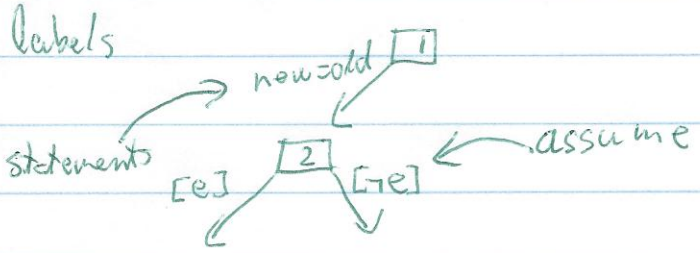
Blast

- abstract-check-refine too stupid
  - throws away and start over
  - same abstraction everywhere
- Use Lazy abstraction

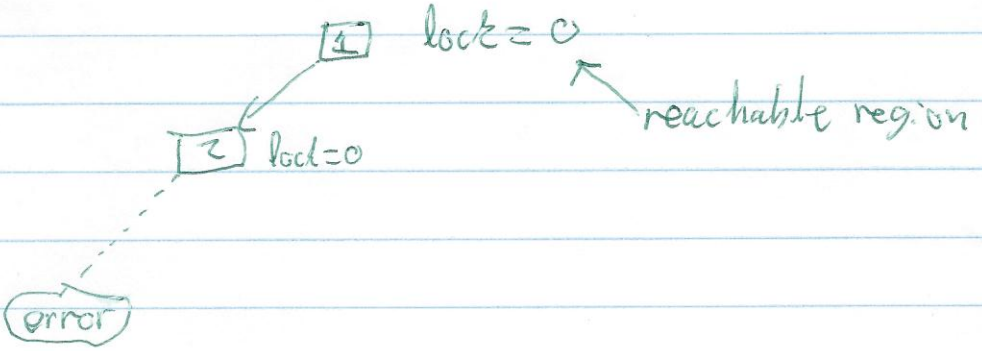
How it works

Instruments code: `it(e)`
ERROR

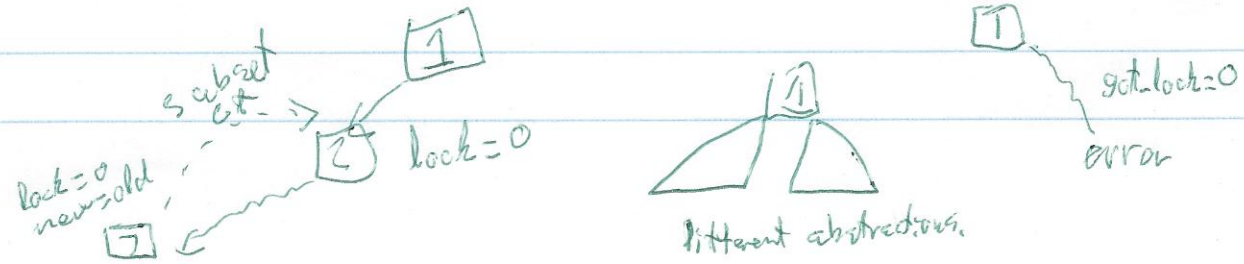
Create control flow automaton
Statements on labels



Forward Search
Create search tree under certain predicates using abstract interpretation



Backwards counterexample analysis
Use wp to compute predicates called bad regions
Check if RR ∧ BR can satisfis. If not our abstraction is too coarse. Pick predicate from proof of unsatisfiability. and rerun on that part of the tree.



Classification

Incomplete
- Finite #predicates is not always enough

Sound framework
but unsound C interpretation
- No overflow
- Bit level manipulations

Expresiveness
Safety properties

Scales
6K lines driver code
No other proof

Tool spectrum
Feels lightweight but uses heavyweight tools (abstract interpretation and theorem proving)