Category-partition Method

- Key idea
  - Method for creating test suites
  - Role of test engineer

Steps

- Develop “Formal Test Specification”
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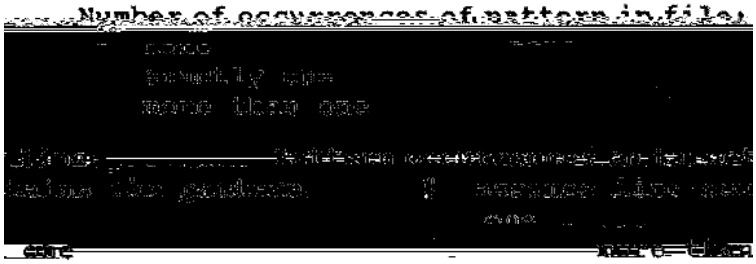
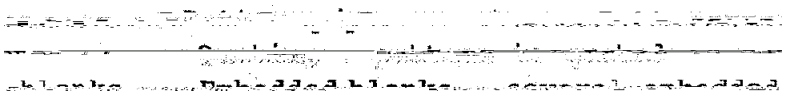
Test Specs - Environment

Environments:



Contradictory Requirements

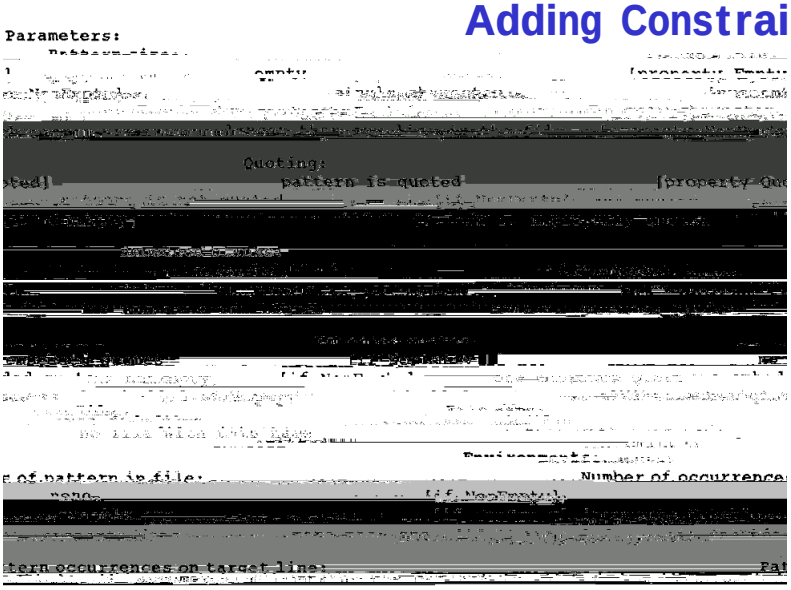
- Can we even generate such a test case?



Constraints

- Properties
  - [property A, B, …]
  - A and B are property names
  - E.g., [property Empty]
- Selector expression
  - [if A]
  - E.g., [if Empty]

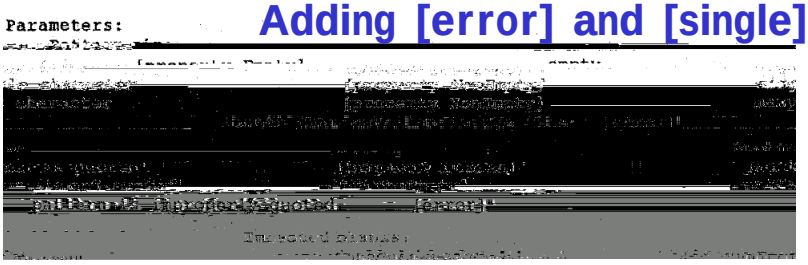
Adding Constraints



Number of Test Frames

- 678
- Can we reduce them?

Adding [error] and [single]



Number of Test Frames

- [error]
  - 125
- [single]
  - 40

Generating Test Cases

- Use a constraint solver
- Choose specific values that satisfy the constraints