

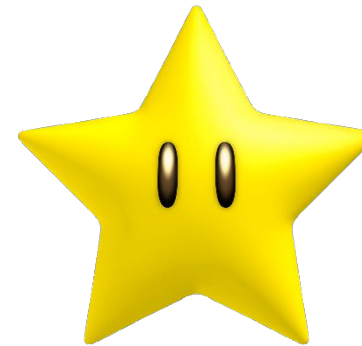
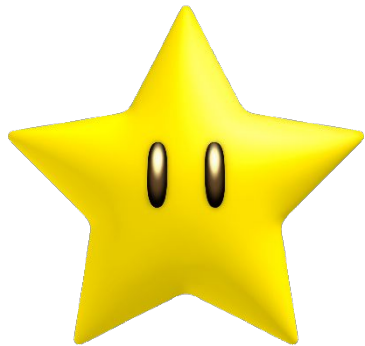
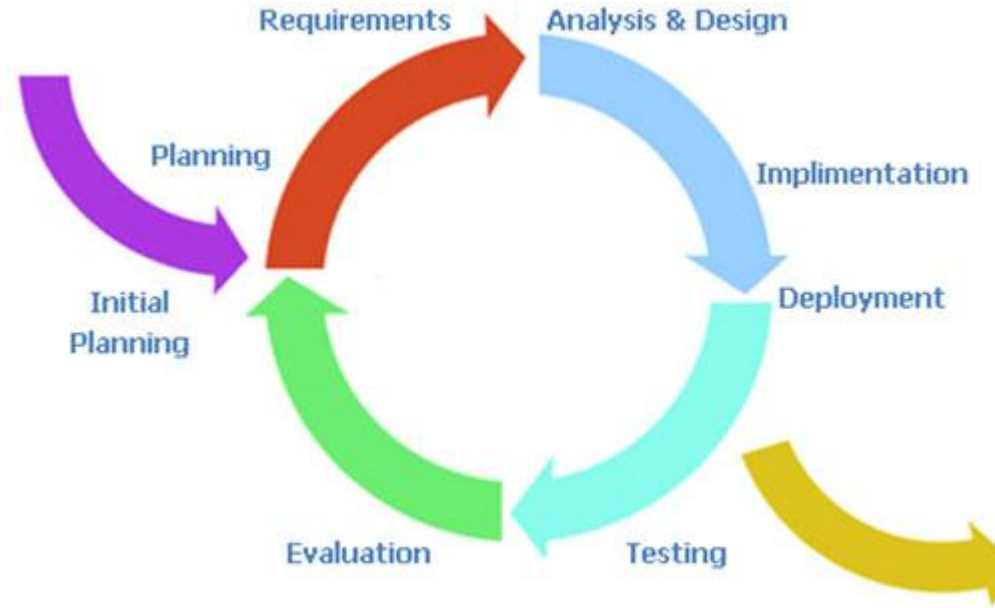
Smart House

Ankhubayar Jansan

Mitchell Klein

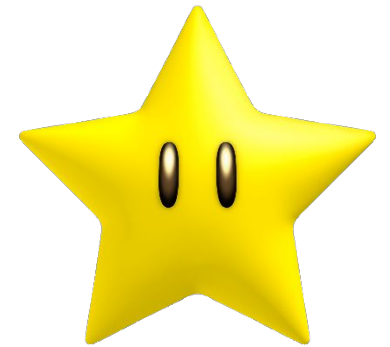
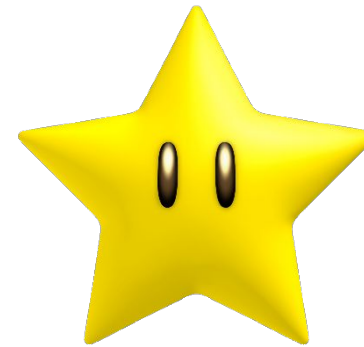
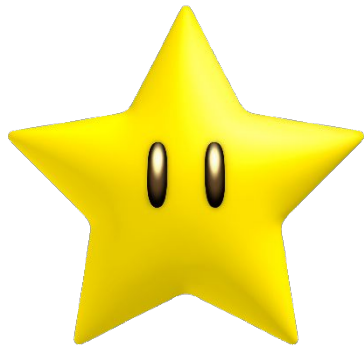
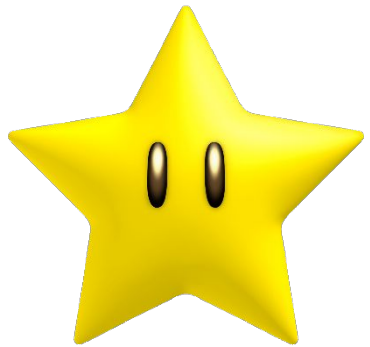
Ryan Talley

Iterfall



Pro: Allows for flexibility and parallel development of different project pieces.
Con: Did not have the time for complete iterations for all of the project pieces.

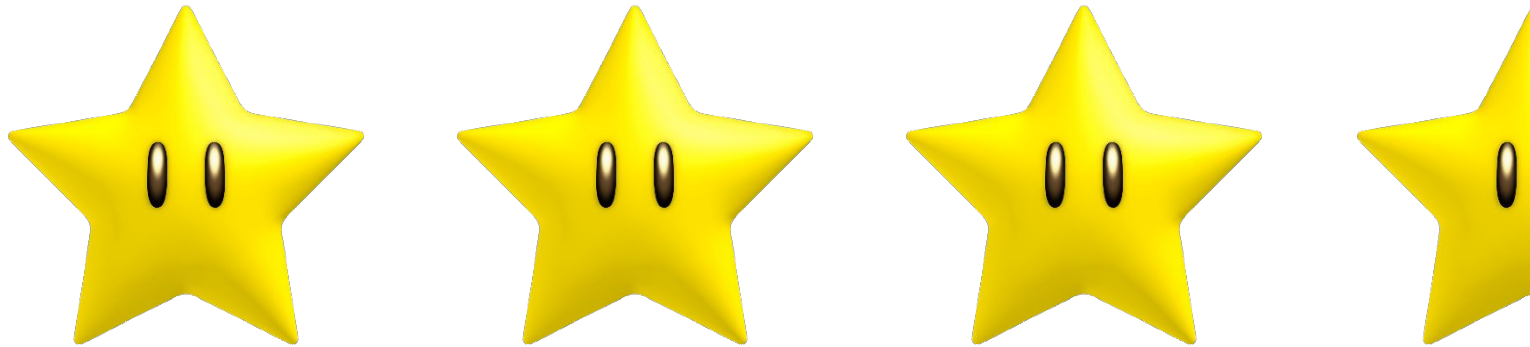
Pair Programming



Pro: Easy to catch mistakes and allows for brainstorming while coding.

Con: Easy to get distracted.

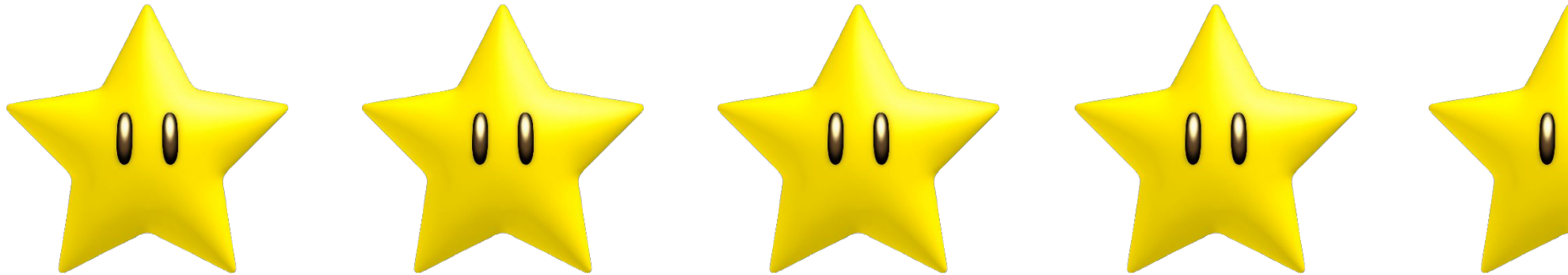
Project Tracker



Pro: Simple to use and easy to set up.

Con: Lacks a lot of advanced features that are standard in other tools.

VCS



Pro: Easy to use and manage and has a nice set of statistics tracking.

Con: Did not display any of Mitchell's commits for some reason.

Database



Pro: Ease of use when writing to and from database with little issues

Con: With our knowledge privacy could be a concern

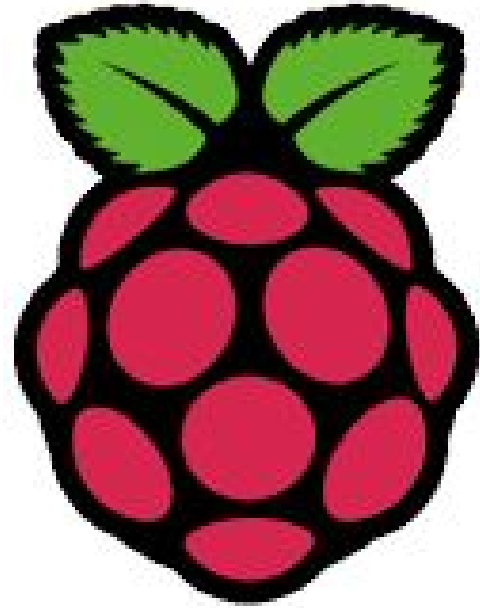
Arduino IDE



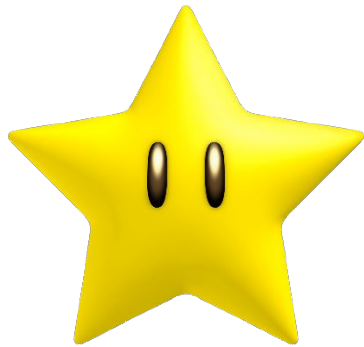
Pro: Simple to use and allows for very fast prototyping.

Con: The compiler error messages are usually misleading or not relevant.

Deployment



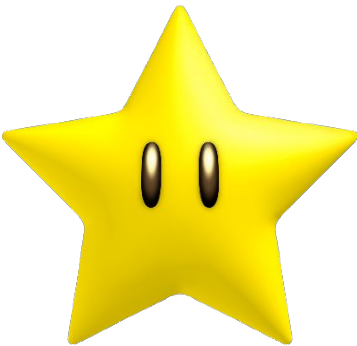
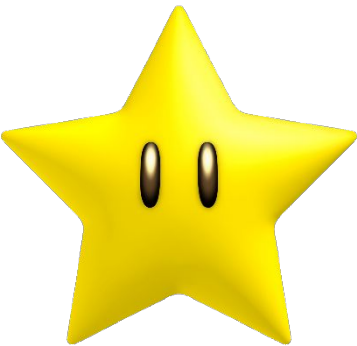
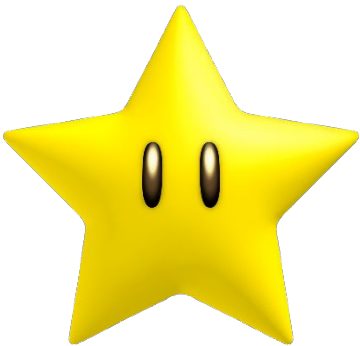
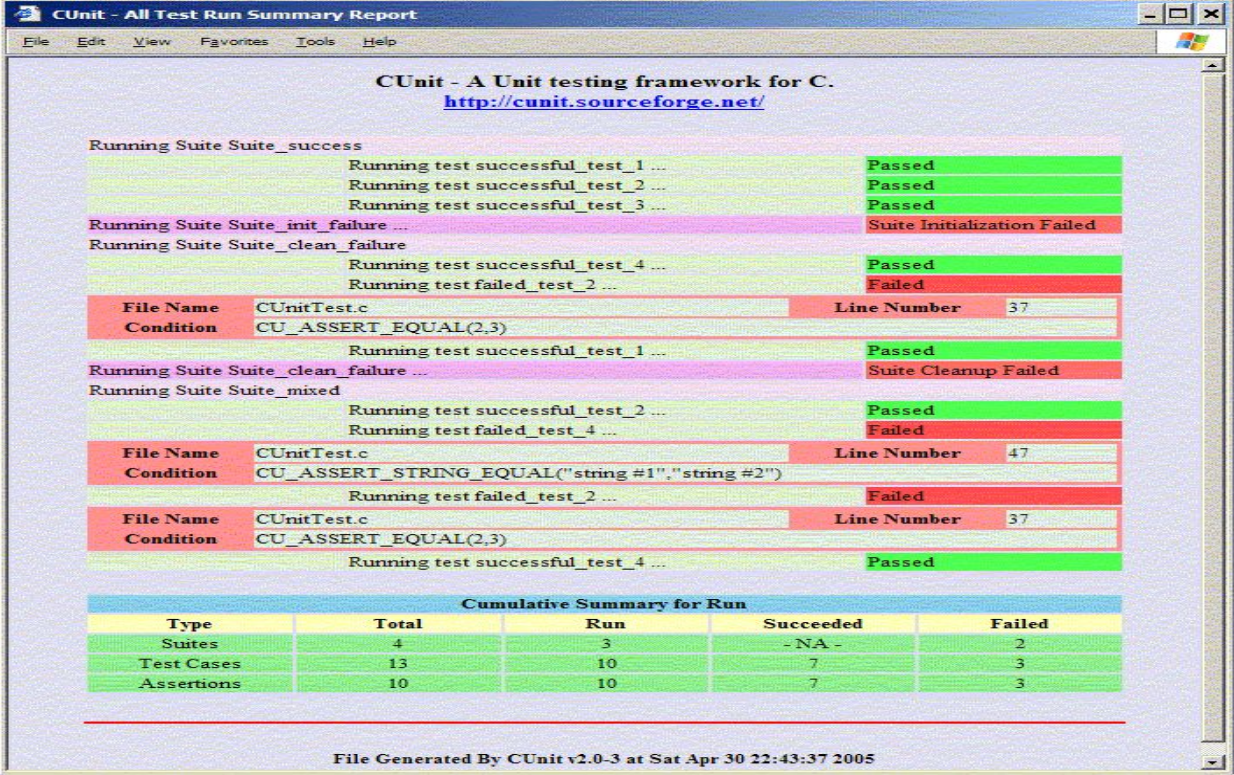
Raspberry Pi



Pro: Very well documented linux mini-computer.

Con: The headless interface, very slow when running SQL with an application.

Unit Testing



Pro: Straightforward and easy to use.
Con: Setting up and initial learning curve is a little steep.

Auto-Documenter



Pro: Mutiple uses and lots of formatting options.
Con: Confussing to work with.

Challenges



Resistor (**R**)

Challenge: Pulse Width Modulation / ADC on the Raspberry Pi.

Solution: Use an Arduino as a peripheral interface.

Challenge: Setting up Bluetooth communication on the Raspberry Pi

Solution: Communicate with program over the command line.

Challenge: A MySQL C API library was powerful, but complex to use.

Solution: Switched to a less powerful, but simpler to use library.

Demo Video Link

<https://youtu.be/4hLfqULZtTQ>

