Tech Debt

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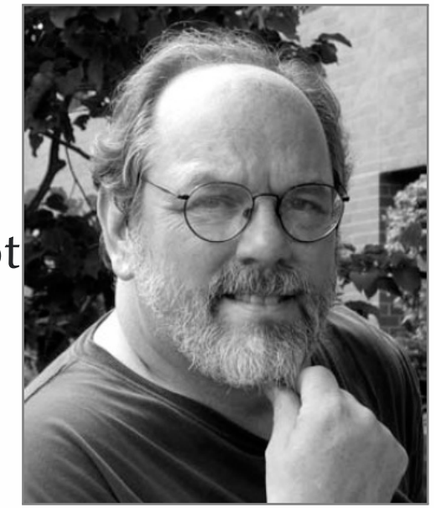
Lecture #14 out of 24
80 minutes

+2pt



“Shipping first time code is like going into debt. A little debt speeds development so long as it is paid back promptly with a rewrite. The danger occurs when the debt is not repaid. Every minute spent on not-quite-right code counts as interest on that debt.”

— Ward Cunningham, *Experience Report — The WyCash portfolio management system*, OOPSLA, 1992

Puzzle Driven Development: Motivating Example

Commit #1:

```
int fibonacci(int n) {
  if (n <= 2) {
    return 1;
  }
  // @todo I don't know
  // what to do when "n"
  // is larger than "2".
  // Implement it and uncomment
  // the assertion below.
  return 0;
}
assert fibonacci(0) == 1;
assert fibonacci(2) == 1;
// assert fibonacci(9) == 34;
```

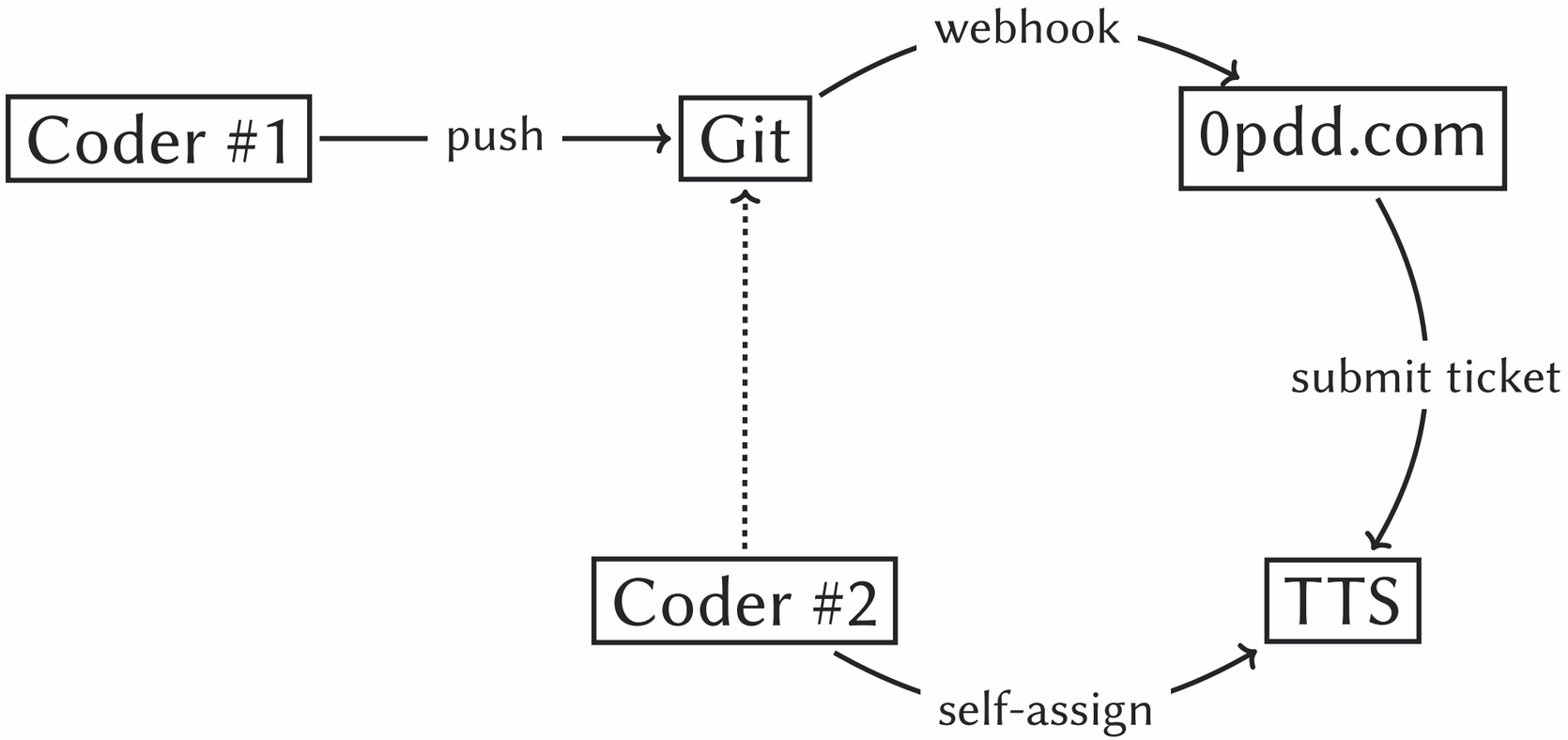
Commit #2:

```
int fibonacci(int n) {
  if (n <= 2) {
    return 1;
  }
  if (n == 9) {
    return 34;
  }
  // @todo Implement others
  // too, but I don't know
  // how to do it right.
  return 0;
}
assert fibonacci(2) == 1;
assert fibonacci(9) == 34;
// assert fibonacci(10) == 55;
```

Commit #3:

```
int fibonacci(int n) {
  if (n <= 2) {
    return 1;
  }
  return fibonacci(n-1)
    + fibonacci(n-2);
}
assert fibonacci(0) == 1;
assert fibonacci(2) == 1;
assert fibonacci(9) == 34;
assert fibonacci(10) == 55;
```

PDD Pipeline



Read this:

Automatically Prioritizing and Assigning Tasks from Code Repositories in Puzzle Driven Development, Yegor Bugayenko, Ayomide Bakare, Arina Cheverda, Mirko Farina, Artem Kruglov, Yaroslav Plaksin, Giancarlo Succi, and Witold Pedrycz, Proceedings of the International Mining Software Repositories (MSR), 2022

Puzzle Driven Development (2010)