

sboljs: SBOL on the Web

James Alastair McLaughlin

j.a.mclaughlin@ncl.ac.uk

I (C )₂ S



2001

```
<a href="#" onclick="javascript:alert('hello!')"></a>
```

2016

```
const Dialog = require('./Dialog')
const clickEvent = require('../..../event-handlers/click-handler')
class TabbedDialog extends Dialog {
  constructor(app, parent) {
    super(app, parent)
    if(new.target === TabbedDialog) {
      throw new TypeError('TabbedDialog base class is abstract; cannot be instantiated')
    }
    this.tabs = []
    this.currentTab = null
  }
  setTabs(tabs) {
    this.tabs = tabs
    if(this.currentTab)
      this.currentTab.deactivate()
    this.currentTab = this.tabs.filter((tab) => tab.defaultTab)[0]
    if(this.currentTab)
      this.currentTab.view.activate()
  }
}
```



Fork me on GitHub

e.g. proteins

162 components found

Component	Stars	Downloads	Modified	Demos
 escher-vis 1.5.0-beta.1 Zachary King Escher: A Web Application for Building, Sharing, and Embedding Data-Rich Visualizations of Biological Pathways... visualization pathway map metabolism genome-scale-model web application D3.js	42	1630	3 hours ago	# 1
 biojs-human-tissues 0.2.2 Benedikt Rauscher Visualisation of human tissues human tissue visualisation visualization	1	499	6 days ago	# 2
 hierarchic-heatmap-table-component 0.0.1 JinJin Lin A visualisation tool for displaying rows in a hierarchic manner with heatmap capabilities ... nextprot sib	0	26	6 days ago	
 phylocanvas-plugin-metadata 2.0.1 Display binary data adjacent to tree leaves.	0	146	6 days ago	

Prerequisites: node.js and npm

Windows: binaries from <http://nodejs.org>

Debian/Ubuntu: `apt-get install nodejs`

OS X: `brew install node`

```
mkdir sbol_test && cd sbol_test
```

```
npm install sboljs
```

“Hello World”

```
// test.js
//

const SBOLDocument = require('sboljs')

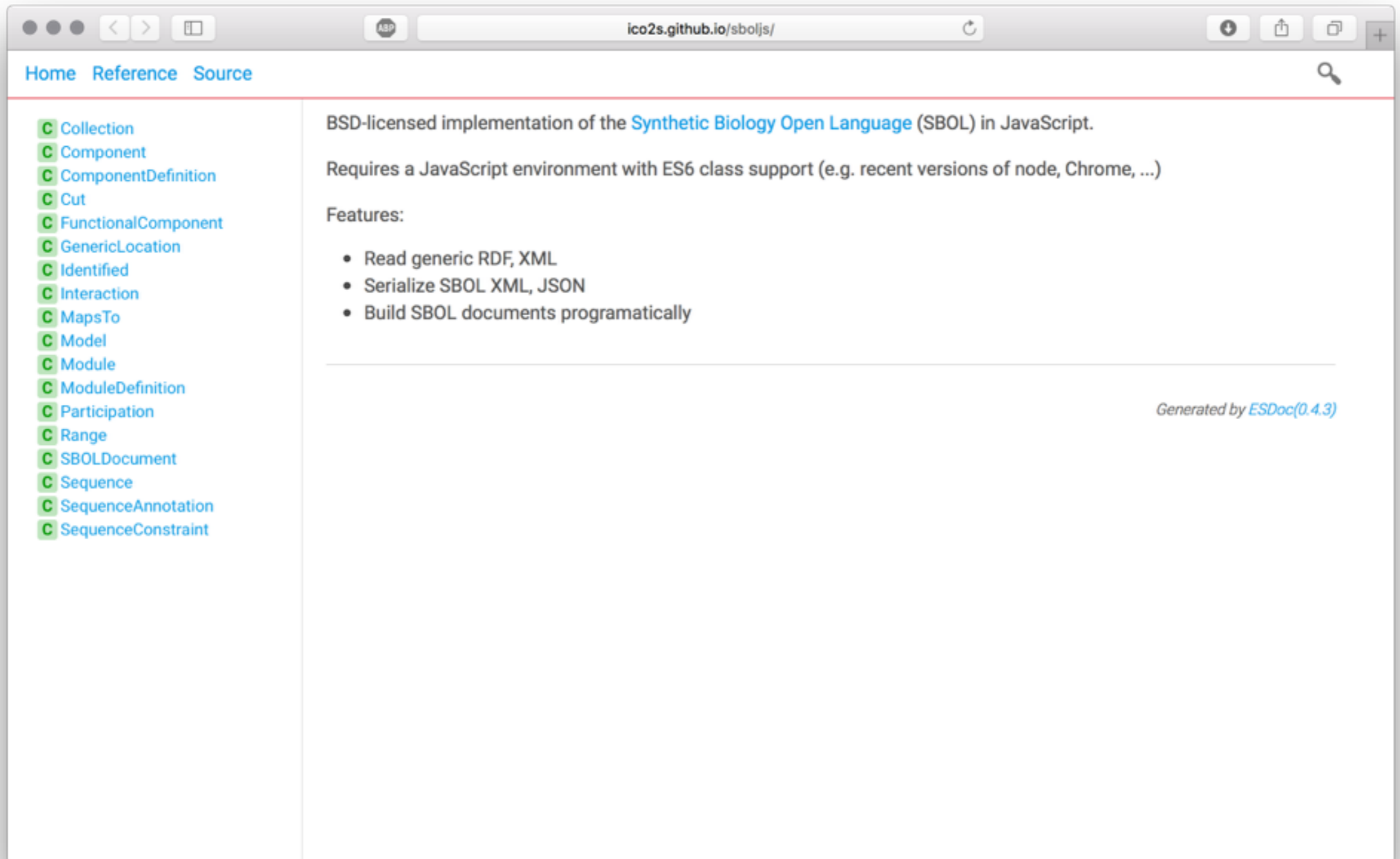
const doc = new SBOLDocument()

const TetR = doc.componentDefinition('http://example.com/TetR')

TetR.name = 'TetR'
TetR.addRole(SBOLDocument.terms.cds)

console.log(doc.serializeXML())
```

<http://ico2s.github.io/sboljs>



ico2s.github.io/sboljs/

Home Reference Source

- C Collection
- C Component
- C ComponentDefinition
- C Cut
- C FunctionalComponent
- C GenericLocation
- C Identified
- C Interaction
- C MapsTo
- C Model
- C Module
- C ModuleDefinition
- C Participation
- C Range
- C SBOLDocument
- C Sequence
- C SequenceAnnotation
- C SequenceConstraint

BSD-licensed implementation of the [Synthetic Biology Open Language \(SBOL\)](#) in JavaScript.

Requires a JavaScript environment with ES6 class support (e.g. recent versions of node, Chrome, ...)

Features:

- Read generic RDF, XML
- Serialize SBOL XML, JSON
- Build SBOL documents programmatically

Generated by [ESDoc\(0.4.3\)](#)

```
<!-- test_browser.html -->

<html>
  <body>
    <pre id="sbol"></pre>
  </body>
  <script src="bundle.js" type="text/javascript"></script>
</html>
```

```
// test_browser.js
//

const SBOLDocument = require('sboljs')

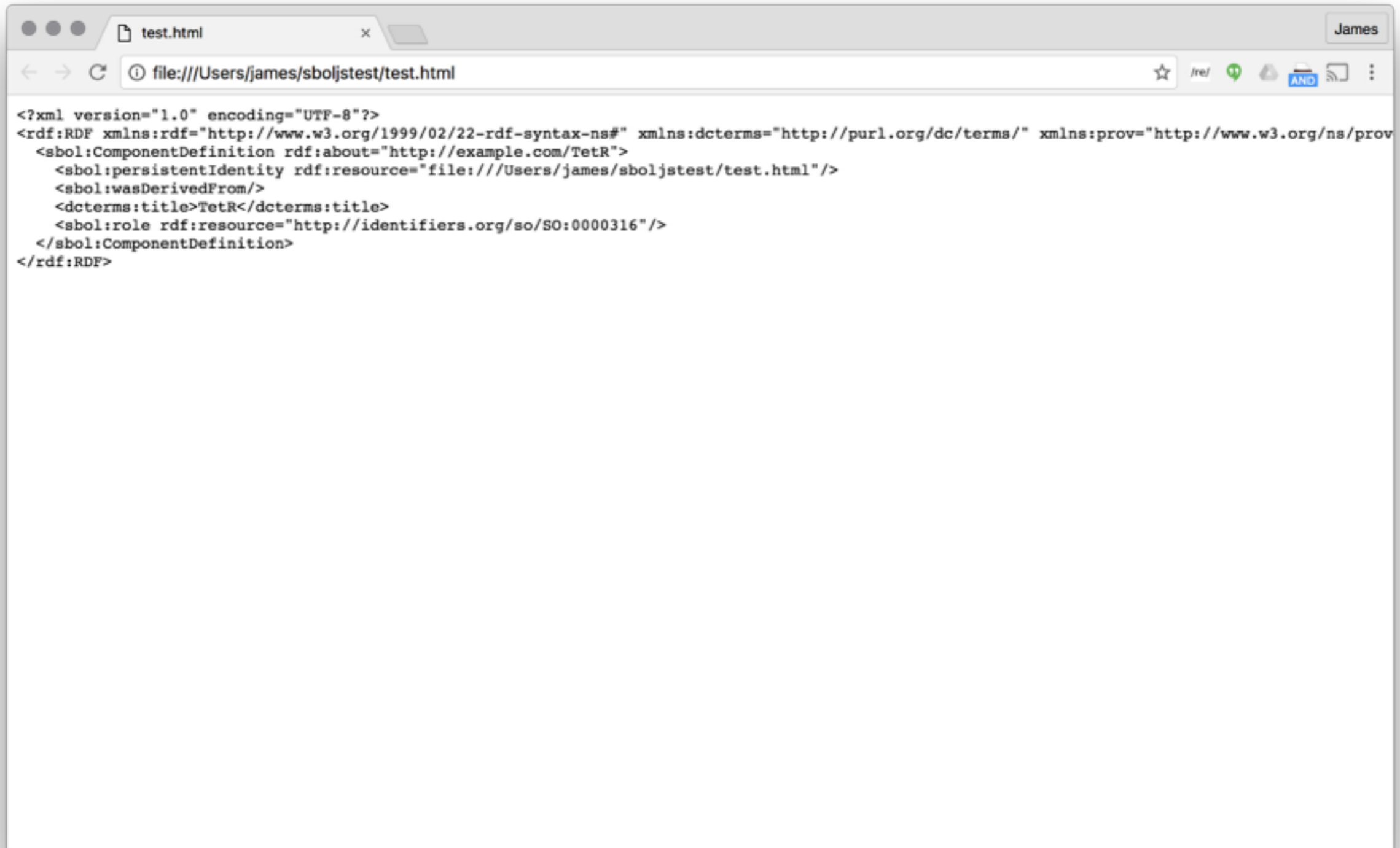
const doc = new SBOLDocument()

const TetR = doc.componentDefinition('http://example.com/TetR')

TetR.name = 'TetR'
TetR.addRole(SBOLDocument.terms.cds)

document.getElementById('sbol').textContent = doc.serializeXML()
```

```
npm install -g browserify
browserify test_browser.js -o bundle.js
```



The screenshot shows a web browser window with a single tab titled "test.html". The address bar displays the file path: "file:///Users/james/sboljstest/test.html". The browser's user interface includes navigation buttons (back, forward, refresh), a star icon for bookmarks, and a user profile icon labeled "James". The main content area of the browser displays the following XML code:

```
<?xml version="1.0" encoding="UTF-8"?>
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#" xmlns:dcterms="http://purl.org/dc/terms/" xmlns:prov="http://www.w3.org/ns/prov"
  <sbol:ComponentDefinition rdf:about="http://example.com/TetR">
    <sbol:persistentIdentity rdf:resource="file:///Users/james/sboljstest/test.html"/>
    <sbol:wasDerivedFrom/>
    <dcterms:title>TetR</dcterms:title>
    <sbol:role rdf:resource="http://identifiers.org/so/SO:0000316"/>
  </sbol:ComponentDefinition>
</rdf:RDF>
```



```
npm install sbolstack-frontend
```

```
// test_stack.js
//

const SBOLDocument = require('sboljs')
const StackFrontend = require('sbolstack-frontend')

const stack = new StackFrontend('http://synbiohub.org:9090')

stack.getDefaultStore().getComponentSBOL(
  'http://www.bacillondex.org/B0_10000'
, (err, doc, componentDefinition) => {
  console.log(componentDefinition.name)
})
```

npm install jquery

```
// test_stack_browser.js
//

const $ = require('jquery')

const SBOLDocument = require('sboljs')
const StackFrontend = require('sbolstack-frontend')

const stack = new StackFrontend('http://synbiohub.org:9090')

stack.getDefaultStore().getComponentSBOL(
  'http://www.bacillondex.org/BO_10000'
, (err, doc, componentDefinition) => {

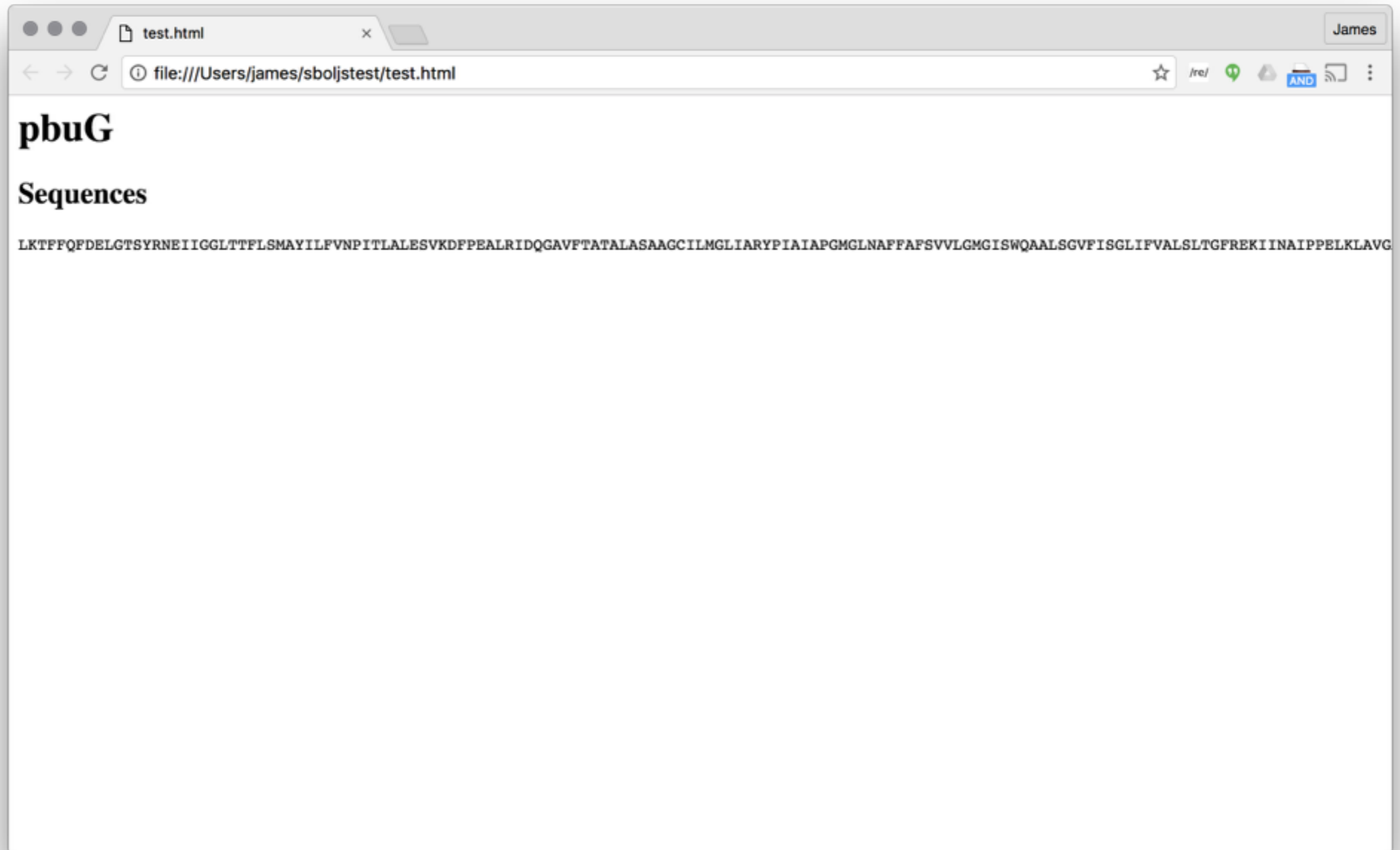
  const body = $(document.body)

  body.append($('

# ').text(componentDefinition.name)) body.append($('').text('Sequences')) componentDefinition.sequences.forEach((sequence) => { body.append($(' ``` ').text(sequence.elements)) }) }) ```


```

```
browserify test_stack_browser.js -o bundle.js
```



npm install sequence-formatter

```
// test_stack_browser.js
//

const $ = require('jquery')

const SBOLDocument = require('sboljs')
const StackFrontend = require('sbolstack-frontend')

const stack = new StackFrontend('http://synbiohub.org:9090')

const formatSequence = require('sequence-formatter')

stack.getDefaultStore().getComponentSBOL(
  'http://www.bacillondex.org/BO_10000'
, (err, doc, componentDefinition) => {

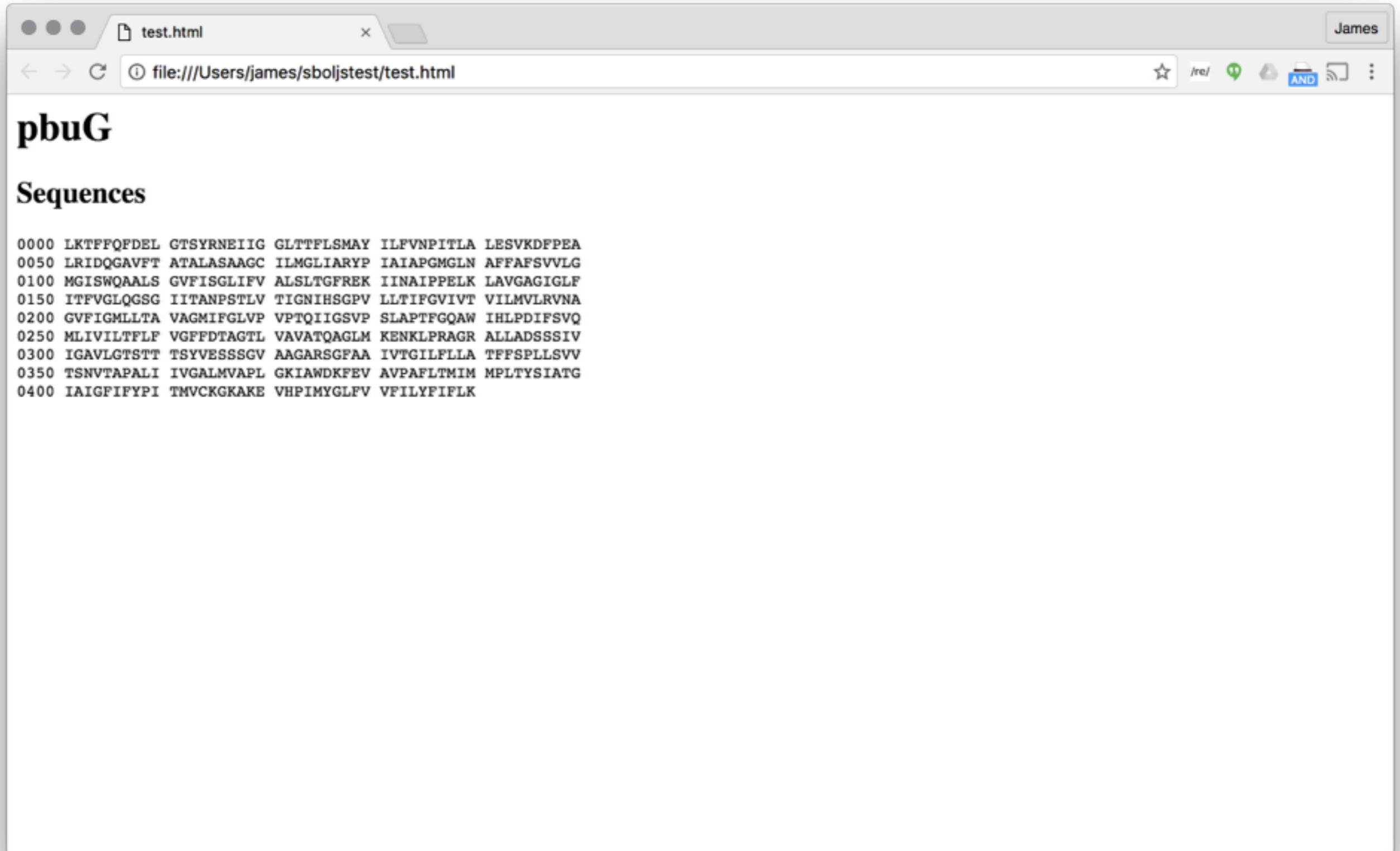
  const body = $(document.body)

  body.append($('

# ').text(componentDefinition.name)) body.append($('').text('Sequences')) componentDefinition.sequences.forEach((sequence) => { body.append($(' ``` ').text(formatSequence(sequence.elements))) }) }) ```


```

```
browserify test_stack_browser.js -o bundle.js
```



Source: <http://github.com/ICO2S/sboljs>

Docs: <http://ico2s.github.io/sboljs>

npm packages: **sboljs** and **sbolstack-frontend-js**

Questions and comments: j.a.mclaughlin@ncl.ac.uk