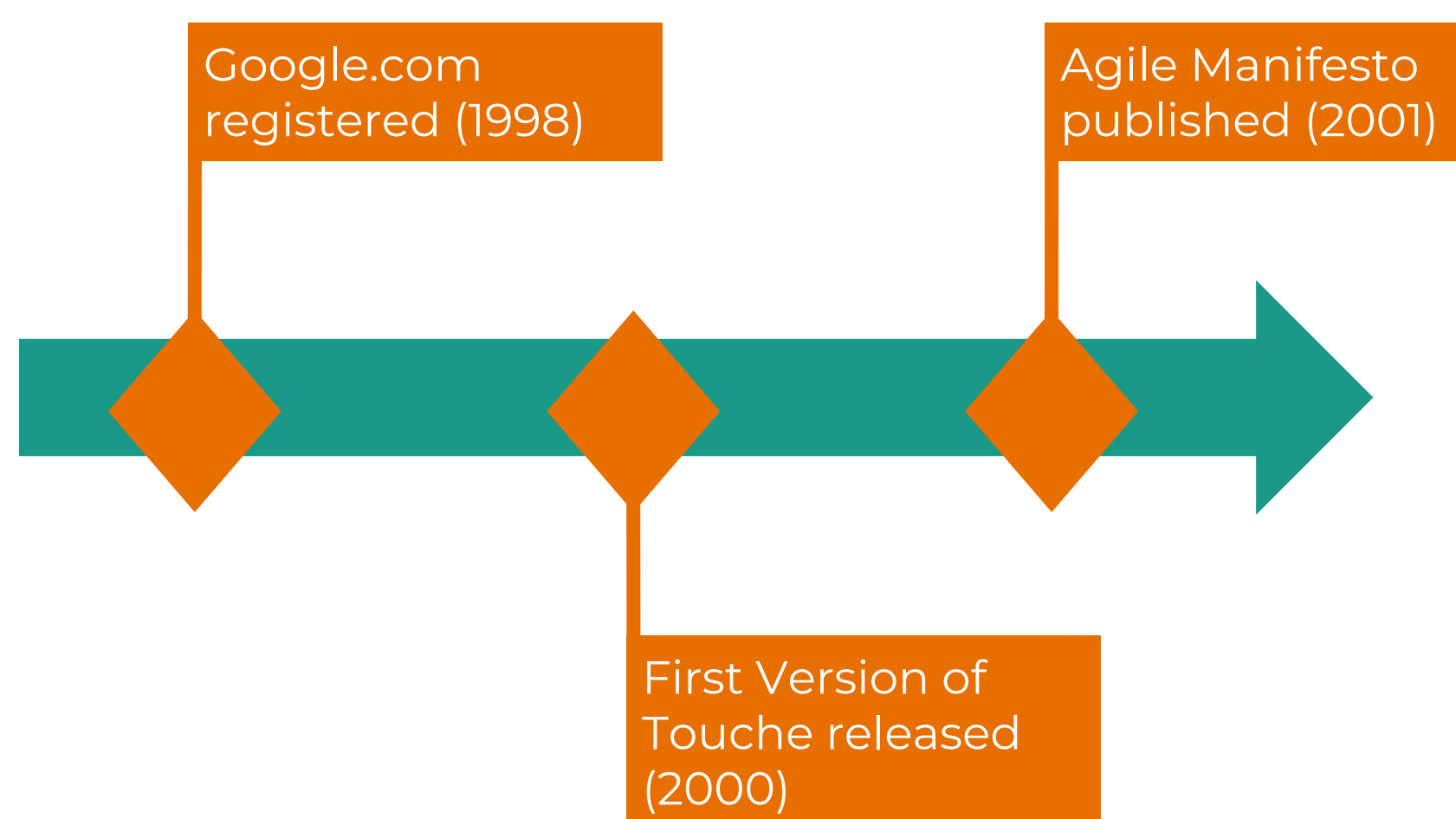


Programming Contest Server Update

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Motivation

Touche is a software package intended to facilitate a programming contest. As you can see, a large portion of the code is quite old. It does still work, but has become unpleasant to work on.








The code was in very bad shape from a software engineering standpoint. There were severe shortages of

- Documentation
- Functions
- Modular design
- DRY code

Our goal was to rewrite or refactor the parts of Touche with the most bugs and the worst organization so that future teams could build on a solid foundation and so that the department can take pride in Touche.

Statistics for Update

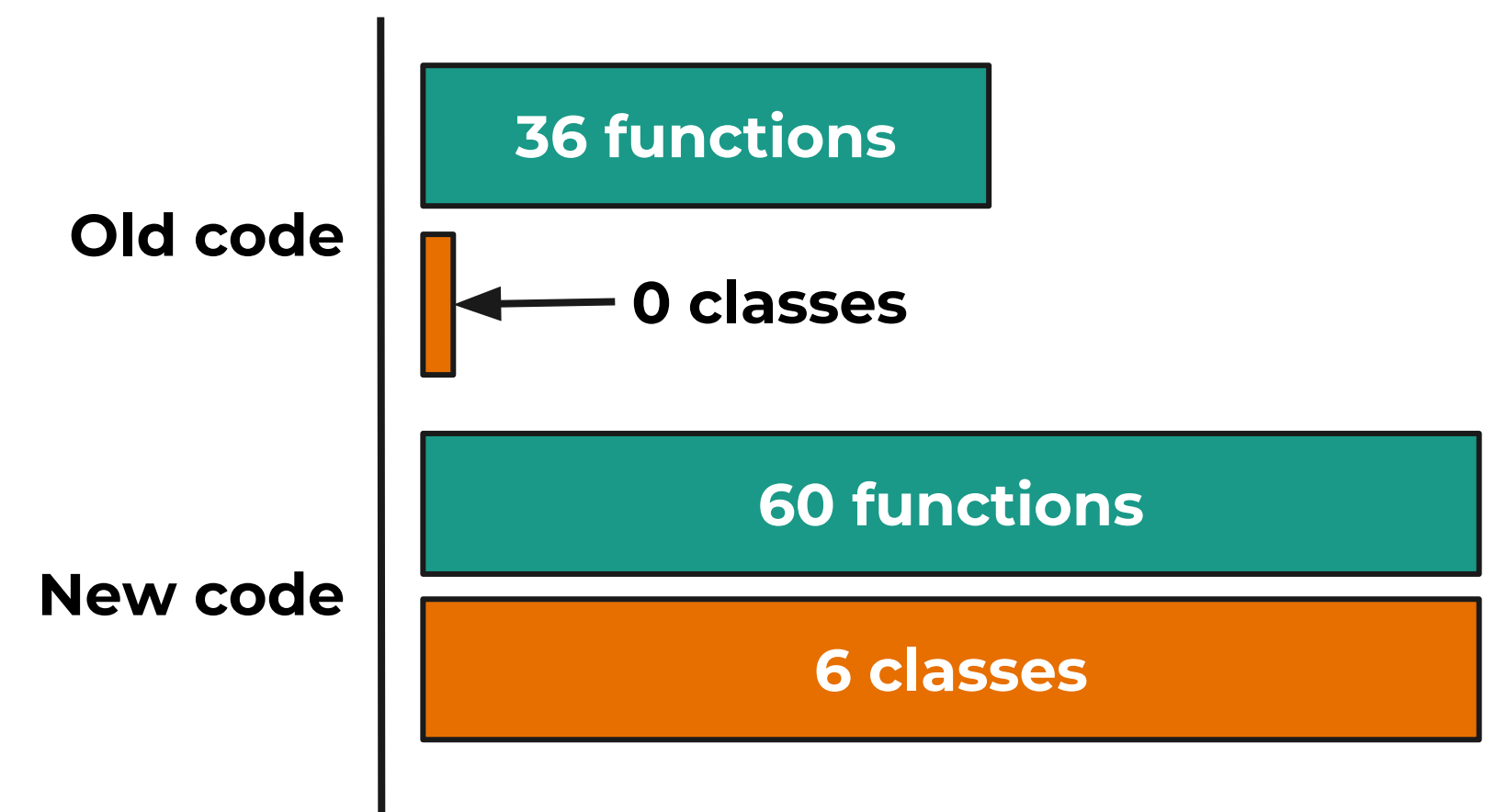
-  Over 150 commits to Github
-  Over 7000 lines of code written
-  1 language added to the codebase
-  10 files rewritten
-  A lot of bugs fixed

Challenges

One of the hardest things about rewriting and refactoring the code was deciding when to stop. It wasn't feasible for us to rewrite the whole codebase, so we had to be selective. It was hard to leave working sections of the code alone since they were often poorly written.

The other main challenge was determining what some of the old code did. It was often difficult to follow the logic because of bad spacing, poor variable names, and hasty bugfixes.

Outcomes



The data above is taken from our rewrite of "the cronscript," an important piece of the backend. We had similar results with other files as well.

We also tracked down a slew of bugs. We hope that future contests will go more smoothly because of this.

Acknowledgments

We would like to thank Dr. Geisler for all of his guidance and advice. We would also like to thank Leonard the llama for being an excellent rubber duck.

