



MGMWERX's WERX Wednesday: Elements of Modern Web Development

Yes it is that simple.
Fast, Flexible and Free
Development

Agenda

- Introductions
- Demo - Creating/Deploying a Web App in 15 Minutes.
- Web and App Development What Has Changed ?
- Hands on Demo with Tools for Fast, Flexible and Free App Development
- Q/A

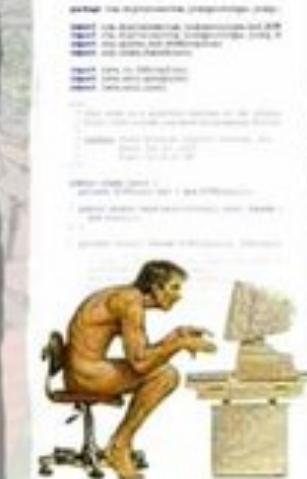
The Evolution Of Computer Programming Languages



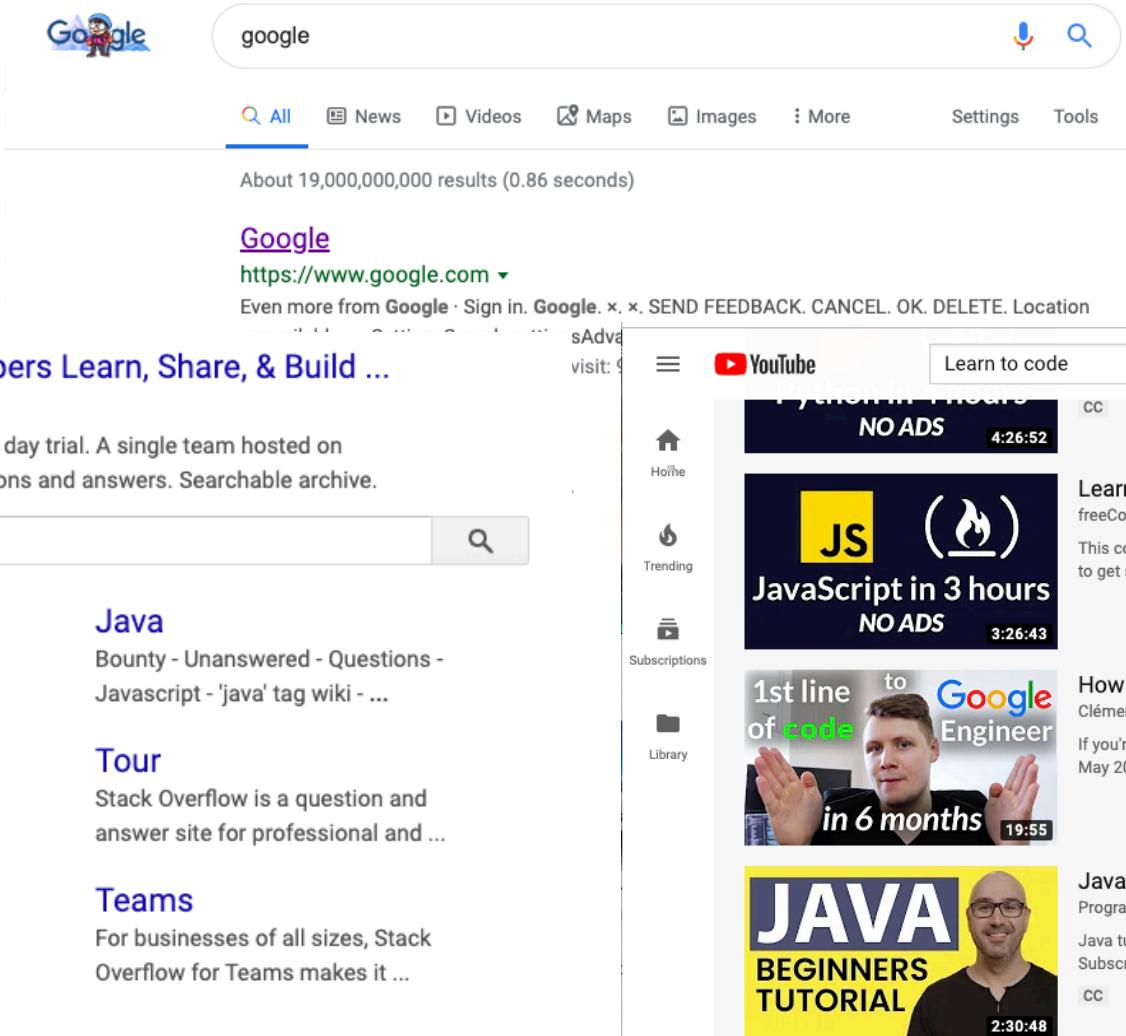
Basic
Fortran
Pascal



ProLog
4GL



What's Changed and Changing



Google search results for "google". The search bar shows "google". Below it, the navigation bar includes "All", "News", "Videos", "Maps", "Images", "More", "Settings", and "Tools". The search results page displays the Google homepage at <https://www.google.com>. The results indicate about 19,000,000,000 results found in 0.86 seconds.

Stack Overflow - Where Developers Learn, Share, & Build ...
<https://stackoverflow.com> ▾
\$5. Per user / month. billed annually. Free 14 day trial. A single team hosted on stackoverflow.com. Unlimited private questions and answers. Searchable archive.

Results from stackoverflow.com

Jobs
Browse thousands of jobs by salary & tech stack ...

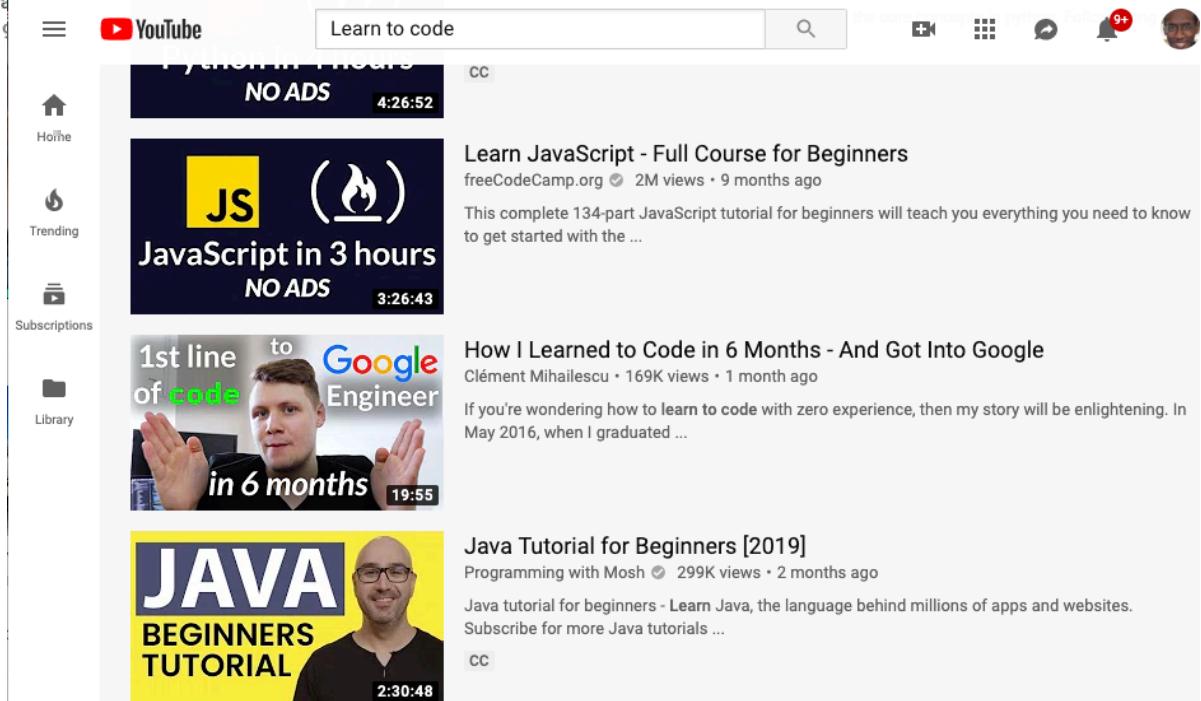
Questions
Bountied 373 - Active - Newest - Python - Javascript - Android

Python
Newest - Bountied 29 - Unanswered - Active - ...

Java
Bounty - Unanswered - Questions - Javascript - 'java' tag wiki - ...

Tour
Stack Overflow is a question and answer site for professional and ...

Teams
For businesses of all sizes, Stack Overflow for Teams makes it ...



YouTube search results for "Learn to code". The search bar shows "Learn to code". The results include:

- Python for beginners** NO ADS 4:26:52
- JavaScript in 3 hours** NO ADS 3:26:43
- 1st line to Google Engineer in 6 months** 19:55
- Java Tutorial for Beginners [2019]** Programming with Mosh 299K views • 2 months ago

Development - What's Changed and Changing

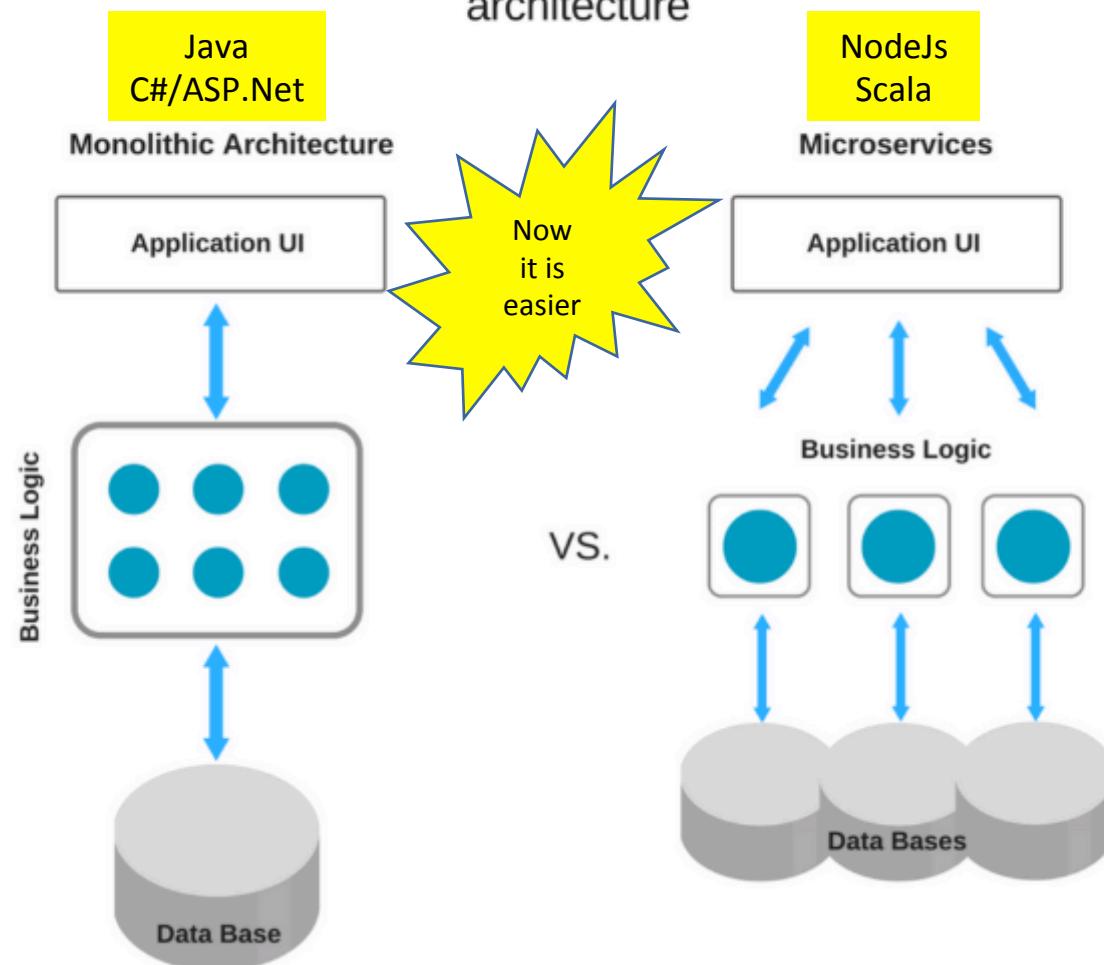
- 1. Now anyone who has basic computer skills and the internet can learn how to build complex apps for FREE. Yes FREE**
2. Complexity of development is reduced by prebuilt frameworks
3. Development Tools free. VS Code, Node, Atom, CodeSandbox and ...
4. Development Cloud Servers available for free. Heroku, Zeit,, Etc ...
5. Programming App Containers, NodeJs and JavaScript Cloud Platforms. From standard Programing Languages to Javascript and Derivatives like Blockchain's Solidity

Hiring What's Changed and Changing

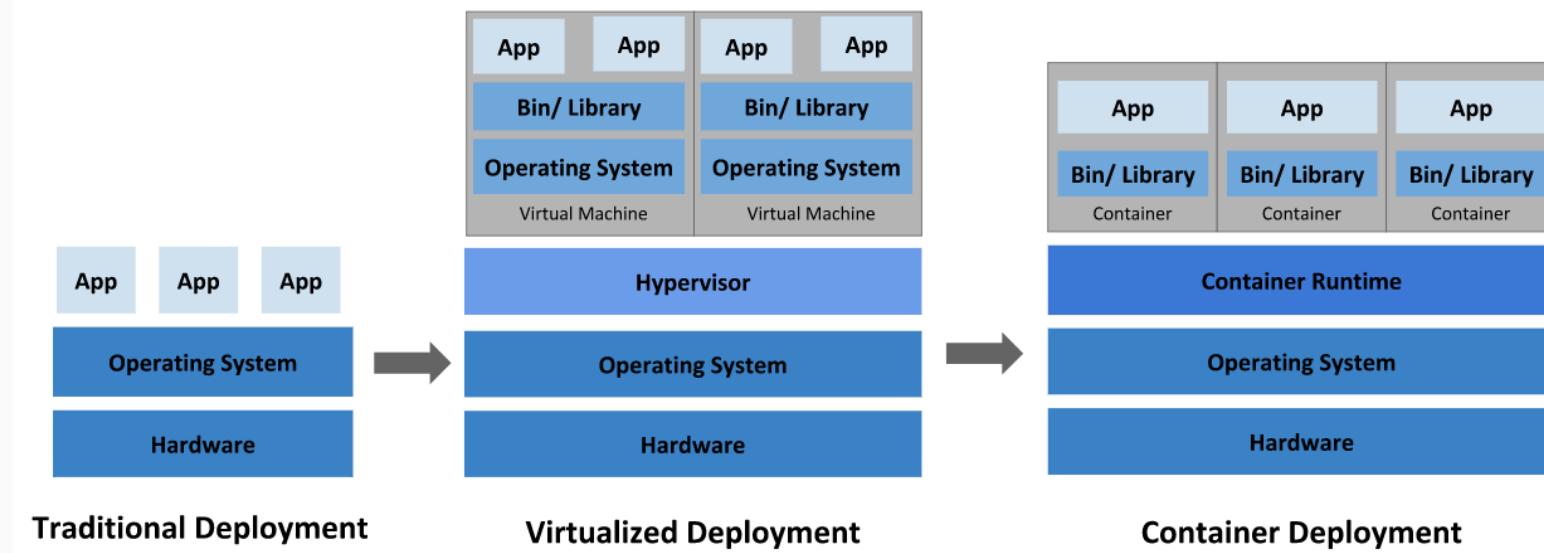
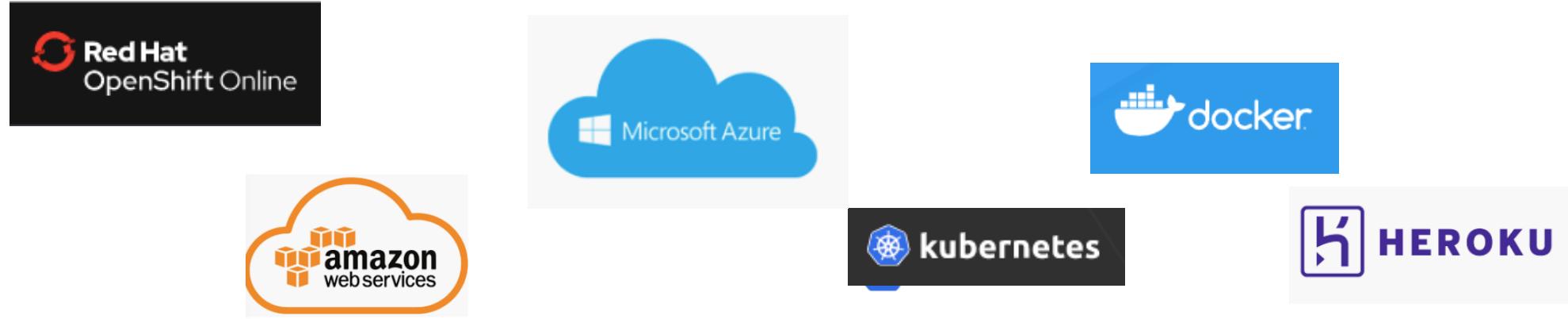
1. Does the person have people/teamwork skills ?
2. Can the person handle rapid change ?
3. Can the person learn fast ?
4. Does the person understand key concepts ?
5. Does the person have experience with Open Source tools ? Github, NodeJs, Python, Docker, Kubernetes, Linux, etc...
6. Do they want to work for us and have a passion for our mission ?

NOTE: Memorizing things that you can find on google in one minute is NOT as important.

The difference between the monolithic and microservices architecture



From Servers to Containers



Red Hat Open Shift

The screenshot shows the Red Hat OpenShift Online web interface. The left sidebar has sections for Home, Projects, Status (which is selected), Search, Events, Catalog, Developer Catalog, and Installed Operators. The main area shows a project named "mgmwerxdemo". Under "Project Status", there are tabs for Resources (selected) and Dashboard. It shows a group by application dropdown and a filter by name input field. A deployment config named "mgmwerxdemo1" is listed, showing 1 of 1 pods. The detailed view for "mgmwerxdemo1" shows an Overview tab (selected) and a Resources tab. In the Overview section, it lists the desired count as 1 pod, up-to-date count as 1 pod, and matching pods as 1 pod. The Resources section shows a table with columns for Name, Latest Version, and Reason. One row is present: mgmwerxdemo1, version 5, with a reason of "image change".

Name	Latest Version	Reason
mgmwerxdemo1	5	image change



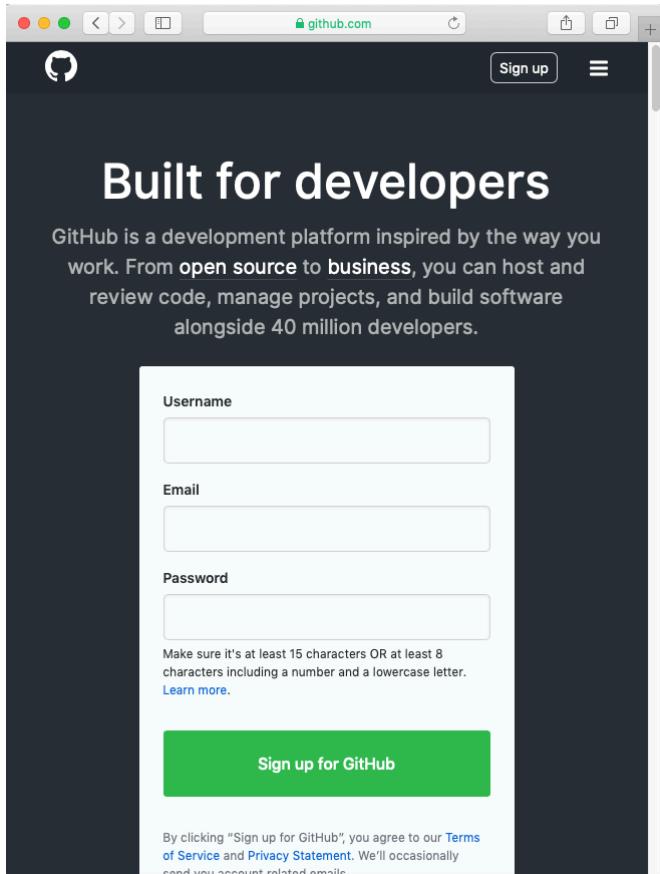
Key Features

- Management Automation
- Self-healing (Resiliency)
- Secret and configuration management
- Automated rollouts and rollbacks

First Things First: --- GitHub.com

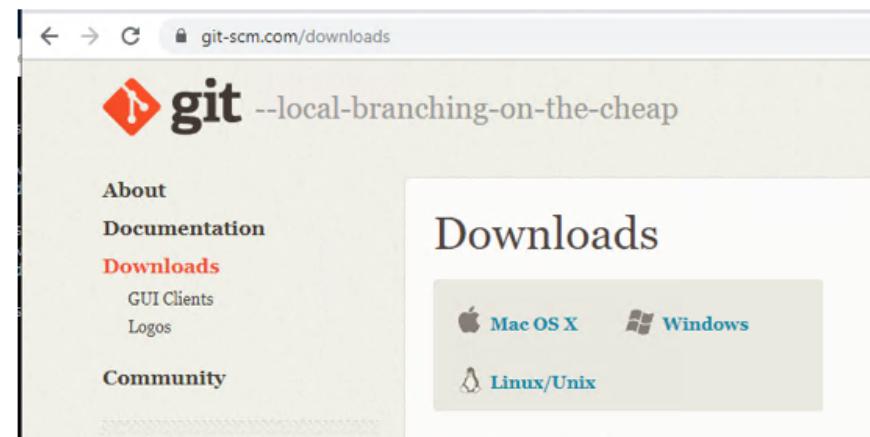
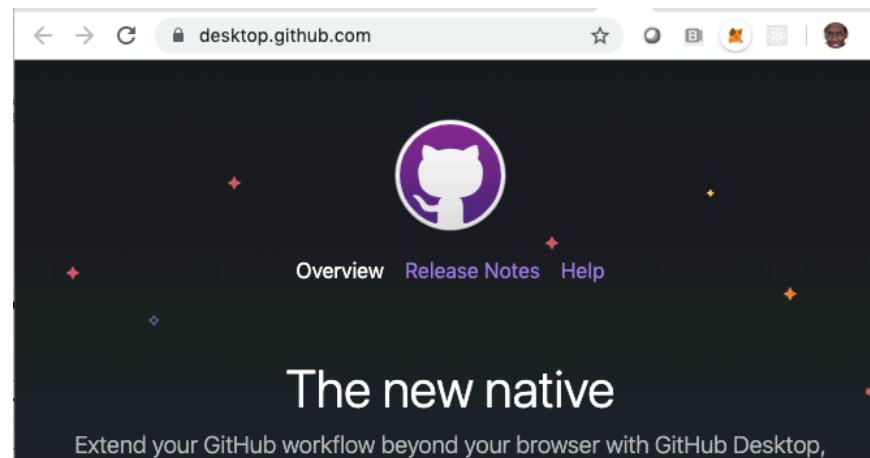
NOTE: GitHub provides an account for single sign-on to other service and as a source code repository.

Create a Github Account at
<https://github.com>



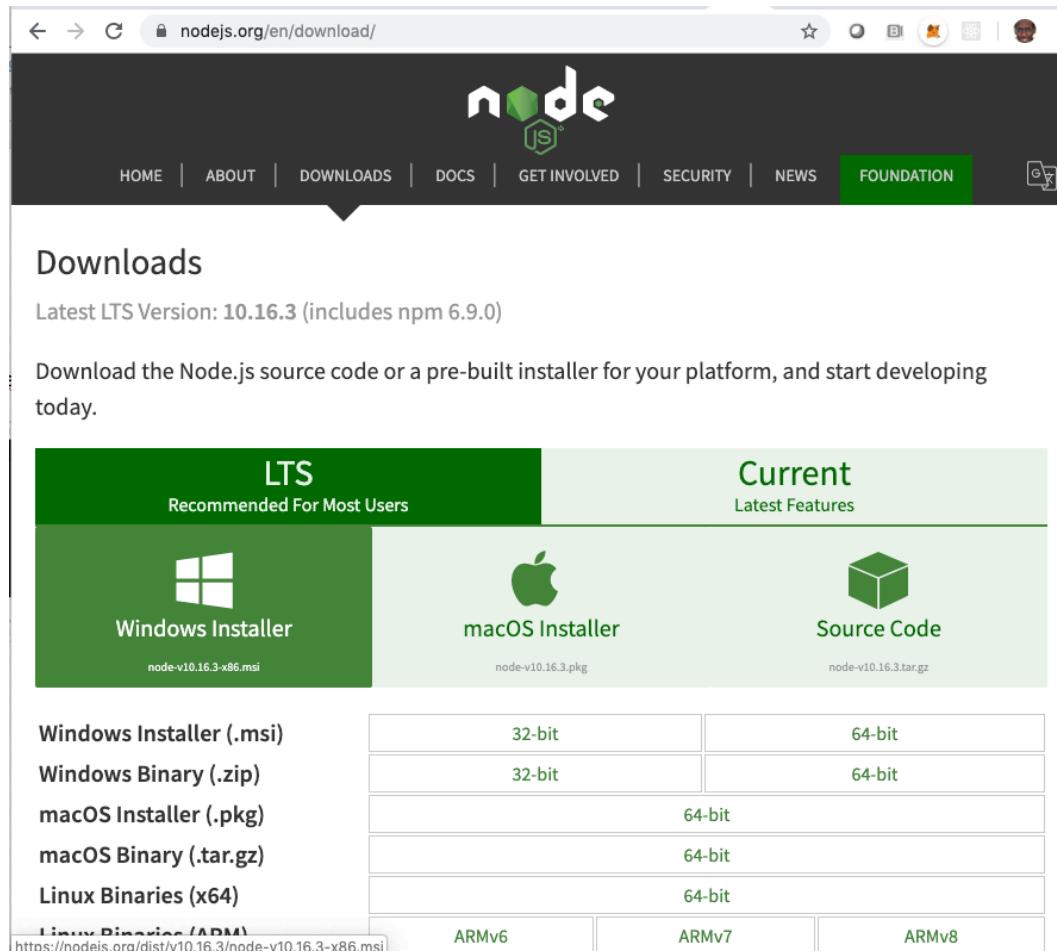
Download Github client or GUI Desktop Tool at:

<https://desktop.github.com> Or <https://git-scm.com/downloads>



NodeJs

NODEJs is the foundation for Javascript based application development.
<https://nodejs.org/en/download>



The screenshot shows the Node.js download page at <https://nodejs.org/en/download/>. The page has a dark header with the Node.js logo and navigation links for HOME, ABOUT, DOWNLOADS, DOCS, GET INVOLVED, SECURITY, NEWS, FOUNDATION, and a search icon. A green button labeled 'FOUNDATION' is highlighted.

The main content area is titled 'Downloads' and features a message about the latest LTS version (10.16.3) including npm 6.9.0. It encourages users to download source code or pre-built installers for their platform.

Two tabs are visible: 'LTS' (Recommended For Most Users) and 'Current' (Latest Features). Under 'LTS', there are links for 'Windows Installer' (node-v10.16.3-x86.msi), 'macOS Installer' (node-v10.16.3.pkg), and 'Source Code' (node-v10.16.3.tar.gz). Under 'Current', there are links for 'Windows Binary (.zip)', 'macOS Binary (.tar.gz)', and 'Linux Binaries (x64)'.

A large table below lists binary distributions for various platforms and architectures:

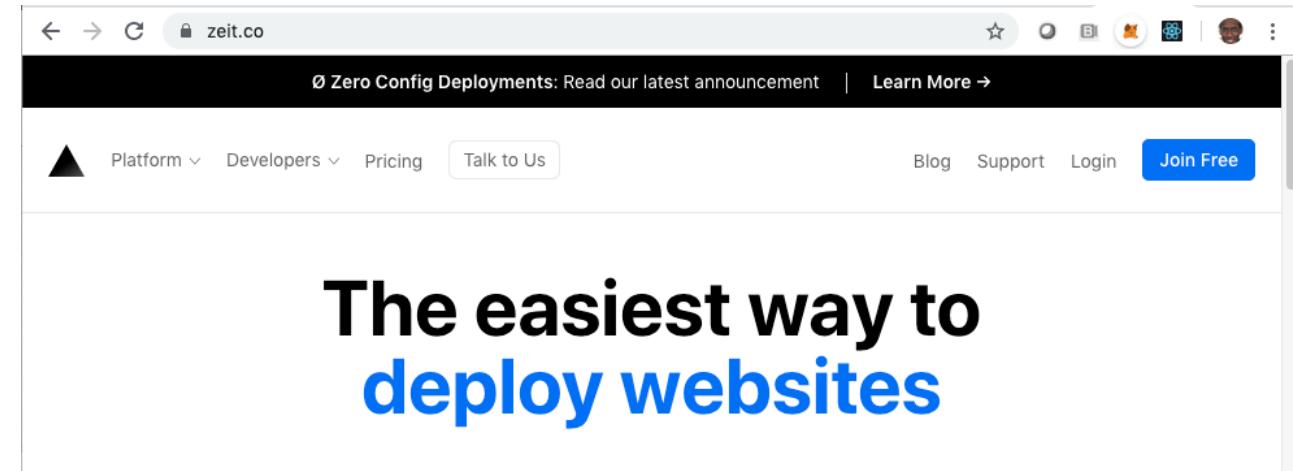
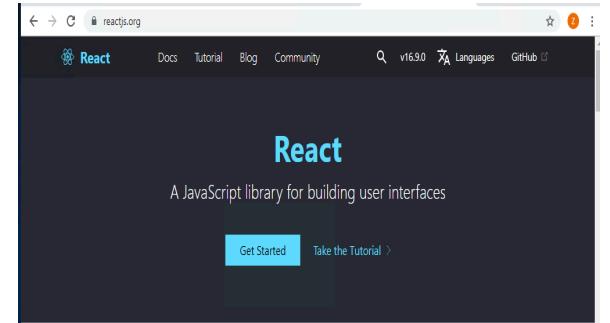
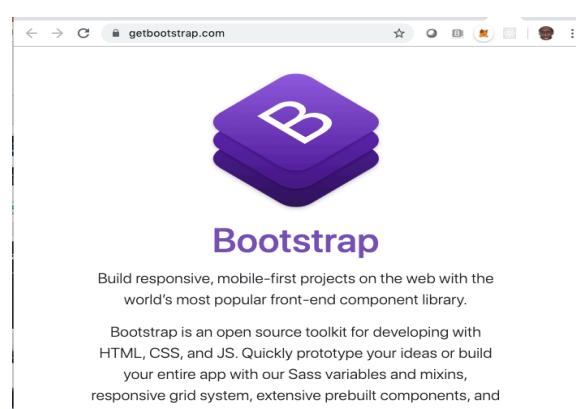
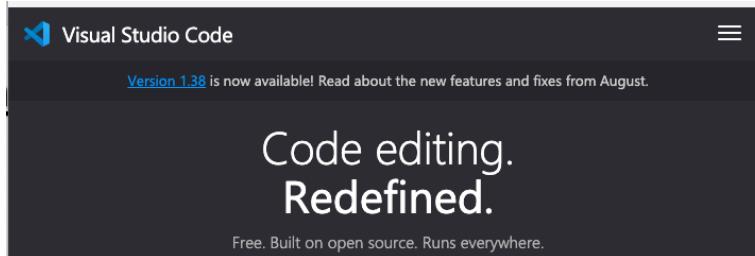
	32-bit	64-bit
Windows Binary (.zip)	32-bit	64-bit
macOS Binary (.tar.gz)	64-bit	
Linux Binaries (x64)	64-bit	
Linux Binaries (ARM)		

At the bottom, a note indicates the URL: <https://nodejs.org/dist/v10.16.3/node-v10.16.3-x86.msi>.

Key Tools used in Development.

Development Tools

- <https://code.visualstudio.com>
- <https://codesandbox.io>



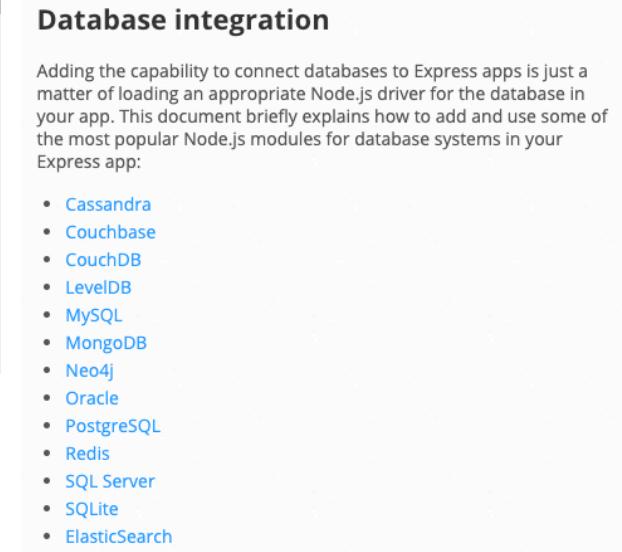
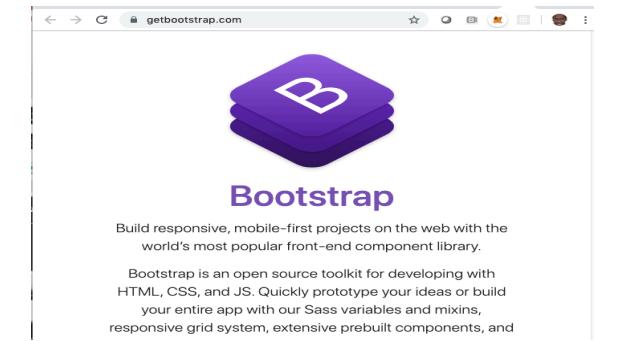
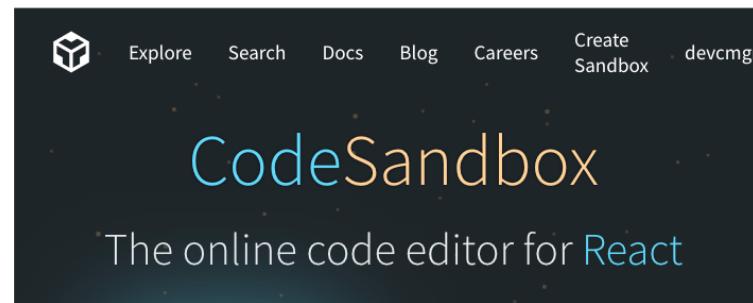
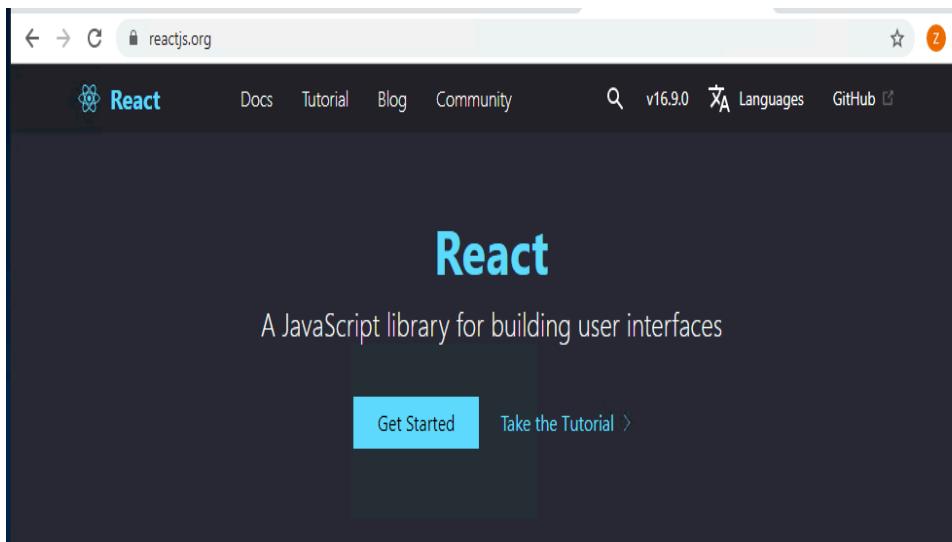
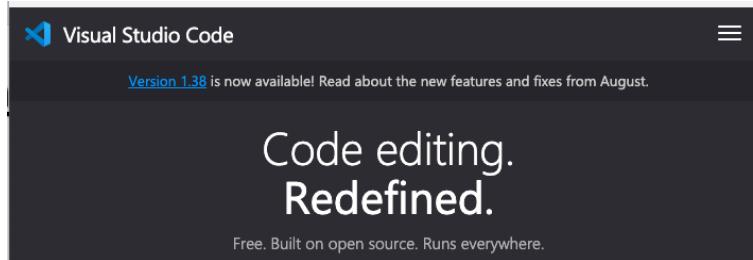
Key Tools used in Development.

Development Tools

- <https://code.visualstudio.com>
- <https://codesandbox.io>

JavaScript Libraries:

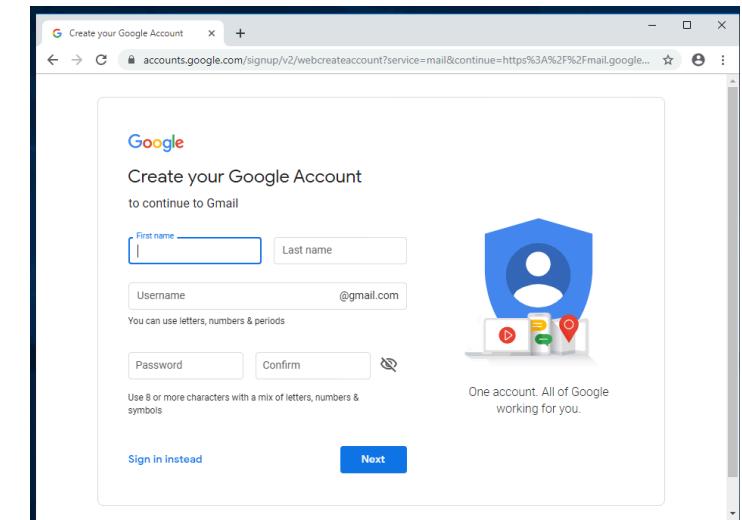
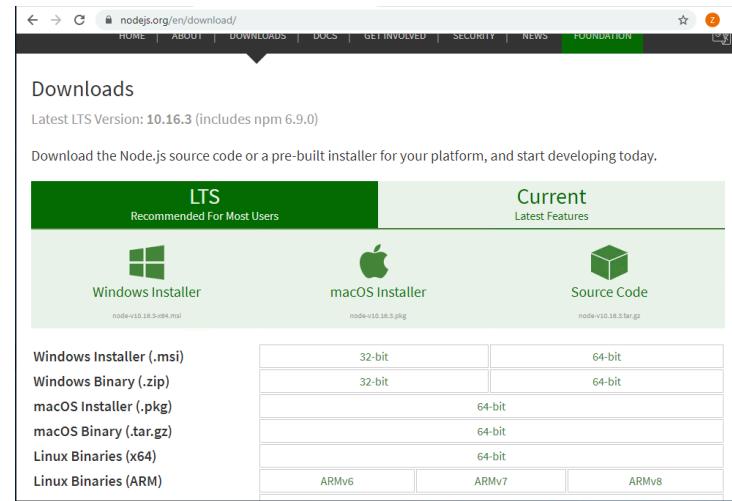
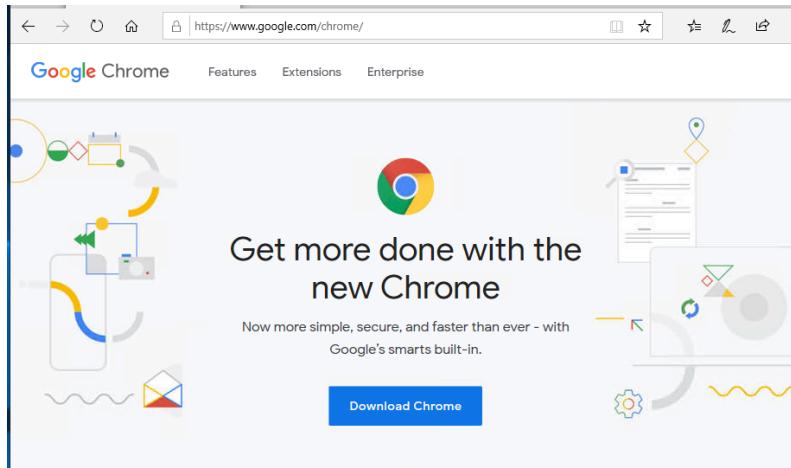
- <https://reactjs.org>
- <https://getbootstrap.com/>
- <https://expressjs.com>



Local Development Tools Basics

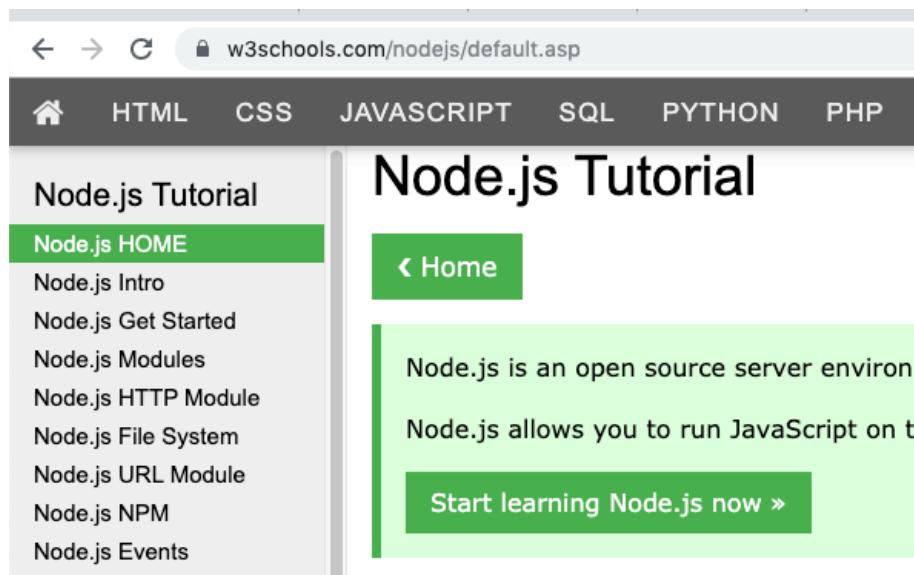
Download Chrome, NodeJs, Get Chrome Email

recommended base tools for local development

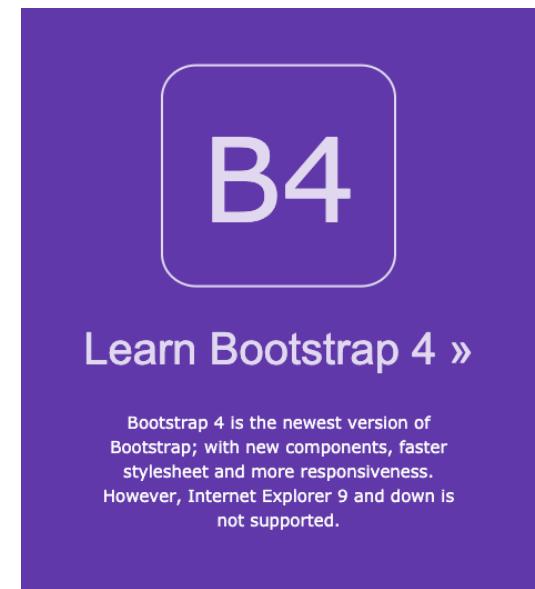


W3Schools is a great place to learn.

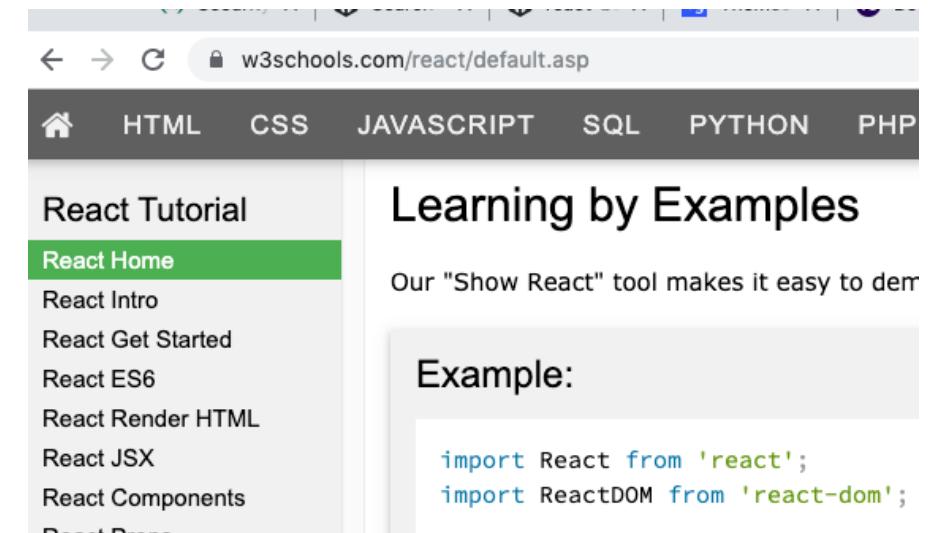
- Bootstrap -- <https://www.w3schools.com/bootstrap>
 - React -- <https://www.w3schools.com/react>\
 - NodeJS -- <https://www.w3schools.com/nodejs>



The screenshot shows the W3Schools Node.js Tutorial page. The URL in the address bar is [w3schools.com/nodejs/default.asp](https://www.w3schools.com/nodejs/default.asp). The top navigation bar includes links for HTML, CSS, JAVASCRIPT, SQL, PYTHON, and PHP. A sidebar on the left lists various Node.js modules: Node.js Intro, Node.js Get Started, Node.js Modules, Node.js HTTP Module, Node.js File System, Node.js URL Module, Node.js NPM, and Node.js Events. The main content area features a large title "Node.js Tutorial" and a "B4" button. Below it is a green box containing text about Node.js being an open-source server environment and allowing JavaScript execution. A green button at the bottom right of the box says "Start learning Node.js now »".



The screenshot shows the W3Schools Bootstrap 4 tutorial page. The URL in the address bar is [w3schools.com/react/default.asp](https://www.w3schools.com/react/default.asp). The main title is "B4" with a subtitle "Learn Bootstrap 4 ». Below this is a paragraph explaining that Bootstrap 4 is the newest version, featuring new components, faster stylesheet, and improved responsiveness, though Internet Explorer 9 and below are not supported.



The screenshot shows the W3Schools React tutorial page. The URL in the address bar is [w3schools.com/react/default.asp](https://www.w3schools.com/react/default.asp). The top navigation bar includes links for HTML, CSS, JAVASCRIPT, SQL, PYTHON, and PHP. A sidebar on the left lists various React topics: React Home, React Intro, React Get Started, React ES6, React Render HTML, React JSX, React Components, and React Prop. The main content area features a title "Learning by Examples" and a section titled "Example:" containing code snippets for importing React and ReactDOM.

Convert my JSON Messages to SQL

<https://sqlify.io/>

Example
Data
Transformation

SQLIFY

BLOG

CONVERT

PRICING

SIGN IN

**Convert and transform any data
into queryable data**

Upload CSV and JSON. Use our website,
or automate the process through our API

Convert a file now

Convert my JSON Messages to SQL

<https://sqlify.io/>

The screenshot shows the SQLIFY website's user interface for converting JSON data to SQL. At the top, there is a purple navigation bar with the SQLIFY logo, BLOG, CONVERT, PRICING, and SIGN IN links. Below the navigation bar, the main content area has a heading "1. Add the CSV or JSON data that you want to convert". It features three input options: "Upload a file" (selected), "Input a URL", and "Paste raw data". A dashed box placeholder contains the text "messages.json". Below this, a message states "We will automatically detect the format of your file". The next section, "2. Select the result format", includes three buttons: "SQL" (selected), "JSON", and "CSV". At the bottom, a large green button labeled "Convert to SQL" is visible.

Convert my JSON Messages to SQL

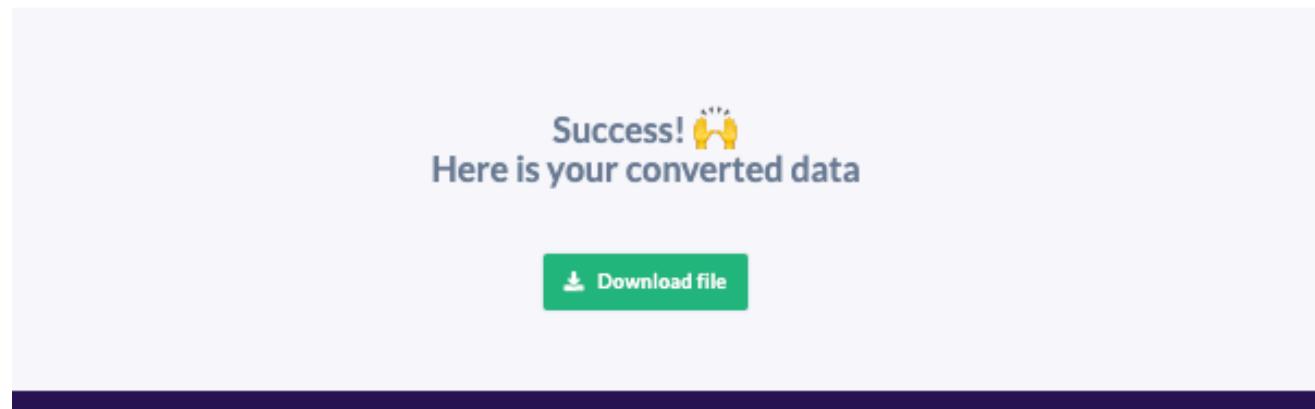
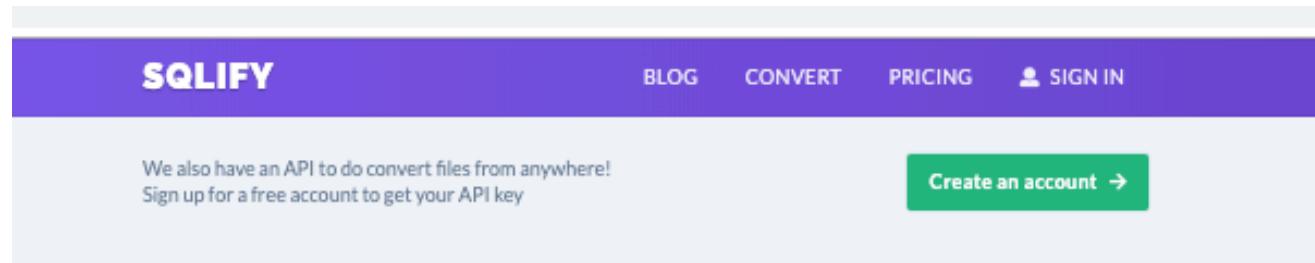
<https://sqlify.io/>

The screenshot shows the SQLIFY web application interface. At the top, there is a purple header bar with the SQLIFY logo on the left and navigation links for BLOG, CONVERT, PRICING, and SIGN IN on the right. Below the header, a progress bar indicates the status of the conversion process: "Uploaded" (Completed), "Schema" (in progress), "Convert" (in progress), and "Download" (not yet started). The main workspace is divided into sections: "Add new field" (purple button), "Autodetect fields" (green button), and "Save schema and continue" (green button). A message box states, "How do you want to map your data? The autodetected schema is good enough for most use cases." Below this, a table lists the mapping between source fields and result field names, including types and lengths. The table has columns: Source field, Result field name, Type, and Length. Each row includes a trash icon for deletion.

Source field	Result field name	Type	Length
\$[*].id	id	Integer	
\$[*].from	from	String	15
\$[*].fromAddress	from_address	String	19
\$[*].subject	subject	String	31
\$[*].dtSent	dt_sent	String	17

Convert my JSON Messages to SQL

<https://sqlify.io/>



Convert my JSON Messages to SQL

<https://sqlify.io/>

Example Data Output

```
CREATE TABLE IF NOT EXISTS data (
    id INT NULL,
    from VARCHAR(15) NULL,
    from_address VARCHAR(19) NULL,
    subject VARCHAR(31) NULL,
    dt_sent VARCHAR(17) NULL,
    body VARCHAR(180) NULL,
    priority INT NULL
);
```

```
INSERT INTO data VALUES
(1,"Gary Lewis","test@foofoo.com","I saw this posting on the board","Today\\, 9:18AM","Hey Mark\\<br><br>I
saw your post on the message board and I was wondering if you still had that item available. Can you call me if
you still do?<br><br>Thanks\\,<br><b>Gary Lewis</b>",NULL),
```

...



Build and Deploy
Web App
In. 15 Minutes
Live Demo

Demo Building Apps in

<https://codesandbox.io>

Zeit Now Demo

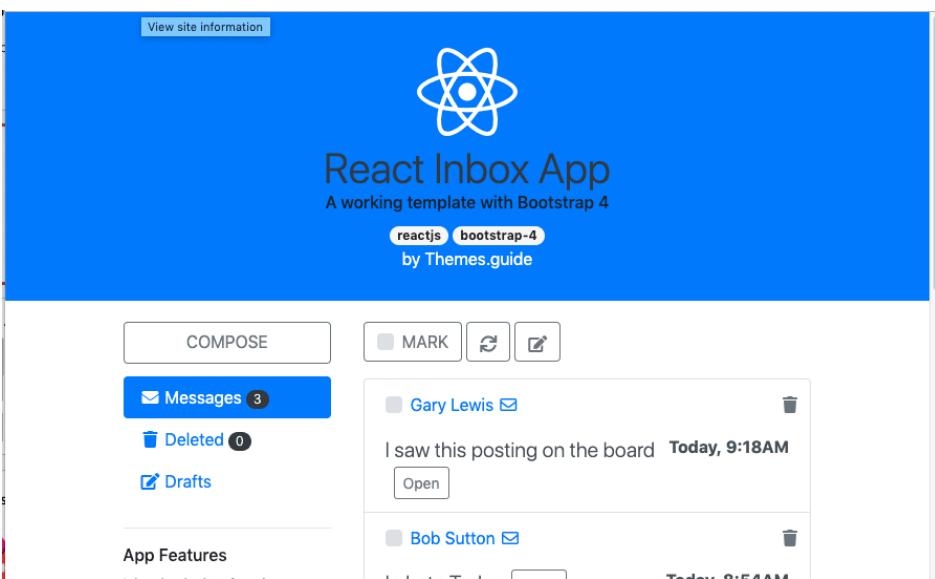
<https://tinyurl.com/y2cnjczf>

Demo Building Apps Custom Email

NOTE: Suppose you want to create your own messaging app?

Demo Custom Messaging App

<https://llzykynvnq.codesandbox.io/>



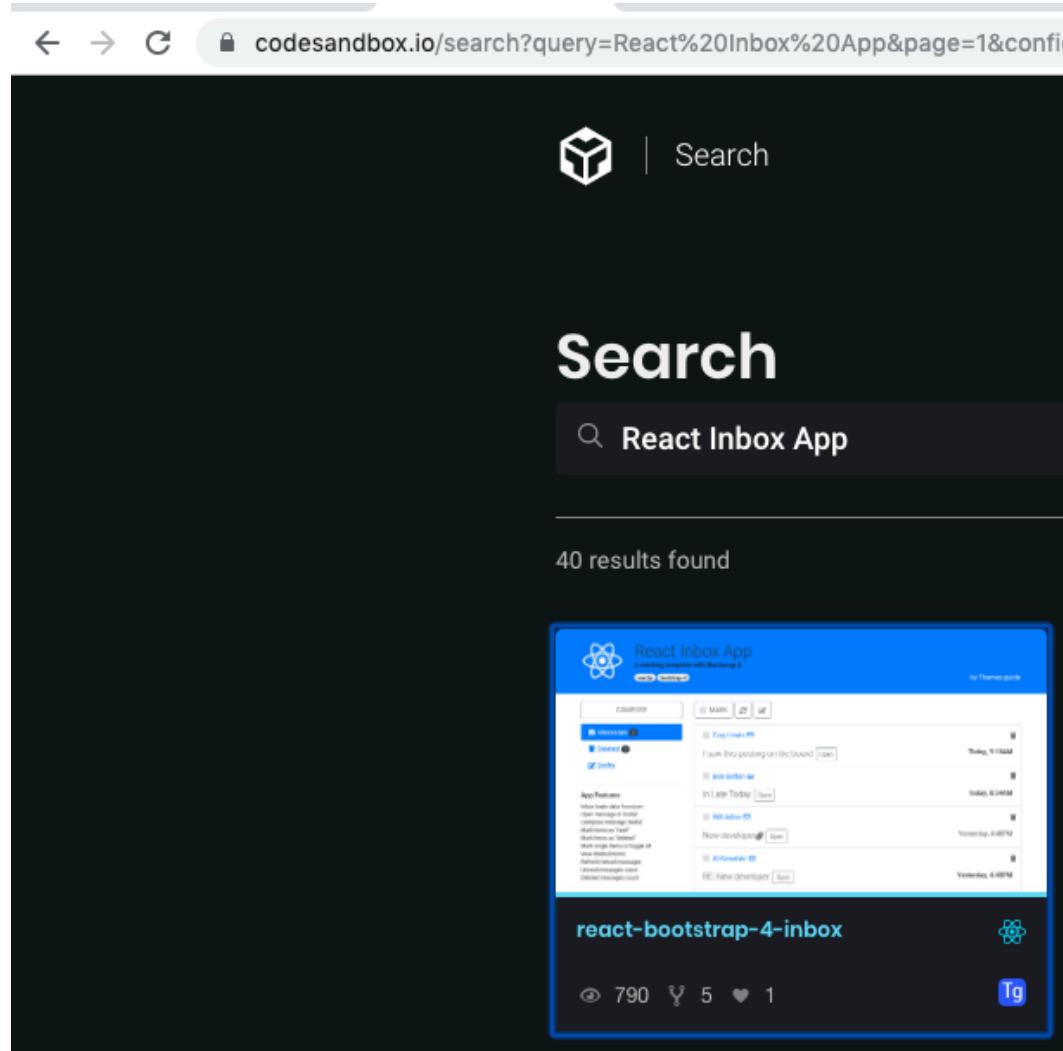
Source Code for Demo Custom Messaging App

<https://github.com/ThemesGuide/react-bootstrap-4-inbox>

A screenshot of a GitHub repository page for "ThemesGuide / react-bootstrap-4-inbox". The repository has 17 commits, 1 branch, 0 releases, and 1 contributor. The codebase includes files like "public", "src", "LICENSE.txt", "README.md", and "package.json". The latest commit is "Hide button on xs" by ThemesGuide. The repository has 0 issues, 0 pull requests, 0 projects, 0 wiki pages, and 0 security vulnerabilities.

Demo Building Apps Custom Email

<https://codesandbox.io/search>

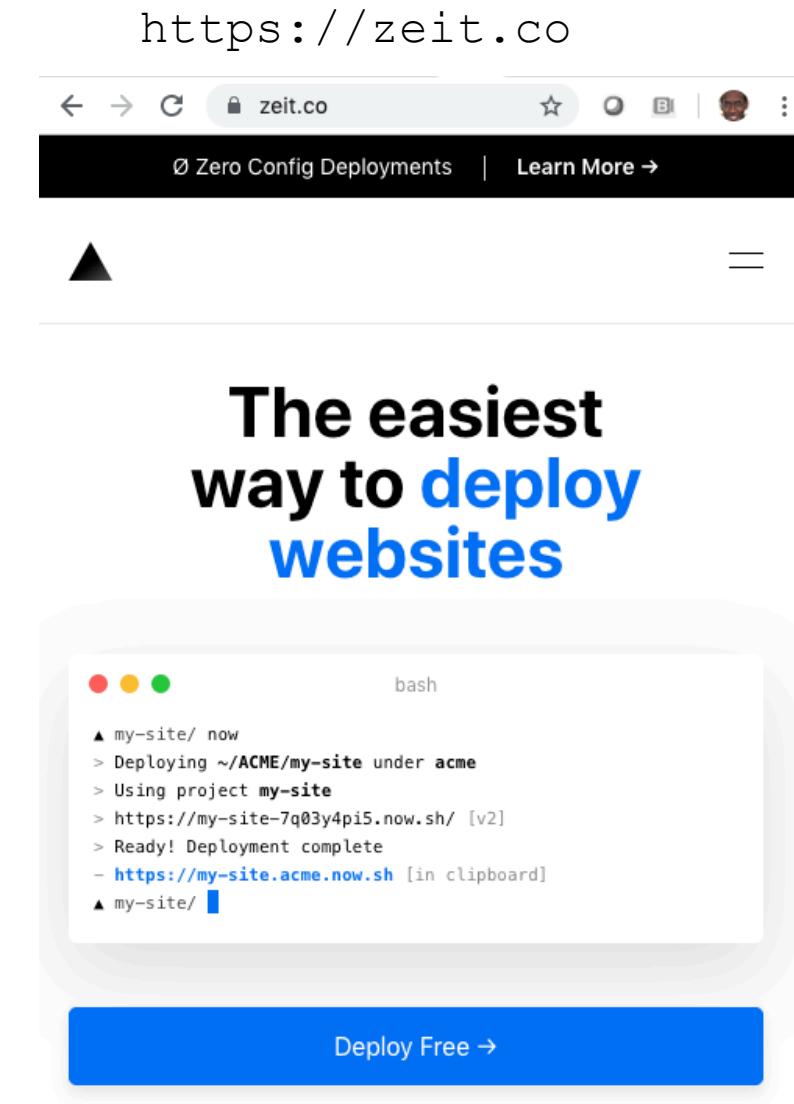


```
CREATE TABLE IF NOT EXISTS data (
    id INT NULL,
    from VARCHAR(15) NULL,
    from_address VARCHAR(19) NULL,
    subject VARCHAR(31) NULL,
    dt_sent VARCHAR(17) NULL,
    body VARCHAR(180) NULL,
    priority INT NULL
);
```

INSERT INTO data VALUES

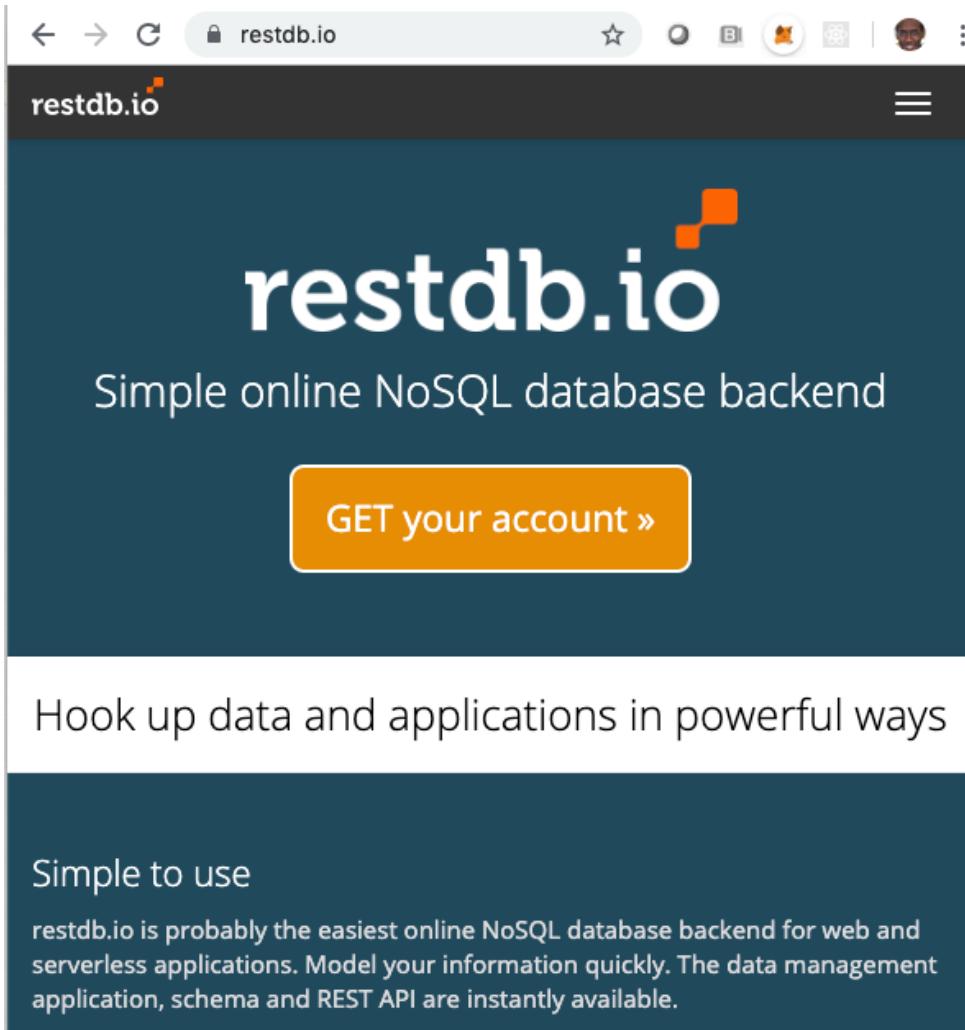
```
(1,"Gary Lewis","test@foofoo.com","I saw this posting on the board","Today\\, 9:18AM","Hey Mark\\,<br><br>I  
saw your post on the message board and I was wondering if you still had that item available. Can you call me if  
you still do?<br><br>Thanks\\,<br><b>Gary Lewis</b>",NULL),  
(2,"Bob Sutton","test@testdomain.com","In Late Today","Today\\, 8:54AM","Mark\\,<br>I will be in late today  
due to an appt.<br>v/r Bob",NULL),  
(3,"Will Adivo","test@testbar.com","New developer","Yesterday\\, 4:48PM","Here is the last resume for the  
developer position we posted on SO. Please review and let me know your thoughts!",NULL),  
(4,"Al Kowalski","test@domain.com","R
```

Key Tools used in Deployment.



One more thing

Restdb.io is a simple place to test Rest API Code.



Questions and Answers



Demo Web URLs

Zeit Now Demo

<https://tinyurl.com/y2cnjczf>

Red Hat Open Shift Demo

<https://tinyurl.com/y42eteqc>