

Exercise 4

Feb 14/19, 2008

Formulate the following program analysis problems as a monotone framework. Is the monotone framework distributive? Is it a bit-vector framework?

1. Live variable analysis.
2. Constant Propagation: at each program point in a procedure, what variables always have single a constant value.
3. Pointer aliasing analysis: at each program point in a procedure, whether two arbitrary pointer variables may be aliased (may reach a common memory location).