DEVELOPMENT TOOLS

Introduction to Development Tools

- With what and how we will work

LIBRARY & FRAMEWORKS

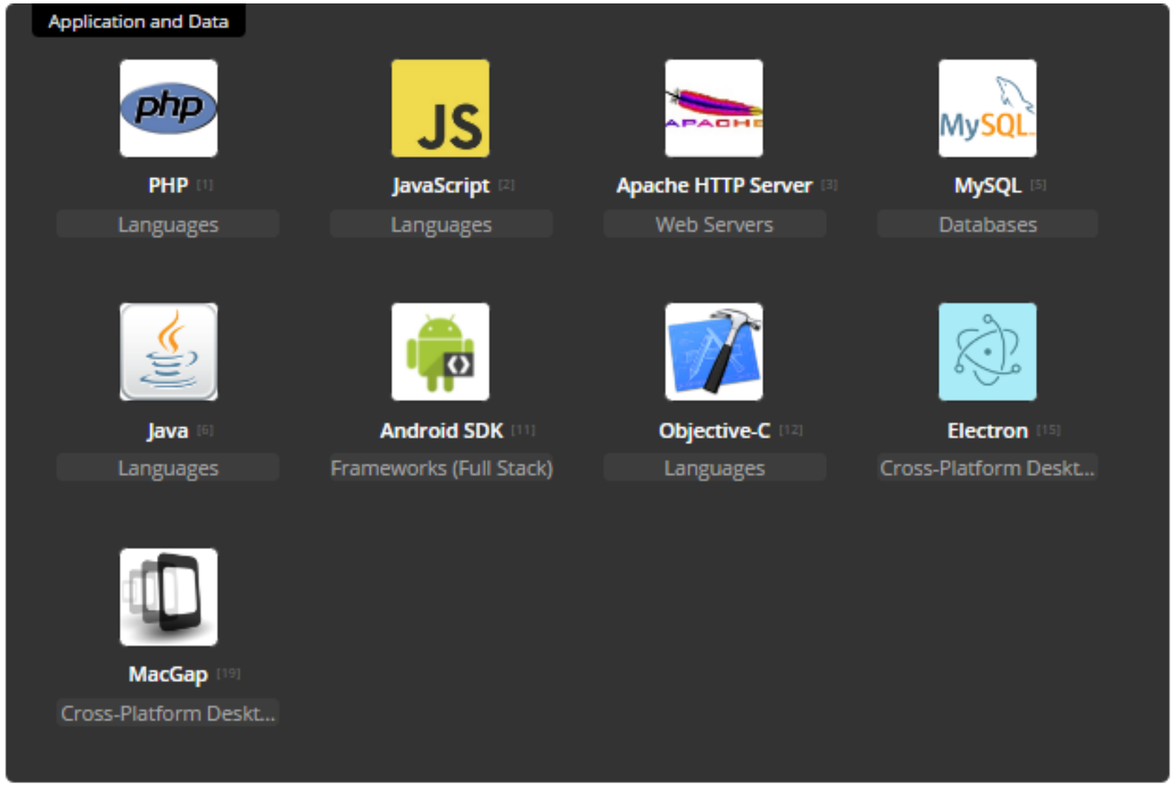
- A Library is a collection of tools and functionalities that is provided to other programmers
- Libraries make it easier to write code because the programmer does not have to implement everything himself
- In python a library has to be downloaded and imported into the coding project
- Frameworks define a basic functionality and structure that needs to be extended and implemented by the user

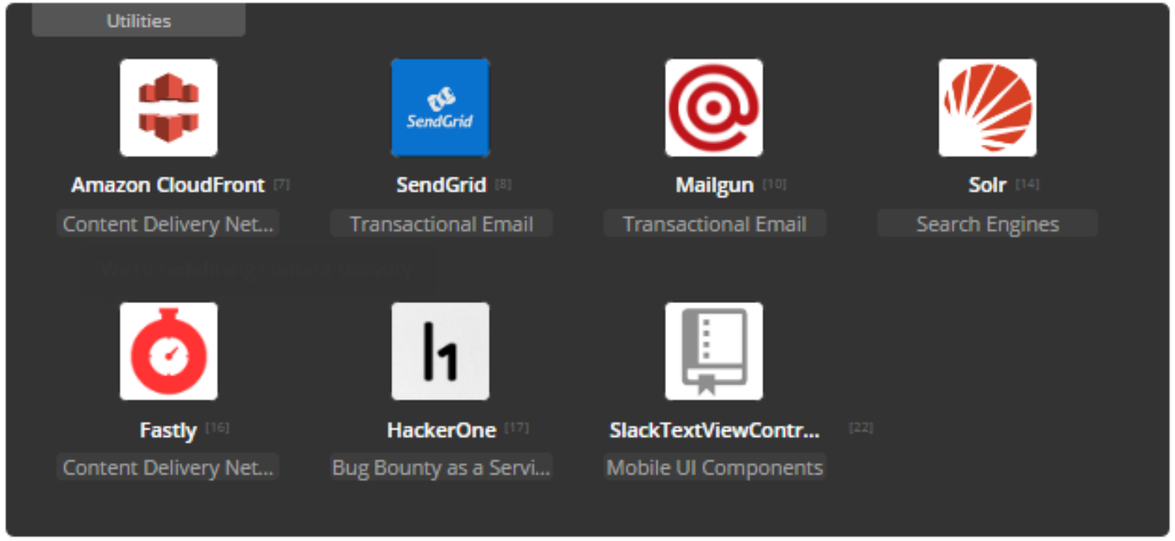
WEB STACK

- Web stack: A web stack is the collection of software required for web development. At a minimum, a Web stack contains a programming language, database software and a Web server.

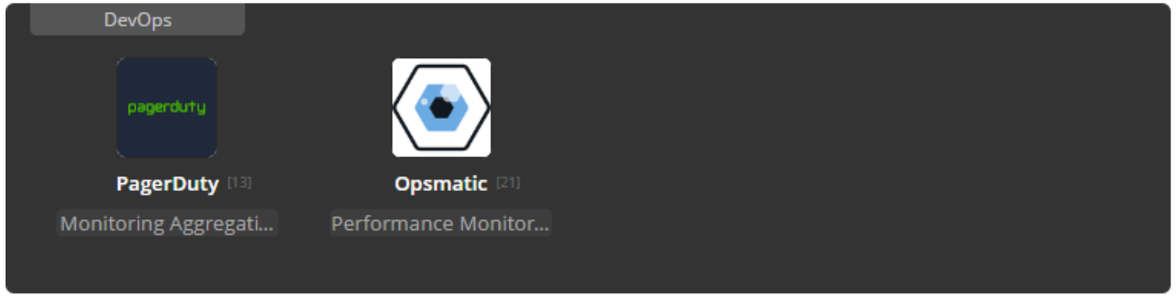
SOME EXAMPLE STACKS

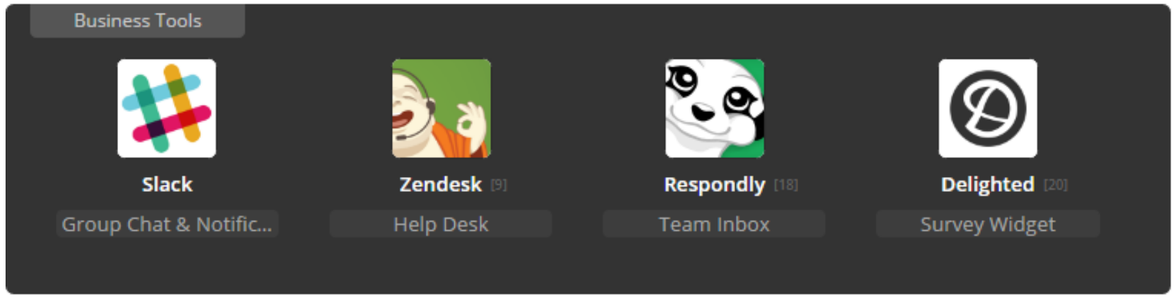
- A web-stack describes the technology that is used by a company to provide their service
- Some companies share their stack on public websites
  - e.g. http://stackshare.io/stacks





https://stackshare.io/slack/slack





DevOps

Bitbucket
Code Collaboration &...

Crashlytics
Mobile Error Monitori...

Puppet Labs
Server Configuration ...

OpenStack [6]
Open Source Cloud

Apache Mesos [7]
Cluster Management

Nemo.js [11]
Browser Testing

Business Tools

JIRA
Issue Tracking

FogBugz
Issue Tracking

ProductPlan [10]
Project Management

PayPal

https://stackshare.io/paypal/paypal

Application and Data

Python [1]
Languages

Utilities

Testdroid [8]
Mobile Test Automati...

Application and Data

Python 2.7
Languages

SQLLite3
Databases

Python 2.7
Backend Framework

AngularJS
JavaScript MVW Framework

CDTM TASKS

Utilities

Github
Version Control

SourceTree
GIT Client

PyCharm
Python IDE

Chrome
Browser

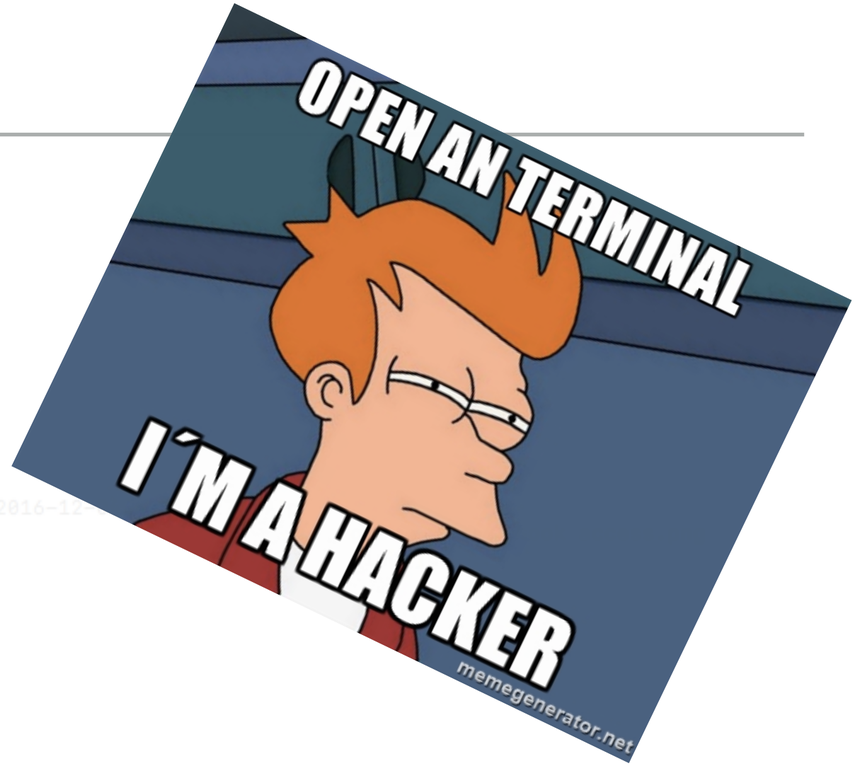
Postman
API Testing

DBBrowser
Sqlite3 Browser

IT'S YOUR TURN

- We need to install all the tools to get your laptops ready for the workshop
- Go to the course repository and follow the setup instructions in the Wiki to install all the tools

TERMINAL



- Navigation Commands

pwd	prints current working directory.
cd	changes directory to your home folder.
cd <directoryname>	changes into <directoryname>
cd ..	changes directory to parent directory

- File Commands

ls	lists all files & folders of the current directory
cp <filename> <newfilename>	copies a a file
mv <filename> <newfilename>	moves a file
rm <filename>	deletes a file

- Other

python	starts the python interactive shell
python <filename>	runs <filename> as a python script
clear	clears content on window

Windows: http://simplyadvanced.net/blog/cheat-sheet-for-windows-command-prompt/

Linux / MacOs: https://gist.github.com/LeCoupa/122b12050f5fb267e75f

PYTHON

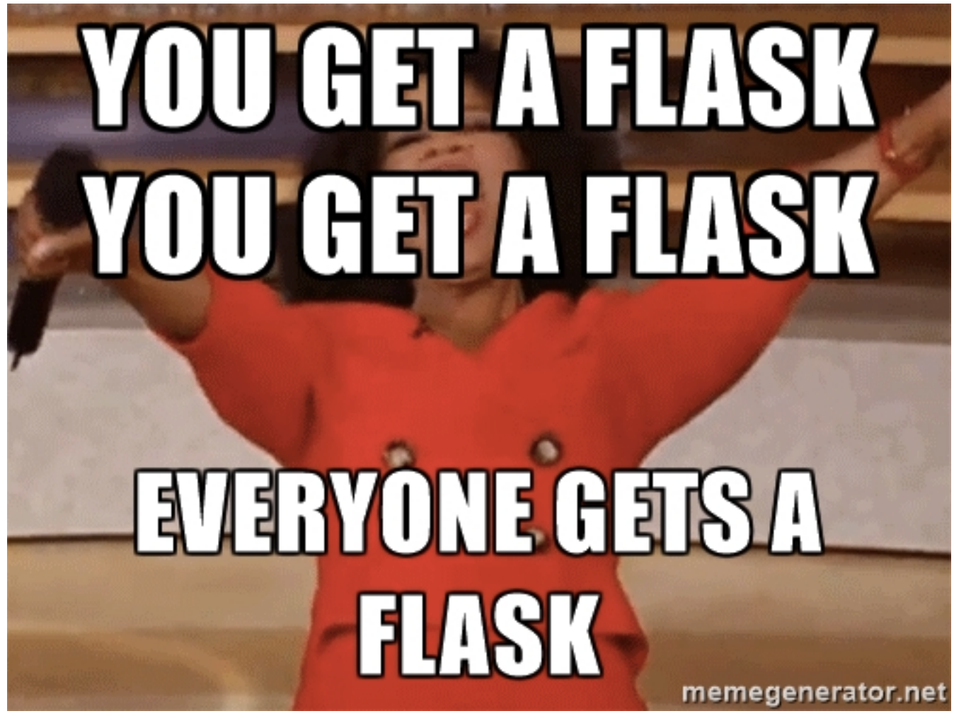
- The program language we will use to develop our backend application.

- Why Python?
  - High level
  - Robust
  - Easy to learn
  - Flexible

Everything you need in one sheet: [Beginner's Python Cheat Sheet]
More Info: https://ehmatthes.github.io/pcc/cheatsheets/README.html
Even More: https://learnpythonthehardway.org/book/

FLASK

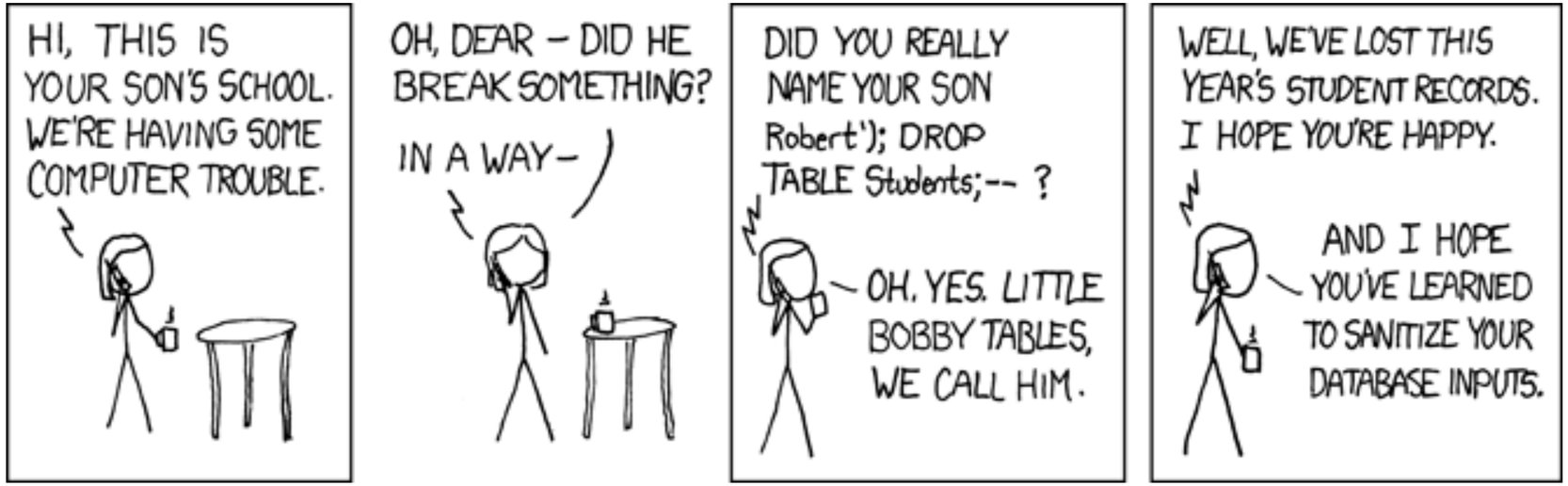
- *Flask is a microframework for Python*
- Why Flask?
  - Easy to get into
  - Well documented
  - Relatively powerful



Website: http://flask.pocoo.org/
Flask Tutorialspoint: http://www.tutorialspoint.com/flask/
Ebook (advanced): https://exploreflask.com/en/latest/
Flask Megatutorial: https://blog.miguelgrinberg.com/post/the-flask-mega-tutorial-part-i-hello-world

SQLLITE3

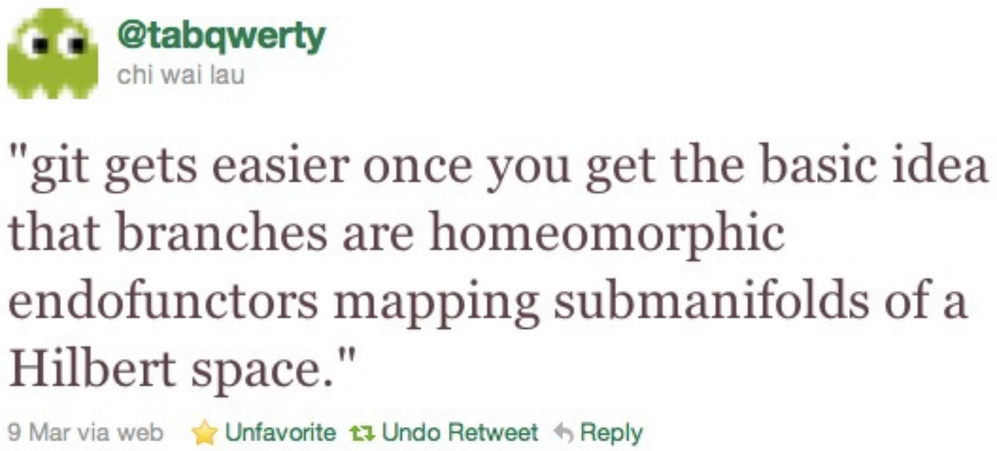
- SQLLite is a lightweight relational database management system we will use.
- DBBrowser for SQLLite: http://sqlitebrowser.org/



SQLLite3 Tutorialspoint: https://www.tutorialspoint.com/sqlite/sqlite_overview.htm
SQL Cheatsheet: http://files.zeroturnaround.com/pdf/zt_sql_cheat_sheet.pdf

GIT

- Git is a version control system (VCS) that is used for software development. As a distributed revision control system it is aimed at speed, data integrity and support for distributed, non-linear workflows



More: http://readwrite.com/2013/09/30/understanding-github-a-journey-for-beginners-part-1
Git for Dummies: https://backlogtool.com/git-guide/en/stepup/stepup1_1.html
Practical Git Guide: http://stackoverflow.com/questions/315911/git-for-beginners-the-definitive-practical-guide

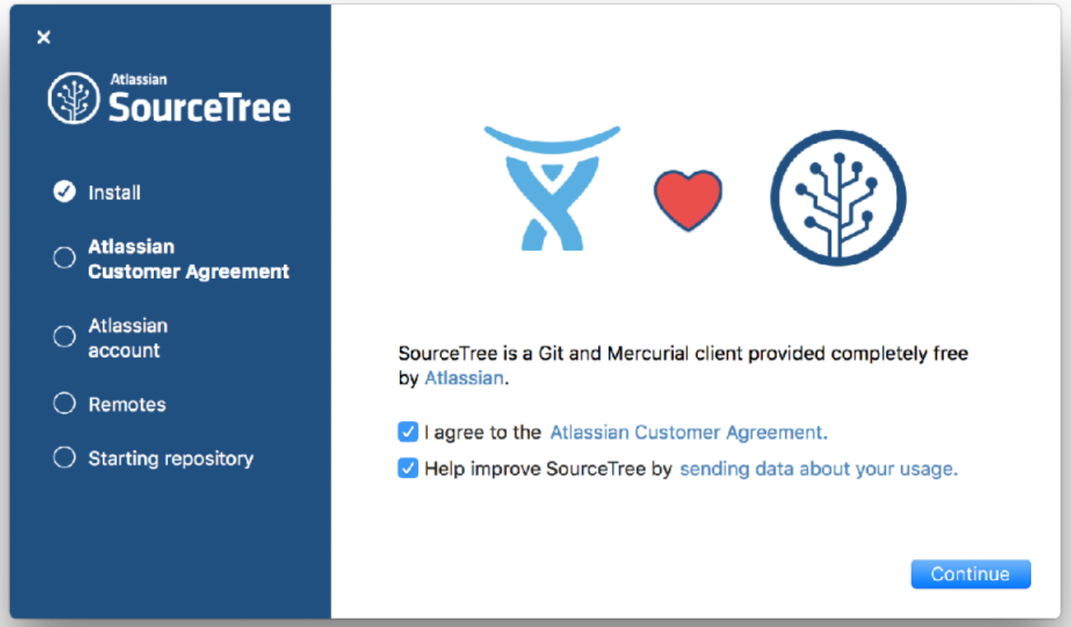
GITHUB.COM

- The ‘Git as a service’ provider we will use for this workshop
  - Facebook meets Dropbox for developers
  - Widely used
  - > 14 million users

Website: https://www.github.com

SOURCETREE

- A GUI (Graphic User Interface) Client for Git



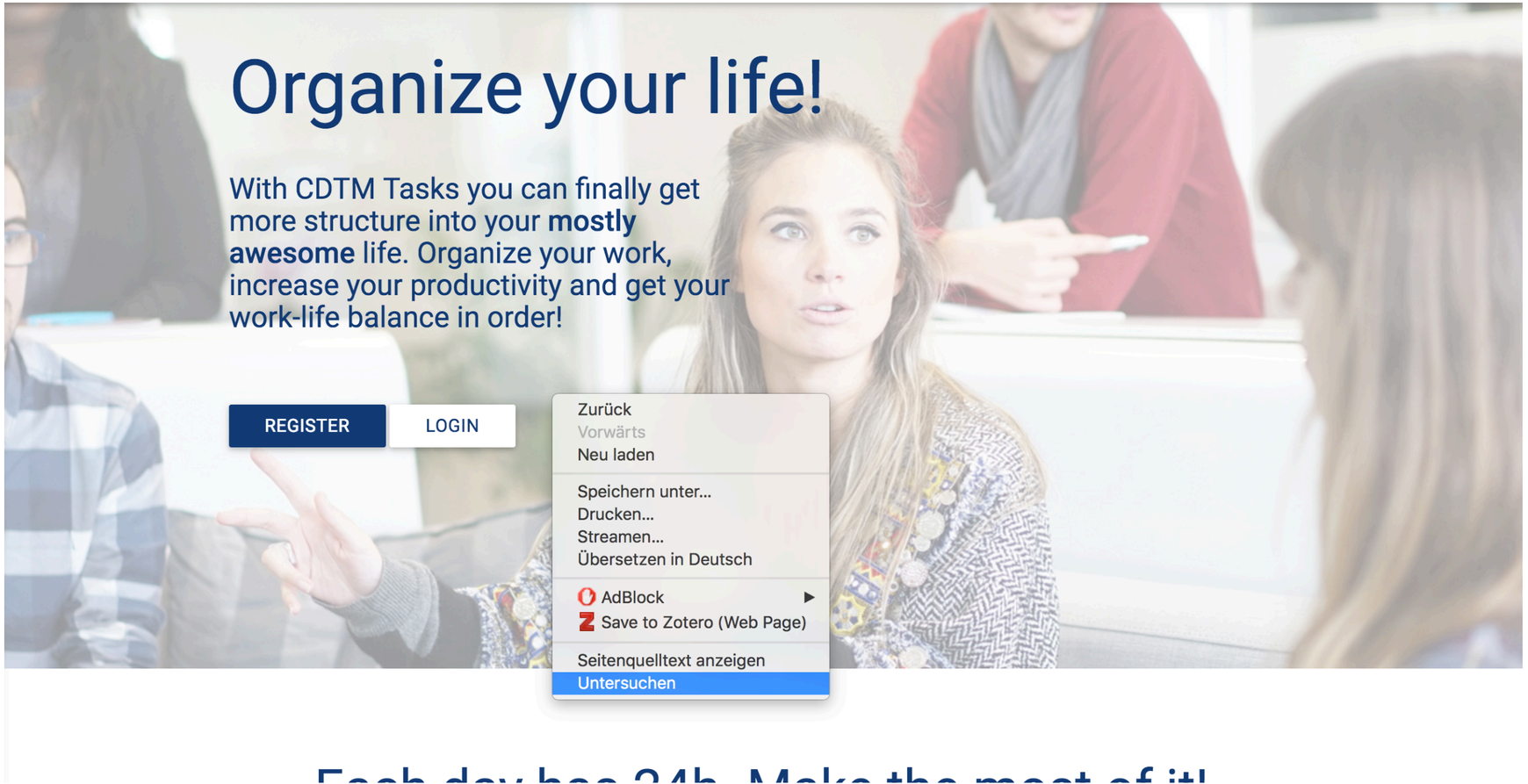
Website: https://www.sourcetreeapp.com/

CHROME

- A nice browser for web development

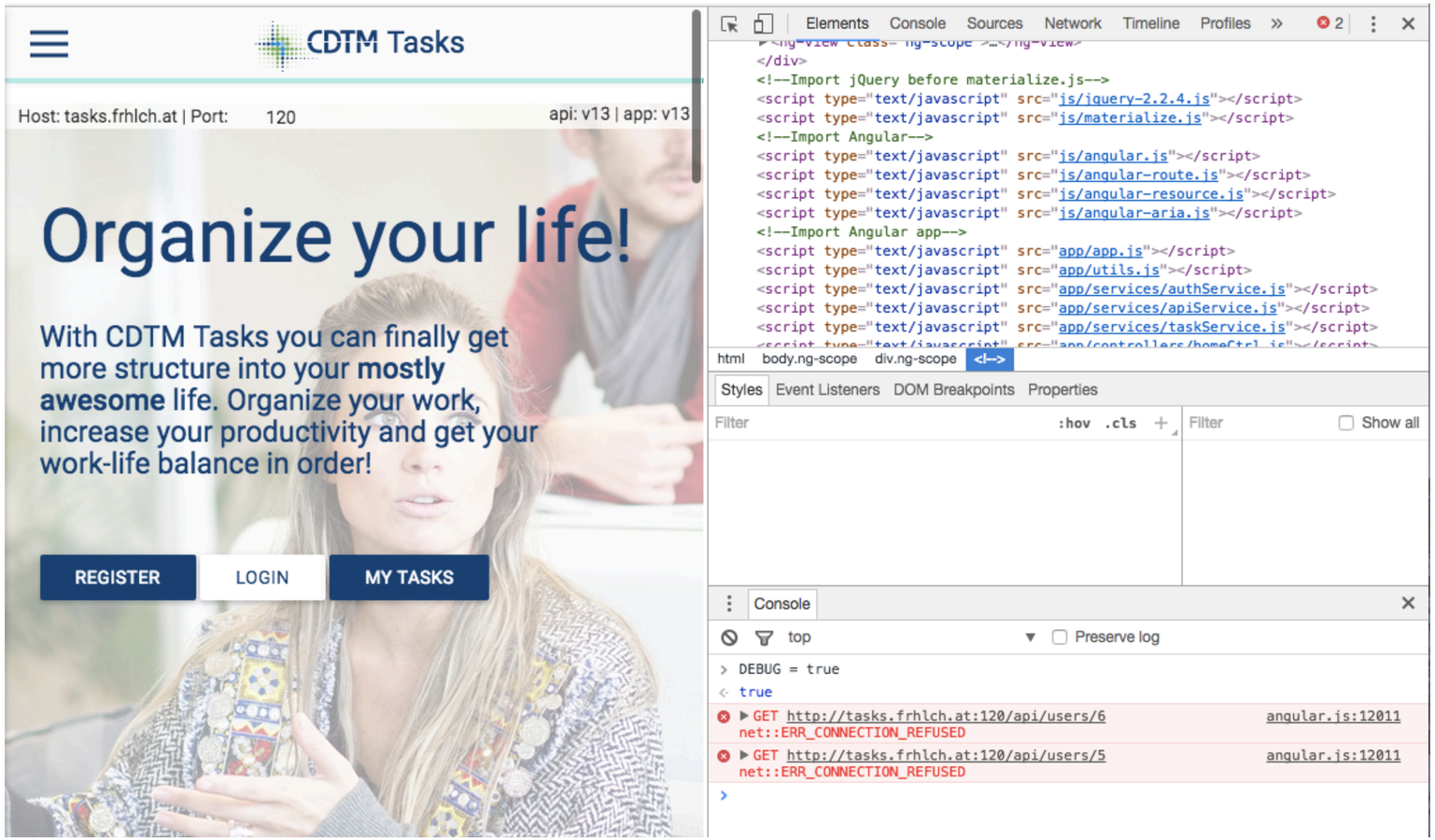
CHROME – DEVELOPER TOOLS

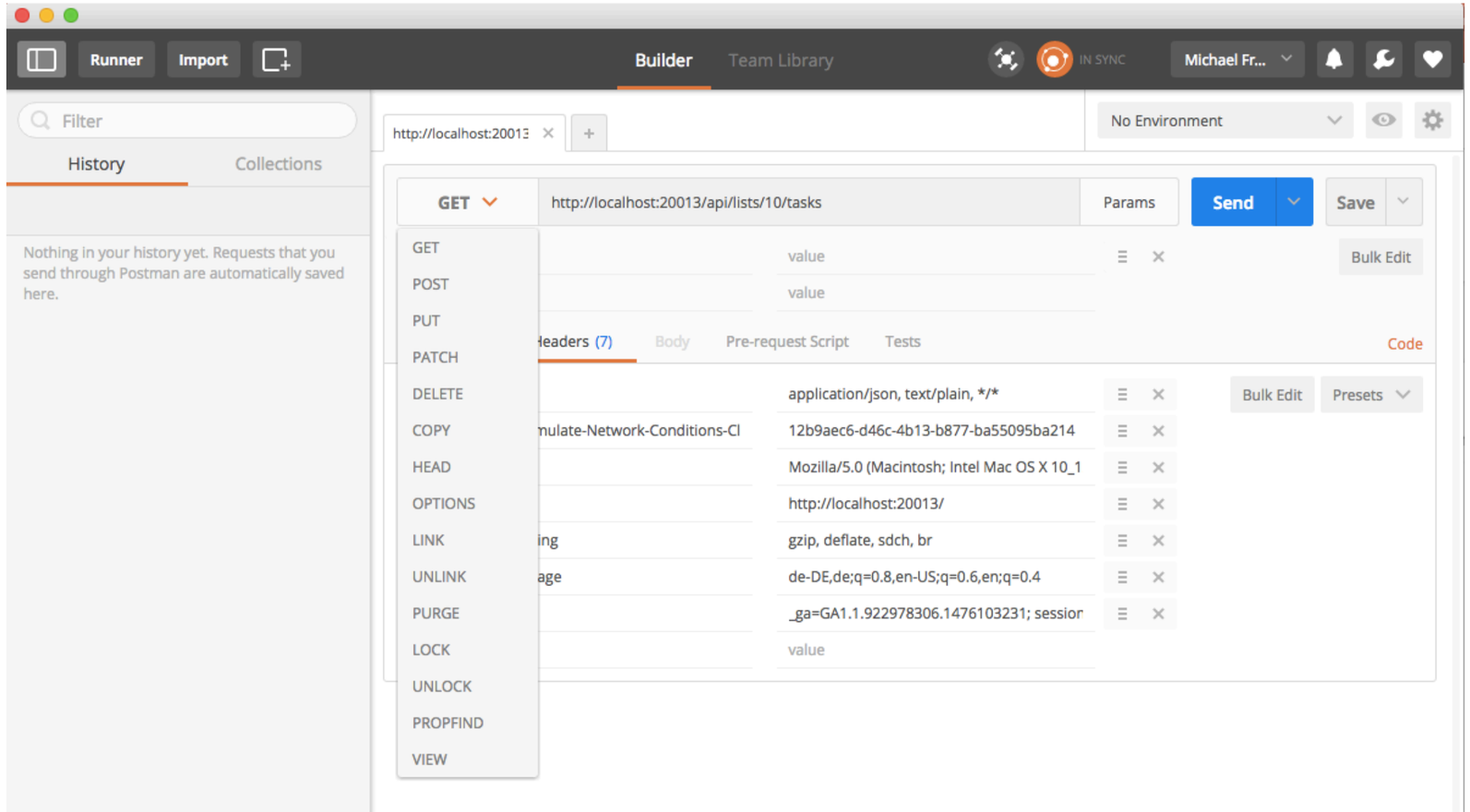
- Useful to figure out front-end errors



CHROME – DEVELOPER TOOLS

- Useful to figure out front-end errors



POSTMAN

- A tool to debug and test your API by sending HTTP Request manually
- Nice documentation: https://www.getpostman.com/docs/requests