ReSoLVe Verification
Some History

• Need for good textbooks
• Combining of 2 research groups – Ogden and Weide RSRG (reusable software research group)
• Need for a name: REFORMS, VERPL, VERSOFT, VPL
• Meeting in Robinson Lab – We need to resolve this problem of finding a name
Principles

• Separation of concerns
• Modularity
• Precise specifications
• Generics
• Automated verification
Necessary Parts

• Library
  • Math Units
    • Math Theories with Proofs
    • Precis
    • Concepts, Realizations, Facilities
• Proof Checker
• Compiler
• Proof Rules
• Prover
Conditional Rule

\(\text{C code: Assume } B; \text{ code1; Confirm } Q;\)
\(\text{C code: Assume } \neg B; \text{ code2; Confirm } Q;\)

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\(\text{C code: If } B \text{ then code1 else code2; endif; Confirm } Q;\)