ACBrewingCalculator

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Our Project

- ACBrewingCalculator is a Chrome Extension that provides easy, free access to calculators for several aspects of brewing.
- Released under GPL 3.0
- Github: https://github.com/averyscottnorris/ACBrewingCalculator
  - Bug tracker: ACBrewBug@hotmail.com
  - Dev Contact: avnorris@pdx.edu and cleytham@pdx.edu

What does it do?

- Basic brewing calculations:
  - Bitterness unit calculations
  - Unit conversions: metric to imperial and vice versa
  - Alcohol calculator based on starting and final gravity (level of sugar)
  - Hydrometer adjustment for temperature
  - Priming sugar needed for carbonation
  - pH adjustment for mash

How does it work?

- Install as a Chrome extension
- Click on icon to open drop-down menu
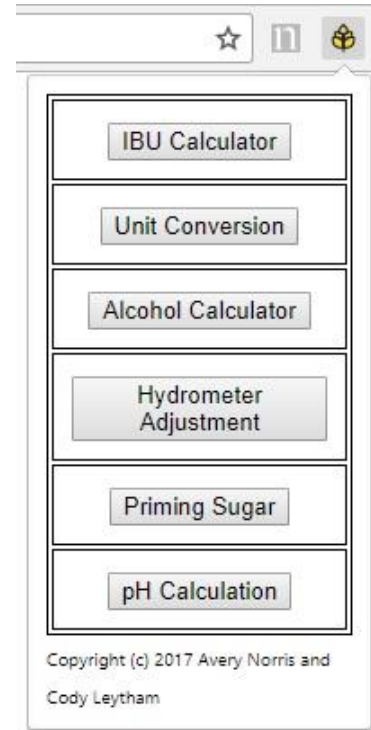- Choose a calculator and it will open it in a new page

Why did we choose this project?

- We both enjoy beer and brewing
- Wanted to try out a Chrome extension
- Free, super-easy access alternatives are sparse

What difficulties did we face?

- Efficiently collaborating as a team
  - Dealing with multiple people pushing to git simultaneously
- Working within the confines of Chrome
  - No inline Javascript
    - Must all be in separate .js file
  - Fonts not correctly displaying
  - Finding reliable information (formulas)
    - Lots of digging through reference books and old blogs

What did we learn?

We had to relearn some things and then learn some new things

- Relearn
  - HMTL
  - CSS
- Learn
  - Javascript
  - How to make a chrome extension
  - How work within the limitations of the extension
  - GIT functionality

The Competition

- Paid Options
  - BeerSmith
  - BrewBot

- Free Options
  - Brewer's Friend
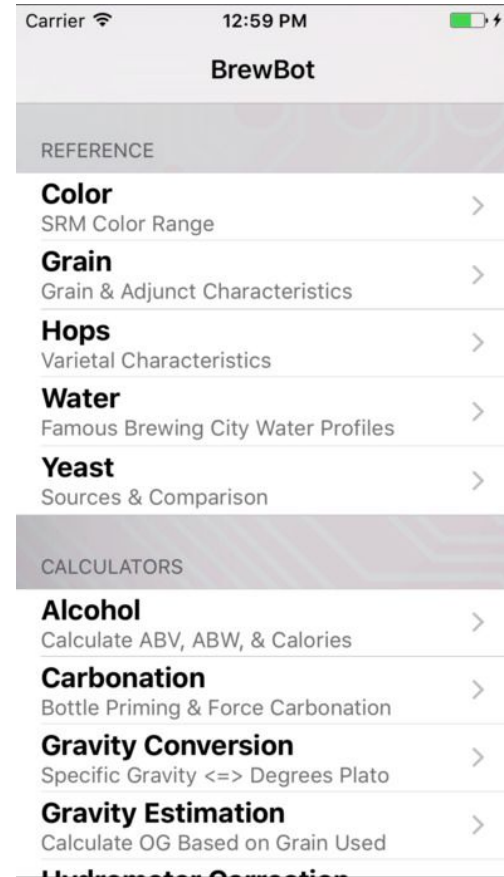 - Calculate by hand

BeerSmith

- Desktop application
  - Windows or Mac
- Pros
  - TONS of functionality
  - No internet required to use
  - Can manage recipes and inventory as well as calculations
- Cons
  - Complicated to use at first
  - Costs money ($27.95)

Brewbot

- Mobile app for iPhone
- Pros
  - Mobile app is easy to access and use
  - Works without internet
  - Reference materials as well as calculations
- Cons
  - Less functionality than some web-based calculators
  - Costs money ($1.99)

Brewer's Friend

- Web-based brewing calculator
- Pros
  - Free
  - Lots of functionality
- Cons
  - Requires internet access

Alcohol By Volume Calculator:

Gravity Unit:
- ● SG (1.xxx)
- ○ Plato °P

Original Gravity (OG): 1.050

Final Gravity (FG): 1.010

Equation:
- ● Standard
- ○ Alternate
- *(see below for more information)*

UPDATE

Alcohol By Volume: **5.25%**

Apparent Attenuation: 79%
Calories: 163.7 per 12oz bottle
Original Gravity: 12.39 °P, 1.050
Final Gravity: 2.56 °P, 1.010

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The Low-Tech Option

- Do all calculations by hand with the assistance of a calculator
    - Difficult to find equations
    - Labor-intensive and time consuming

Where may this project go?

- Just added ACBrewingCalculator to Google Chrome's web store
  - Allows for automatic updates, and easy installation for users
- Add additional functionality
  - Gravity calculation
  - Color estimation
  - Yeast starter cell count calculation
- Make it prettier
  - More CSS

References and Borrowed Images

- https://3.bp.blogspot.com/-7P6nvEaMP-4/URZcwWMRY1I/AAAAAAAAAqw/Nq_1WcJbK-g/s1600/calculations.JPG
- https://itunes.apple.com/us/app/brewbot/id542237024?mt=8