

Structured Programming

Prove the program to be RIGHT

- Mathematical Approach
 - Discipline of proving provable statements true
 - Use Euclidean hierarchy of theorems in the proof
 - Dijkstra tried at 1960s, but couldn't make it
- Scientific Approach
 - Discipline of proving provable statements false
 - Falsifiable but not provable - show correctness by failing to prove incorrectness
 - The rescue is **TEST**
 - Use tests to prove those small provable functions incorrect

Object-Oriented Programming

Hard to define ...

- The combination of data and functions
- A way to model the real world
- The proper admixture of three things (E.I.P.)
 - Encapsulation
 - Inheritance
 - Polymorphism