

Spending less time bug fixing by
spending more time unit testing

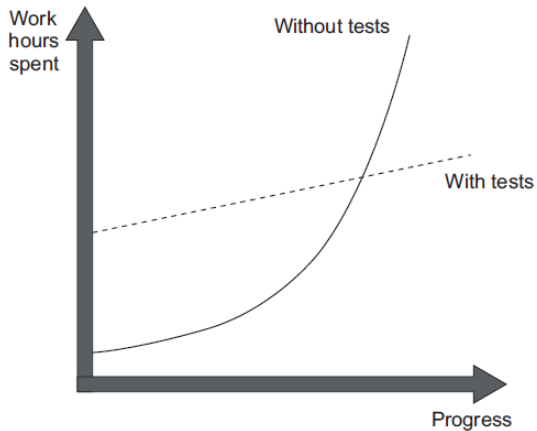
<Name>

There's much more to unit testing than the act of writing tests.

—*Khorikov, Unit Testing Principles, Practices, and Patterns*, 3

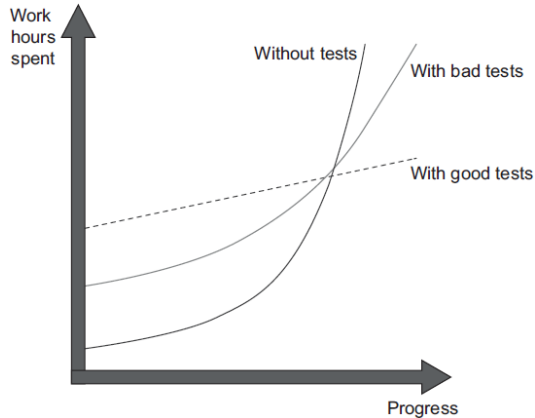
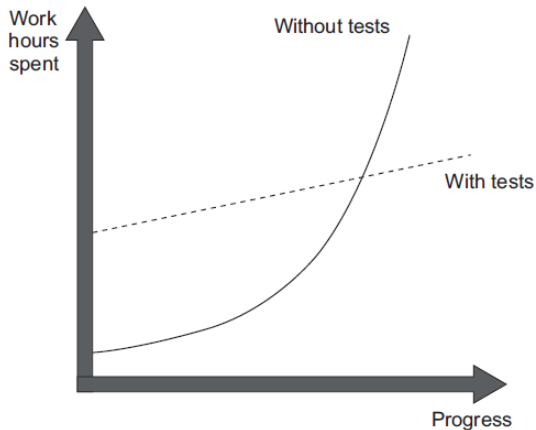
The goal of unit testing

To enable **sustainable** growth of software project.



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Coverage metrics

Statement vs Branch vs Path vs Condition

```
1 def is_fizzbuzz(num: int) -> bool:
2     if num % 3 and num % 5:
3         return True
4     return some_var
5
6 def test_fizzbuzz():
7     result = is_fizzbuzz(3)
8     assert result
```

$$\frac{\text{Number of statements executed}}{\text{Total number of statements}} \\ \approx 67\%$$

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Statement vs Branch vs Path vs Condition

```
1 def is_fizzbuzz(num: int) -> bool:
2     return True if num % 3 and num % 5 else some_var
3
4 def test_fizzbuzz():
5     result = is_fizzbuzz(3)
6     assert result
```

$$\frac{\text{Number of statements executed}}{\text{Total number of statements}} = 100\%$$