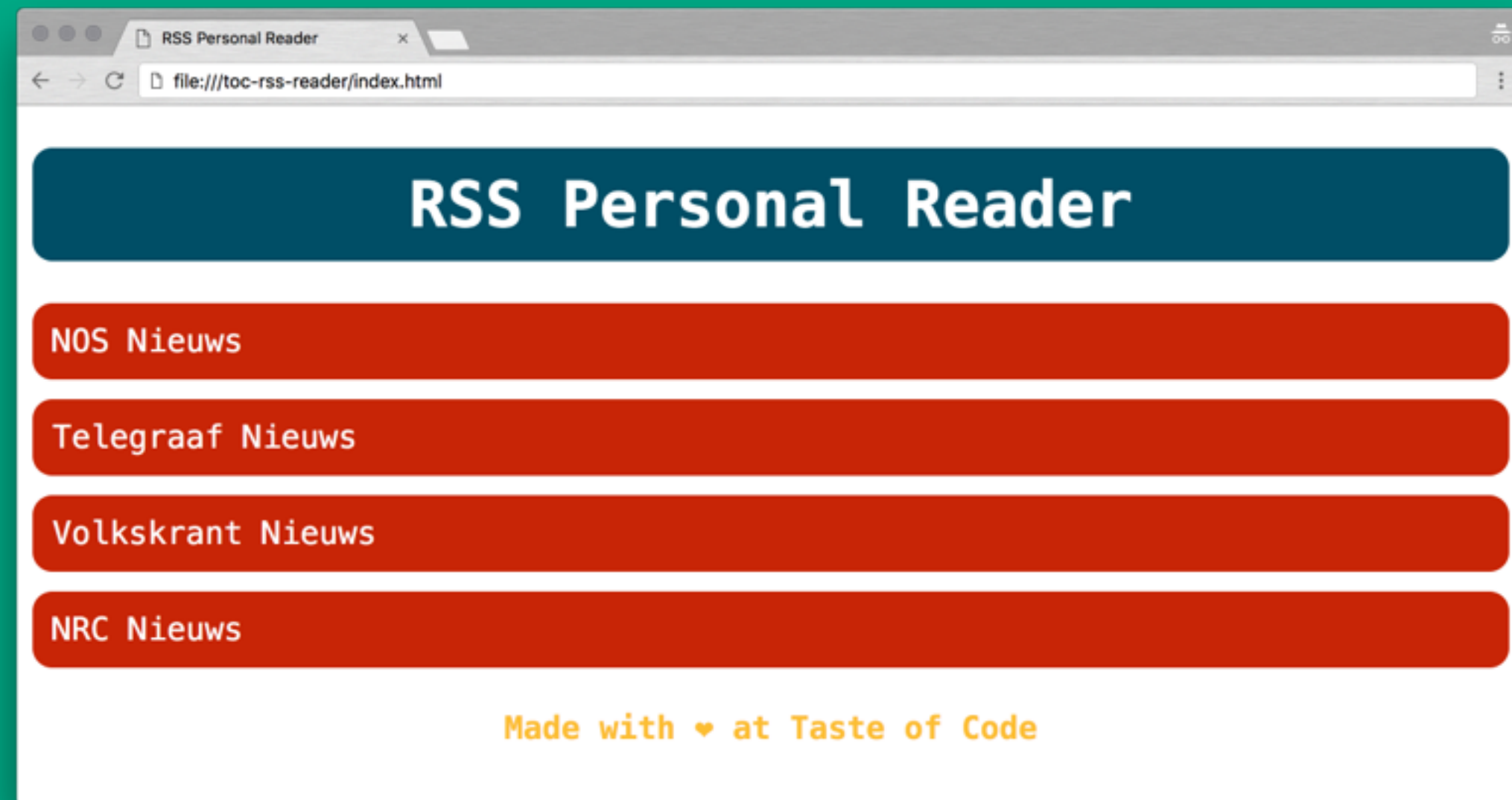
Link to Github

Intro to JavaScript

Making your web page interactive

JavaScript lives in your browser

Open JavaScript Console

CMD + ALT + J (Mac)

Control + Shift + J (Windows/Linux)
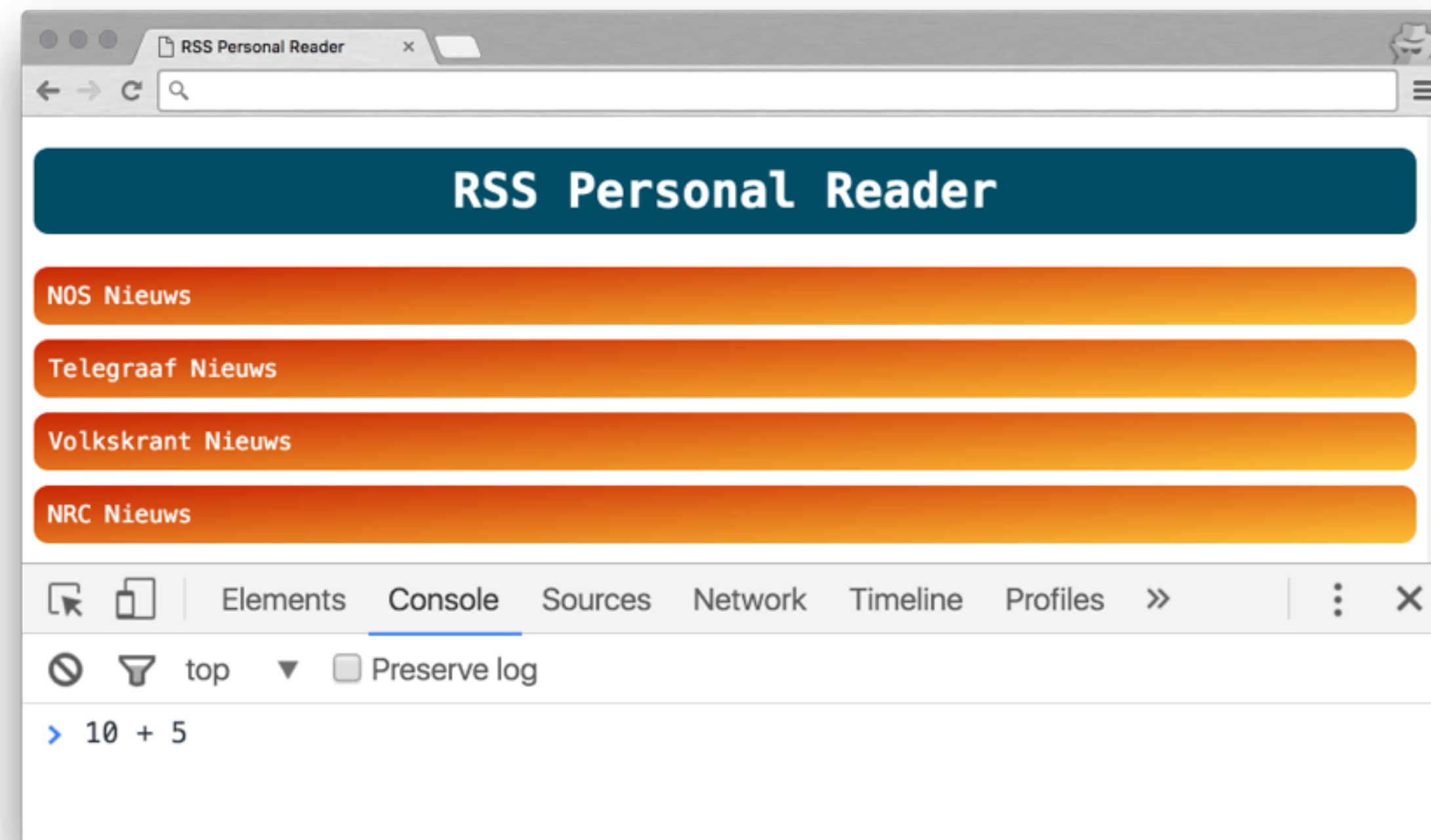
Intro to JavaScript

Exercises
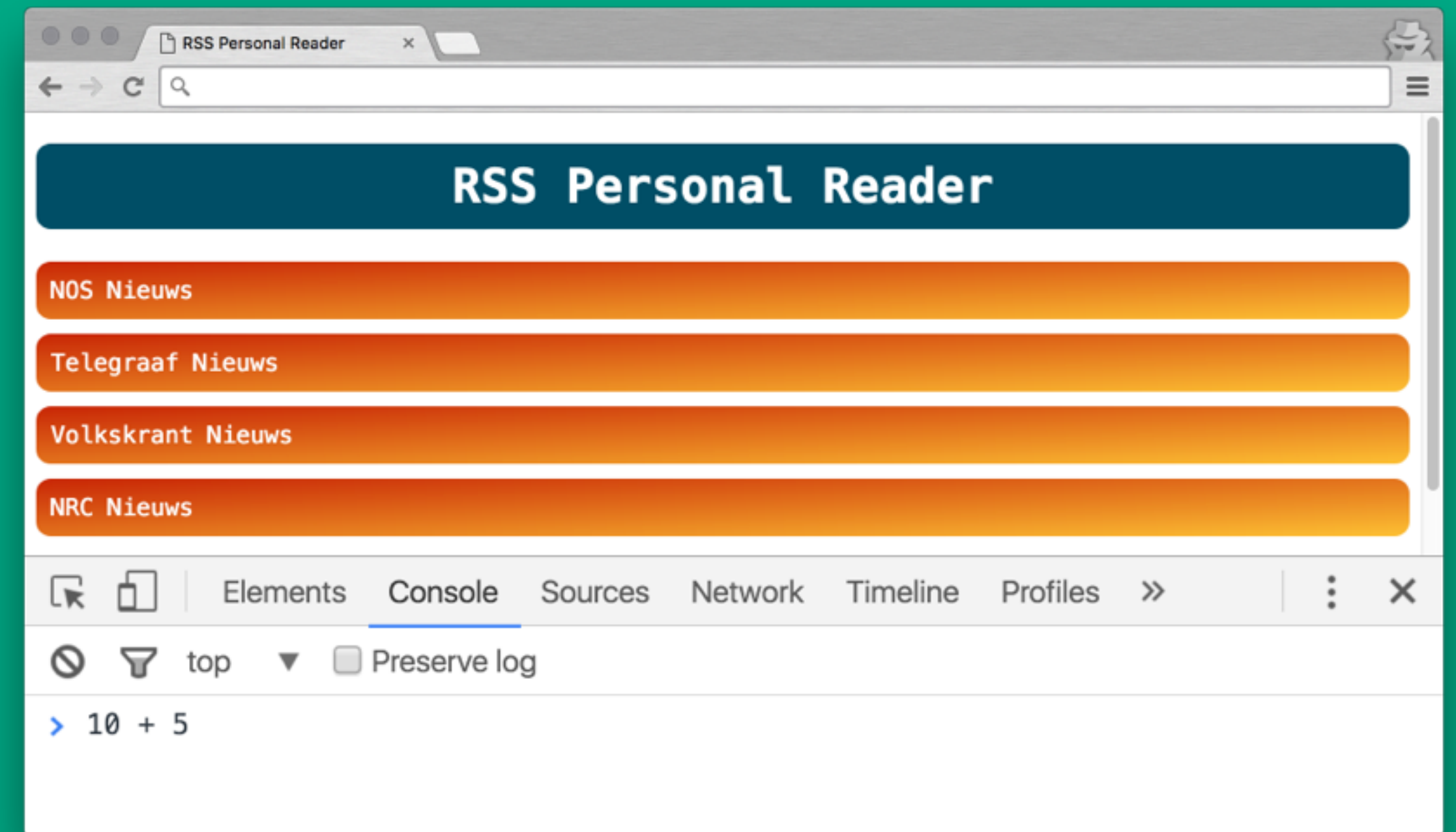
JavaScript Interactivity

Making your web page interactive

How JavaScript makes your pages more interactive

Access content

select elements that have a `warning` class

Modify content

add a paragraph of text after the first `<h1>` element

Program Rules or Instructions

write a script that writes some content depending on the day time

React to events

specify that a script should be run when a button is clicked

Objects (things) & Properties (characteristics)

In computer programming,
each thing in the world
can be represented as an object.

Each object can have
its own **properties** and **methods**.

Objects (things) & Properties (characteristics)

Window Object

The browser represents each window or tab
using the **window** object.

```
window.location
window.alert("We are building a RSS Feed Reader!")
```

Objects (things) & Properties (characteristics)

Document Object

The current web page loaded into each window
is modelled using the **document** object.

```
document.title
document.write("It is gonna be awesome")
```

JavaScript Interactivity

Exercises

This code will make an alert box to apper in the window of your browser !

Content defined between the `<title>` tags in your `index.html` file !
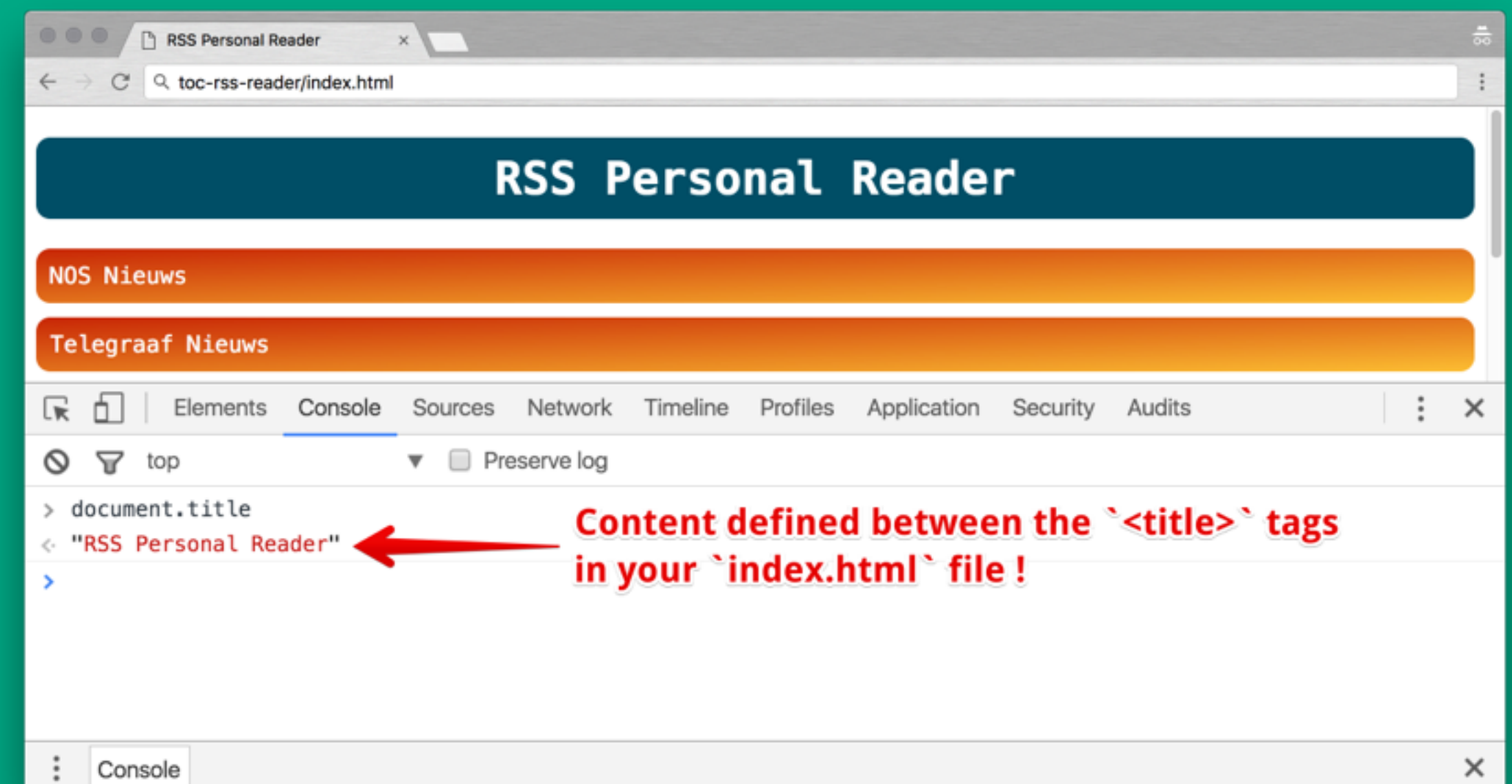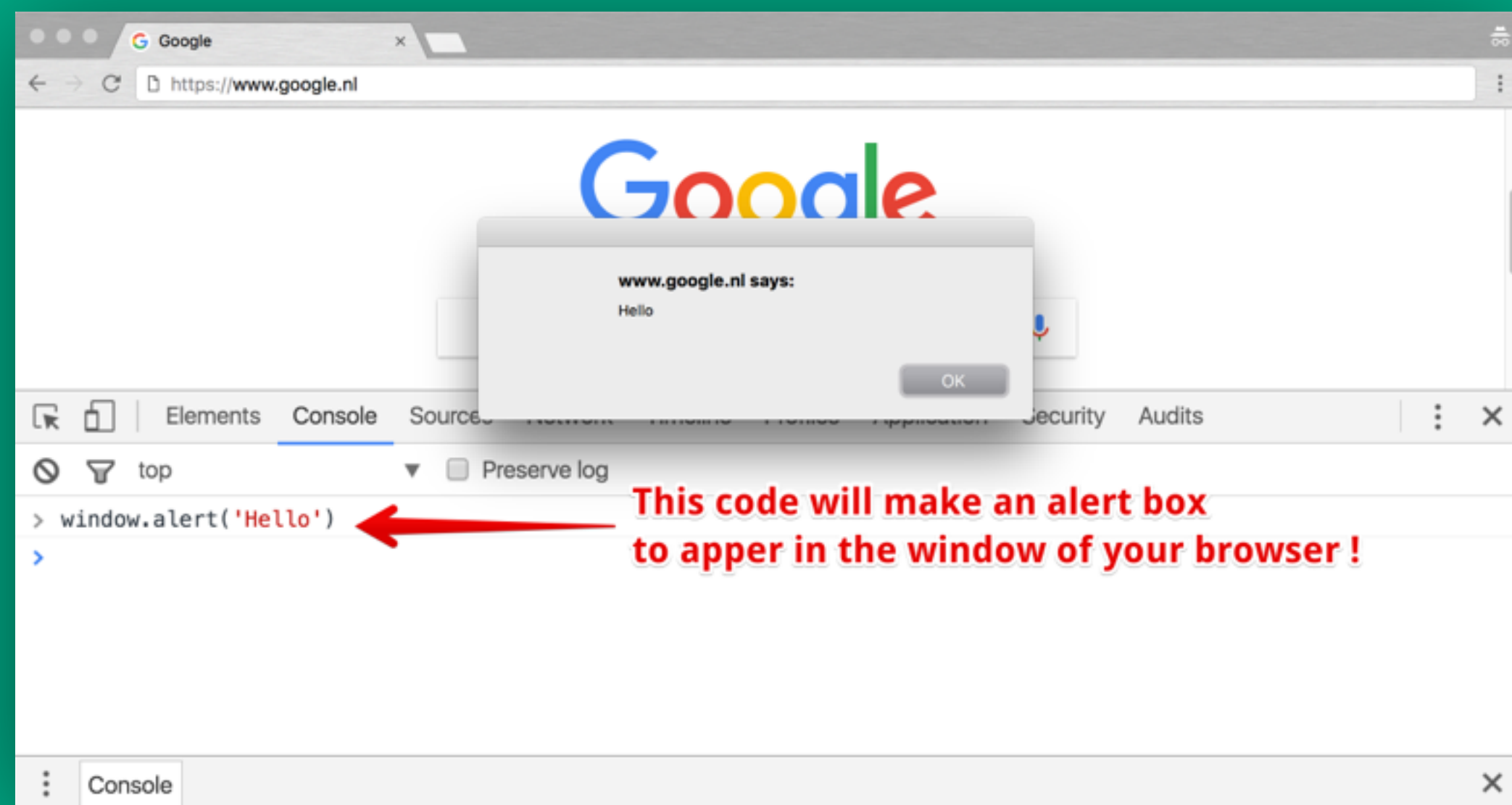
Link to Github

JavaScript Variables

Storing data

What is a Variable?

Variables can be thought of
as **named containers**.

You can place data into these containers
and refer to that data simply by
naming the container.

What is a Variable?

```javascript
// Store a string
var text = "It is gonna be awesome"
document.write(text)

// Store a number
var sum = 10 + 5
document.write(sum)

// Store a boolean (true/false)
var buildingFeedReaderAtTOC = true
document.write(buildingFeedReaderAtTOC)
```

JavaScript Variables

Exercises

```
var nosUrl = "http://feeds.nos.nl/nosjournaal"
```

Link to Github

JavaScript Scripts

Giving Instructions

What is a Script?

A script is a **series of instructions**
that a computer can follow step-by-step
to achieve a goal.

First **state your goal** and then **list the tasks**
that need to be completed to achieve it.

Your First Script

Greeting
with JavaScript

This script adds a greeting into an HTML page.

The greeting changes depending on the time.

```javascript
var today = new Date()
var hourNow = today.getHours()

if (hourNow > 18) {
  var greeting = "Good evening!"
} else if (hourNow > 12) {
  var greeting = "Good afternoon!"
} else if (hourNow > 0) {
  var greeting = "Good morning!"
} else {
  var greeting = "Welcome!"
}

document.write("<h3>" + greeting + "</h3>")
```

External JavaScript

Use the HTML

`<script>` tag

Its **src** attribute tells the browser where the JavaScript file is stored.

```
<!DOCTYPE html>
<html>
  <head>
    <title>RSS Personal Reader</title>
    <link rel="stylesheet" type="text/css"
    href="css/styles.css">
  </head>
  <body>
    <script src="greeting.js"></script>

    <h1 class="main-title">
      RSS Personal Reader
    </h1>
  </body>
</html>
```

JavaScript Scripts

Exercises
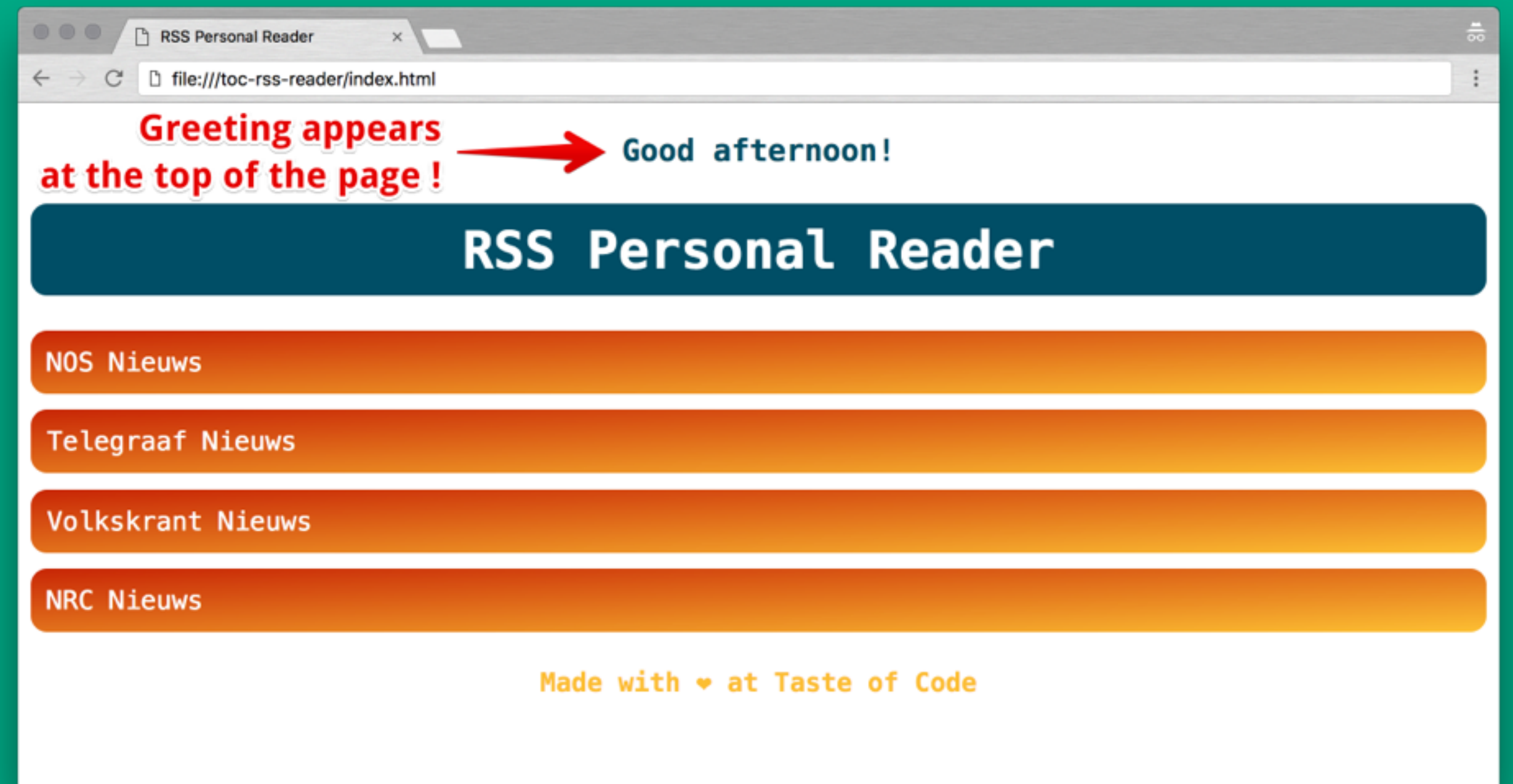
Link to Github

JavaScript Objects

Modelling the world around you

Including jQuery

```
<!DOCTYPE html>
<html>
  <head>
    <title>RSS Personal Reader</title>
    <link rel="stylesheet" type="text/css" href="css/styles.css">
  </head>
  <body>
    <!-- ... -->

    <script src="http://code.jquery.com/jquery-1.12.4.min.js"></script>
  </body>
</html>
```

What is an Object?

Objects group together a **set of variables**
to **create a model** of something
you would recognize from the real world.

In an object,
variables become known as **properties**.

What is an Object?

An object could be a library where a **collection of feed urls** are stored, categorized by site.

rss.js

```
var feedsLibrary = {
  nos: "http://feeds.nos.nl/nosjournaal"
}
```

key

value

Manipulating HTML with JavaScript

You can select any element in HTML by selecting its **class** or **id** attribute

🌟 How to show the **nosUrl** value within the **nos** unordered list?

```html
<!DOCTYPE html>
<html>
  <head>
    <title>RSS Personal Reader</title>
    <link rel="stylesheet" type="text/css"
    href="css/styles.css">
  </head>

  <body>
    …
    <ul id="nos"></ul>
    <script src="http://code.jquery.com…
    <script src="js/rss.js"></script>
  </body>
</html>
```

Manipulating HTML with JavaScript

🌟 How to show the **nosUrl** value within the **nos** unordered list?
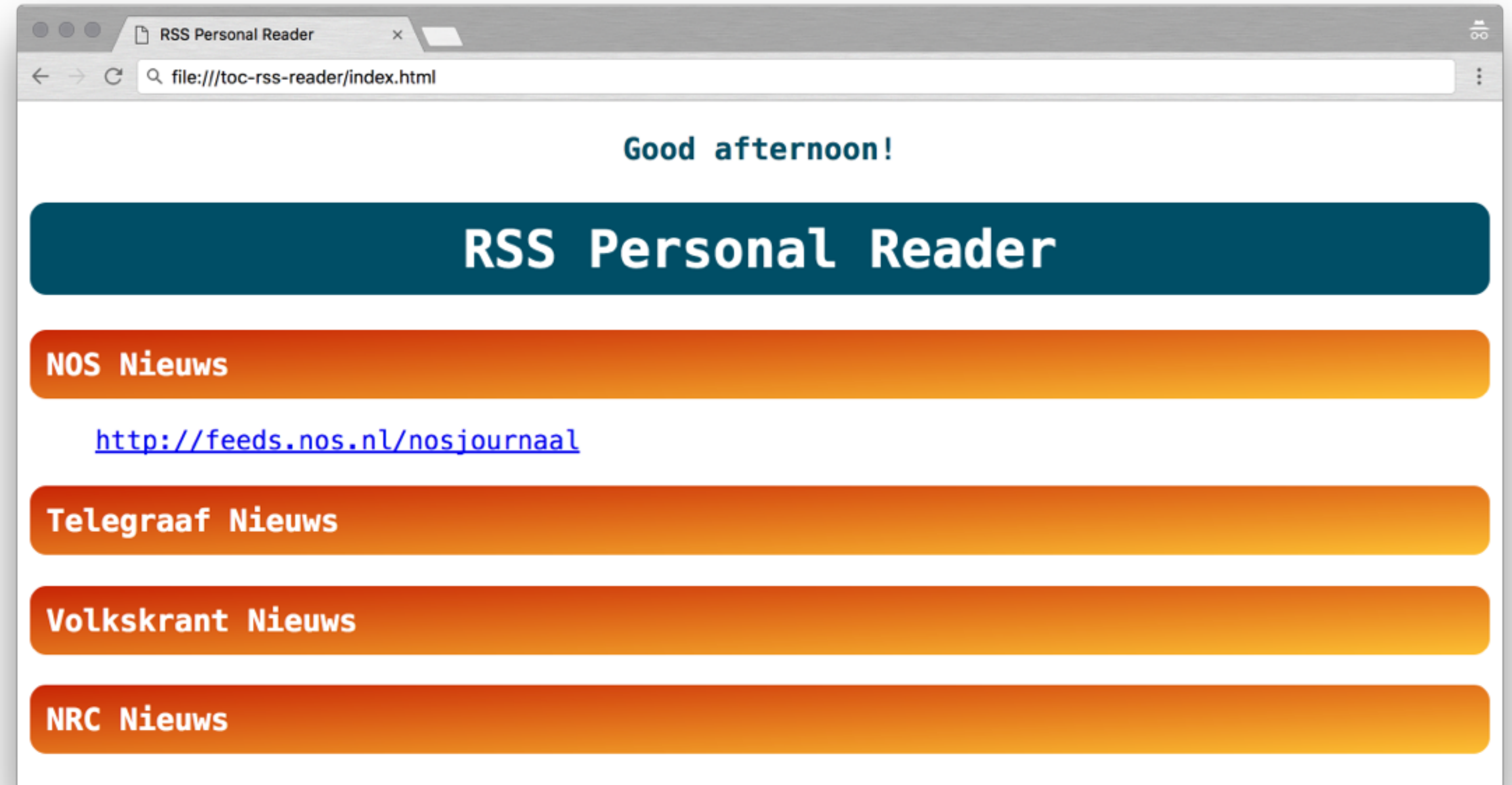
Manipulating HTML with JavaScript

js/rss.js

```javascript
var nosUrl = "http://feeds.nos.nl/nosjournaal"

var feedsLibrary = {
  nos: nosUrl
}

var nosList = $('#nos')

nosList.append('<a href="'+feedsLibrary.nos+'">'+feedsLibrary.nos +'</a>')
```

JavaScript Objects

Exercises
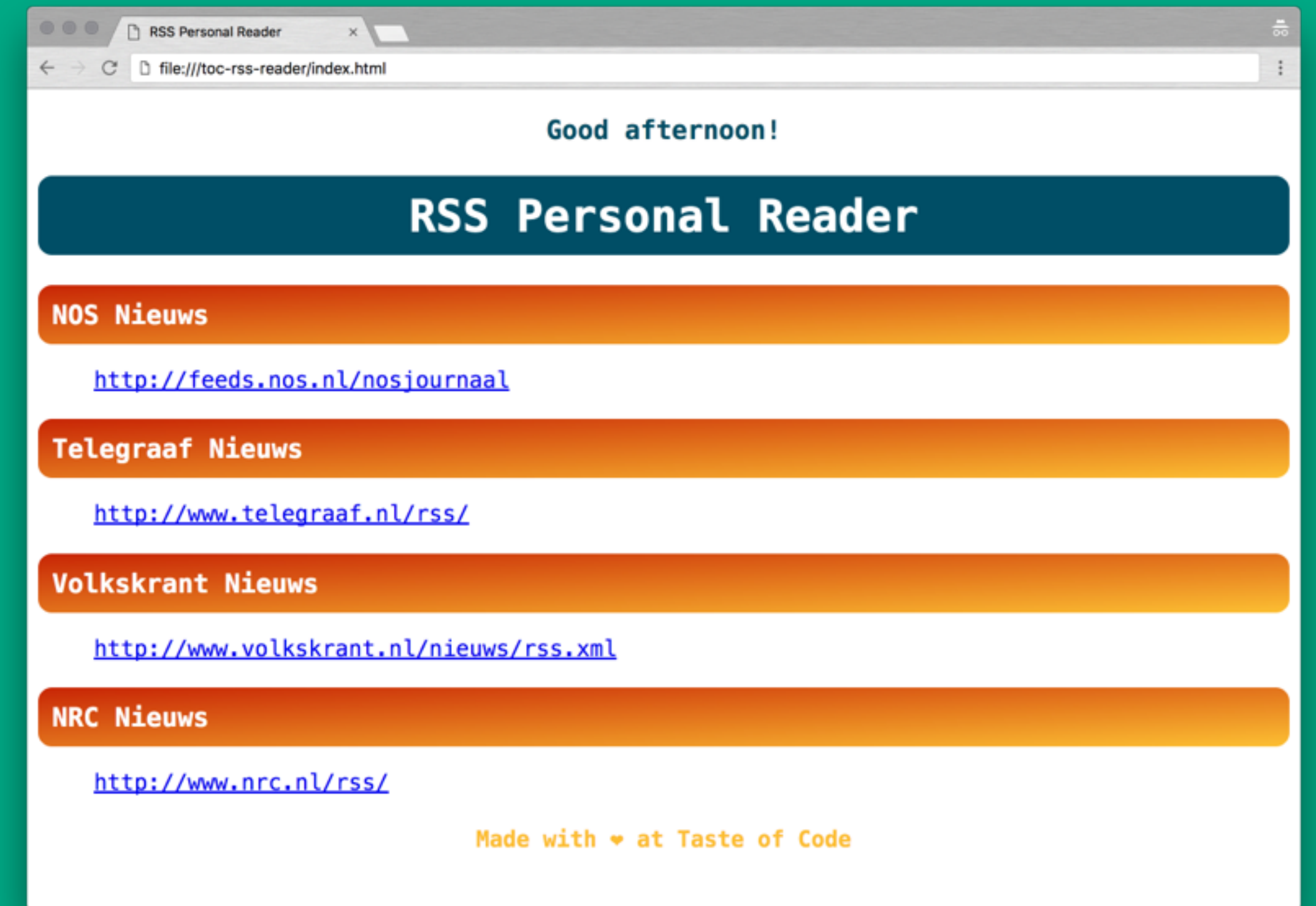
Intro to YQL

Query, filter & combine data across the web

Exploring YQL (Yahoo Query Language)

🌟 Our goal

Grab the RSS feed for each of the sites,
passing them through the **query string**.

We will be using the **JSON** form of the data.

Exploring YQL (Yahoo Query Language)

Visiting the end point

Building up the query string

```
SELECT * FROM feed WHERE url="path/to/rss/feed" LIMIT 5
```

Intro to YQL

Exercises

```
https://query.yahooapis.com/v1/public/yql?q=SELECT%20*%20FROM%20feed%20WHERE%20url%3D"http%3A%2F%2Ffeeds.nos.nl%2Fnosjournaal"%20LIMIT%205&format=js...

{
  - query: {
        count: 5,
        created: "2016-05-28T08:30:01Z",
        lang: "en",
      - results: {
          - item: [
              - {
                    title: "Man in bijzijn van zoontje geliquideerd in Diemen-Noord",
                    link: "http://feeds.nos.nl/~r/nosjournaal/~3/mqNQvZg8J58/2107729",
                  - enclosure: {
                        type: "image/jpeg",
                        url: "http://nos.nl/data/image/2016/05/28/285742/m.jpg"
                    },
                    description: "De man werd onder vuur genomen toen hij in zijn auto zat. Hij was een bekende van de politie.<img src="http://feeds.feedburner.com/~r/nosjournaal/~4/mqNQvZg8J58" height="1" width="1" alt=""/>",
                    pubDate: "Sat, 28 May 2016 07:42:54 +02:00",
                  - guid: {
                        isPermaLink: "false",
                        content: "http://nos.nl/l/2107729"
                    },
                    origLink: "http://nos.nl/l/2107729"
                },
              + { … },
              + { … },
              + { … },
              + { … }
            ]
        }
    }
}
```
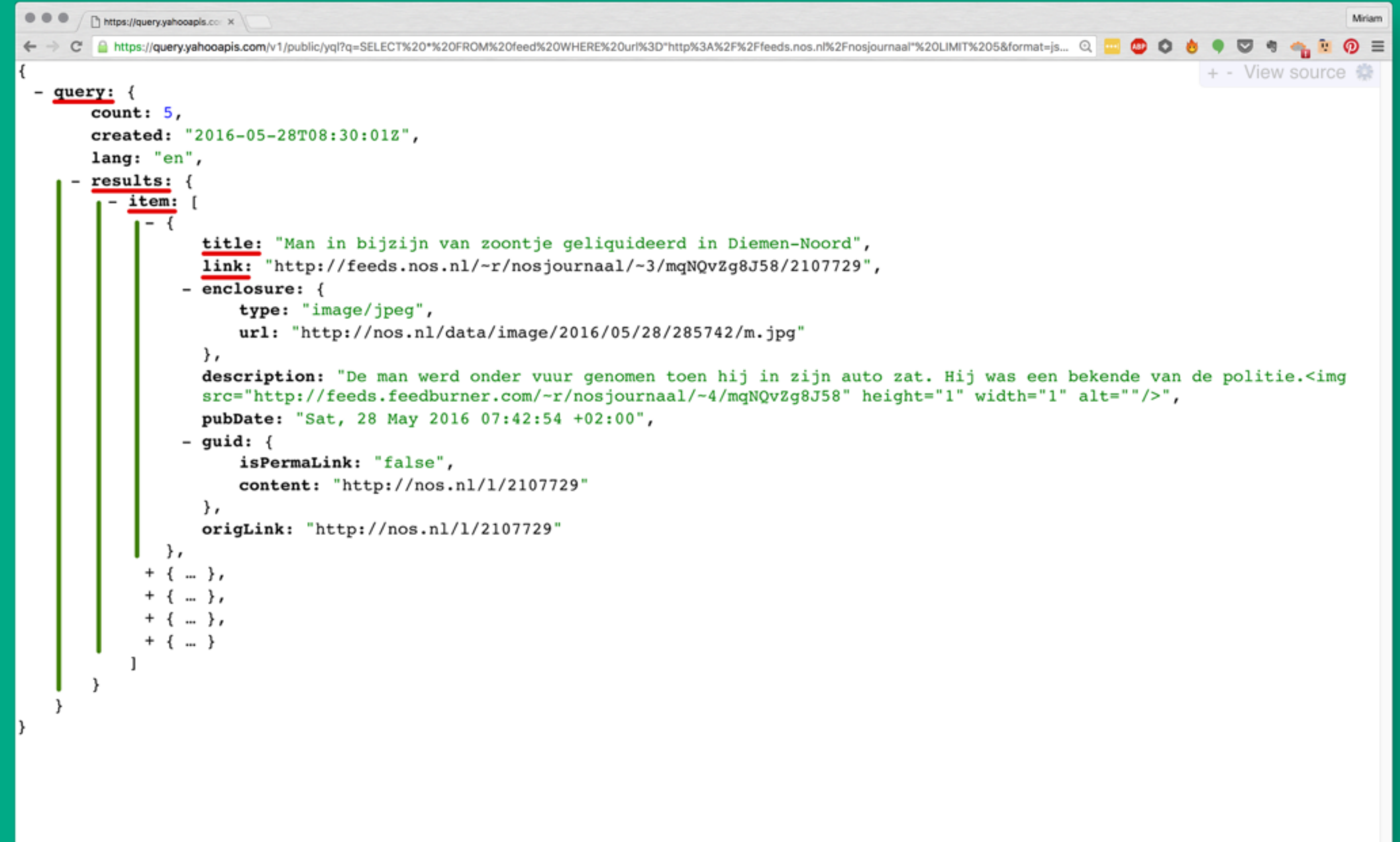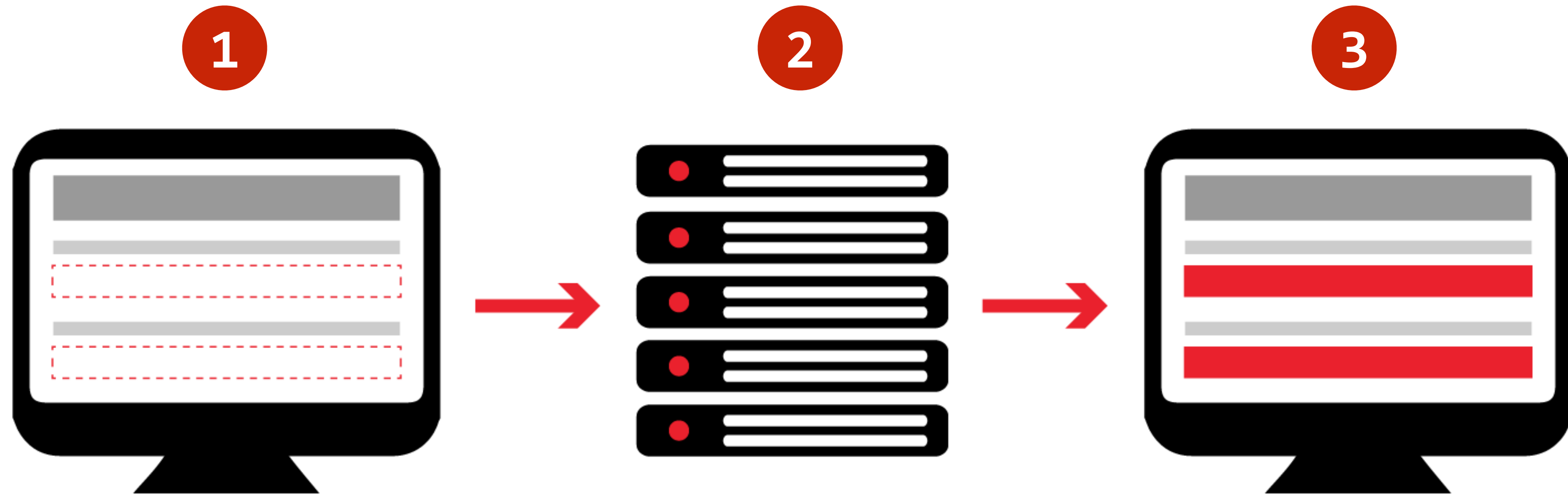
Intro to AJAX

Getting Information from others

How AJAX works

1

THE REQUEST

The browser request information from the server.

2

ON THE SERVER

The server responds with data (JSON).

3

THE RESPONSE

The browser processes content and adds it to the page.

Building up the path to make the request

https://query.yahooapis.com/v1/public/yql?q=SELECT%20*%20FROM%20feed%20WHERE%20url%3D%27http%3A%2F%2Ffeeds.nos.nl%2Fnosjournaal%27%20LIMIT%205&format=json

rss.js

```js
var nosUrl = "http://feeds.nos.nl/nosjournaal"

var baseUrl = "http://query.yahooapis.com/v1/public/yql?q="

var queryString = encodeURI
                    ("SELECT * FROM feed WHERE url='" + nosUrl + "' LIMIT 5")

var format = "&format=json"
var rssFeedPath = baseUrl.concat(queryString, format)
```
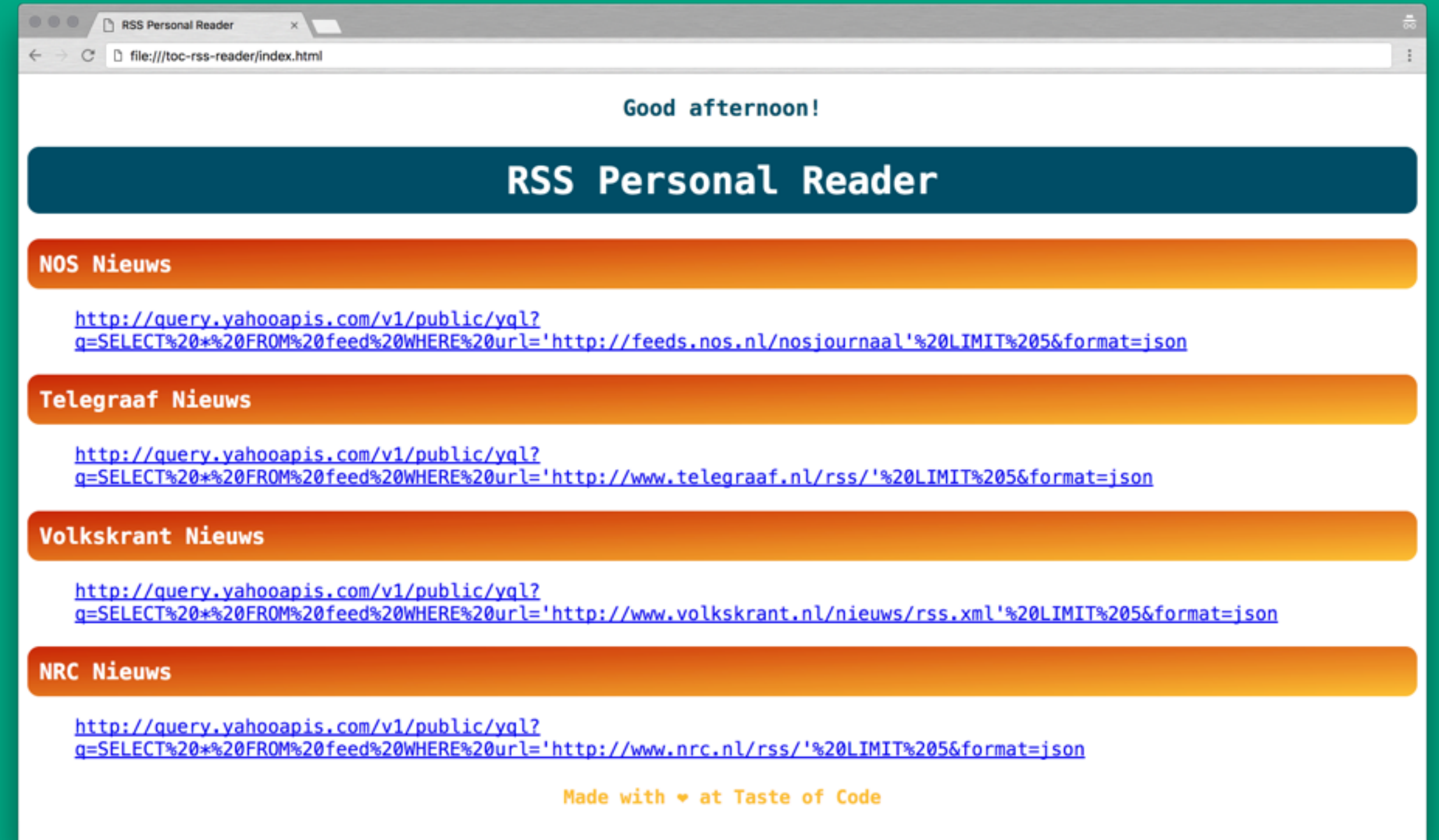
Intro to AJAX

Exercises

Good afternoon!

RSS Personal Reader

NOS Nieuws

http://query.yahooapis.com/v1/public/yql?
q=SELECT%20*%20FROM%20feed%20WHERE%20url='http://feeds.nos.nl/nosjournaal'%20LIMIT%205&format=json

Telegraaf Nieuws

http://query.yahooapis.com/v1/public/yql?
q=SELECT%20*%20FROM%20feed%20WHERE%20url='http://www.telegraaf.nl/rss/'%20LIMIT%205&format=json

Volkskrant Nieuws

http://query.yahooapis.com/v1/public/yql?
q=SELECT%20*%20FROM%20feed%20WHERE%20url='http://www.volkskrant.nl/nieuws/rss.xml'%20LIMIT%205&format=json

NRC Nieuws

http://query.yahooapis.com/v1/public/yql?
q=SELECT%20*%20FROM%20feed%20WHERE%20url='http://www.nrc.nl/rss/'%20LIMIT%205&format=json

Made with ♥ at Taste of Code

AJAX Requests

Asking for desired data

Making an AJAX request

jQuery provides several methods
to make AJAX requests and handle responses.

To get JSON data from an external web server,
you can use the **.getJSON()** method.

Making an AJAX request

🌟 **url** = where to make the request to get the data

🌟 **callback** = what needs to be done when data is returned

```javascript
$.getJSON(url, function(response) {
  // Do something with response and data returned
});
```
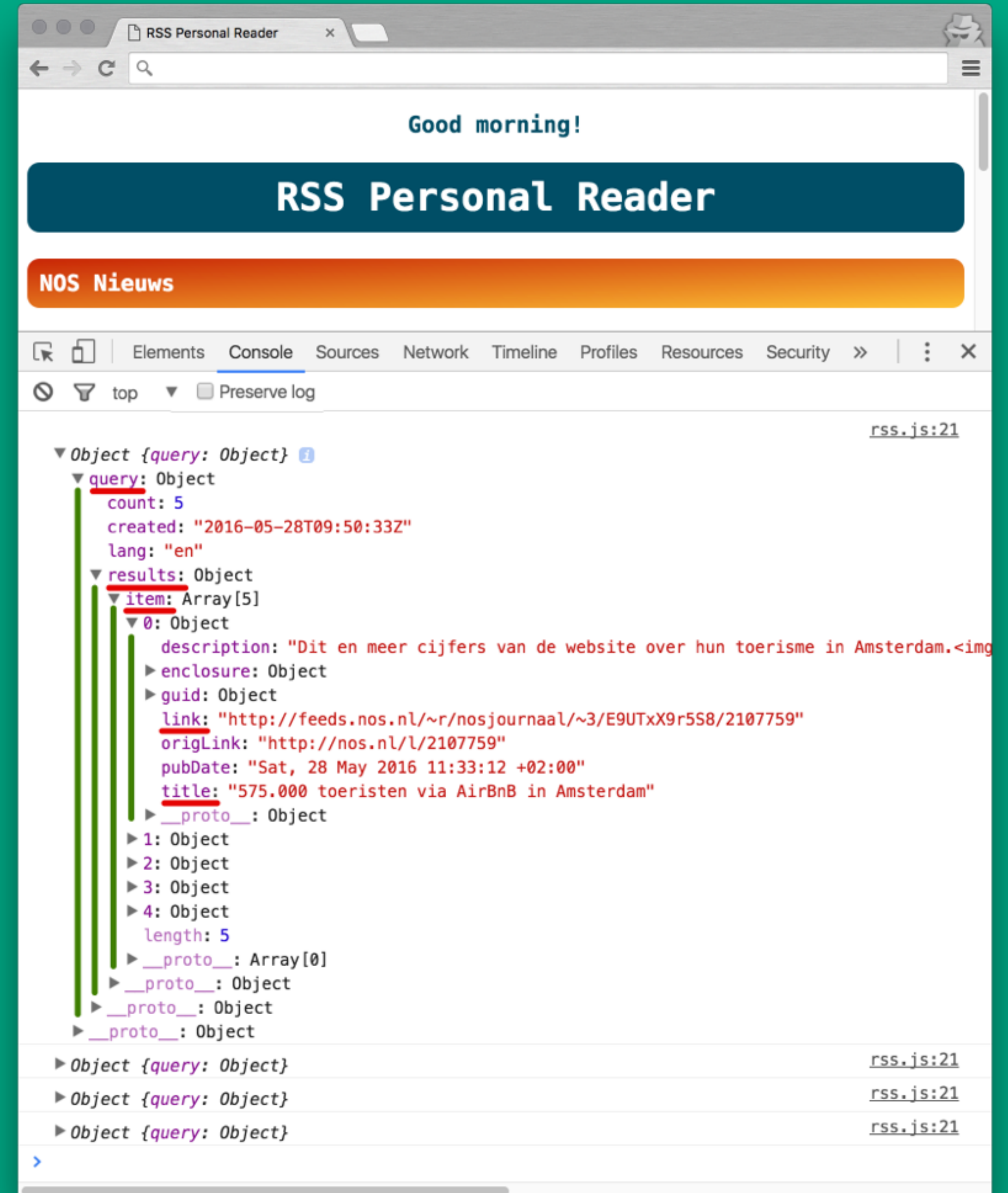
callback

AJAX Requests

Exercises
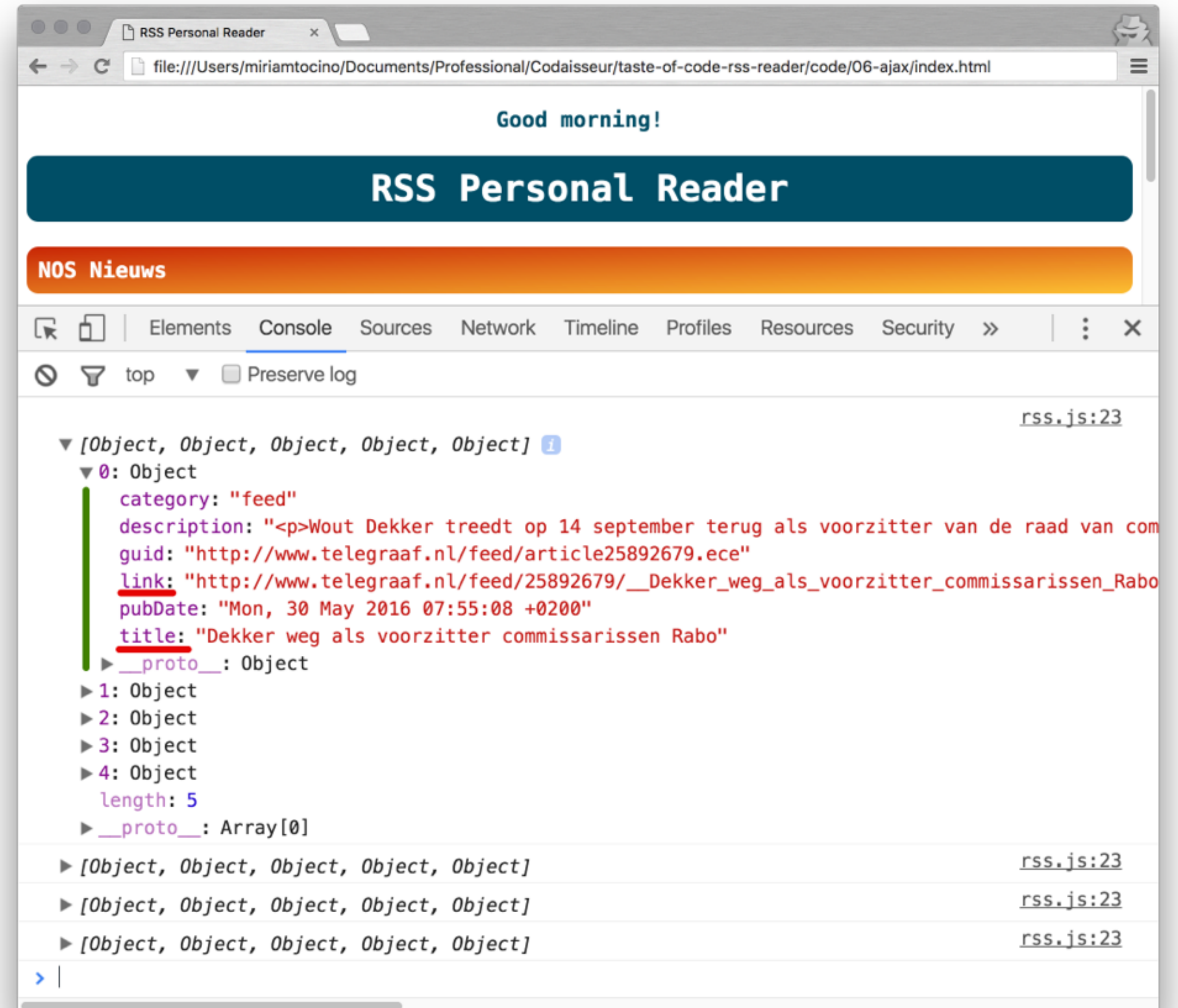
Link to Github

AJAX Responses

Using the returned data

Handling an AJAX response

response.**query**.**results**.**item**
is an array of objects

🌟 **Arrays** are another way of storing data as a collection

Handling an AJAX response

response.**query**.**results**.**item** stores a collection of articles

```
var feedItems = response.query.results.item

// First item data
link1 = feedItems[0].link
title1 = feedItems[0].title


// Second item data
link2 = feedItems[1].link
title2 = feedItems[1].title

// ...
```
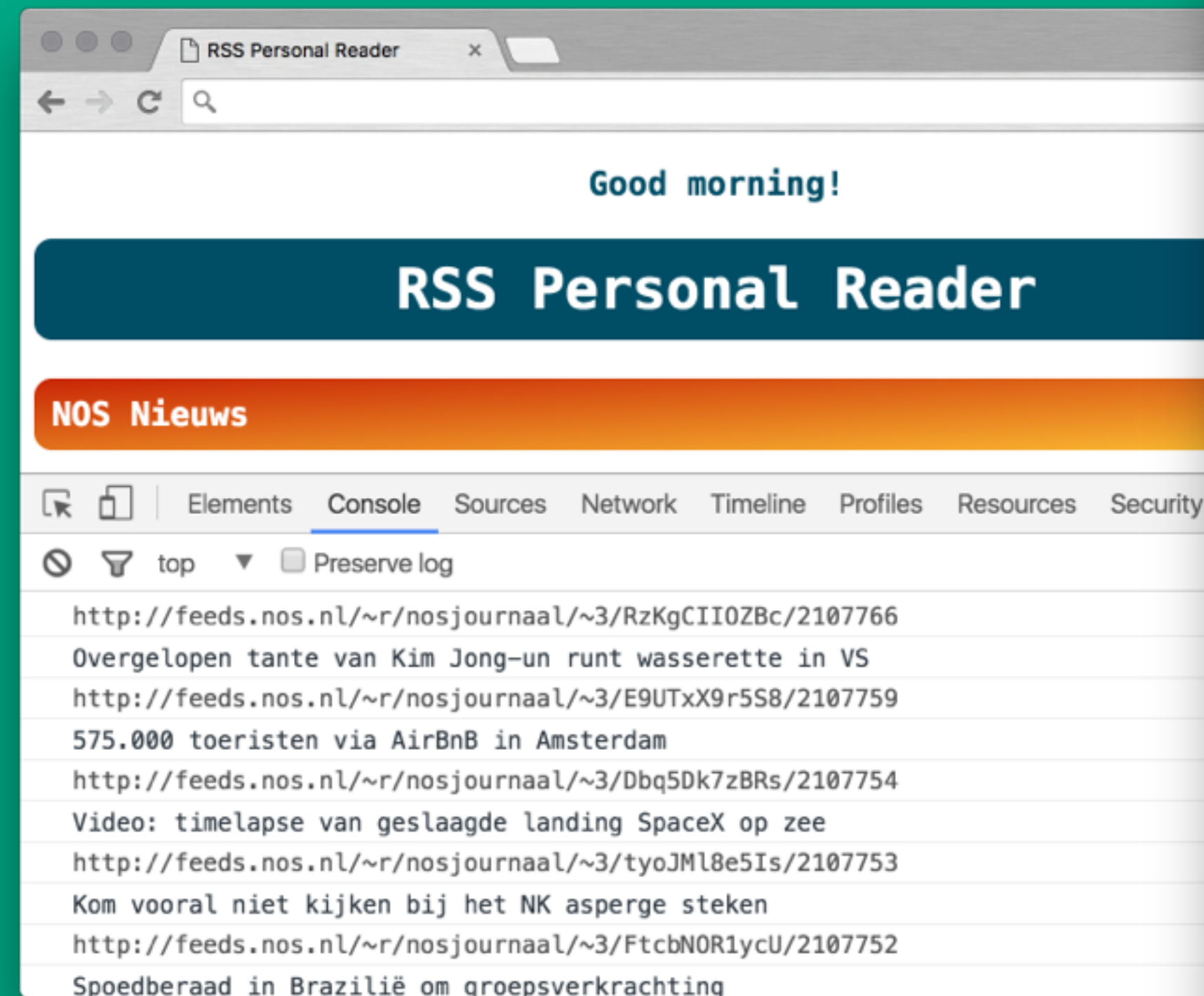
[0] [1] [2] …

🌟 The **index** represents the
   element position within the array

AJAX Responses

Exercises

Link to Github

Fine-tuning