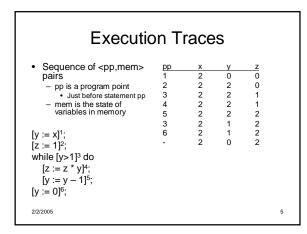
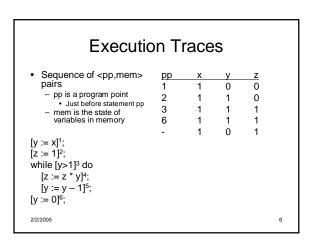


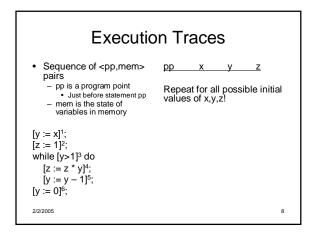
- abstraction relates program execution to data flow values
- conservative means truth \sqsubseteq analysis results

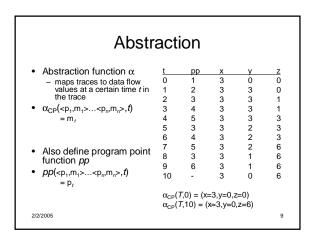
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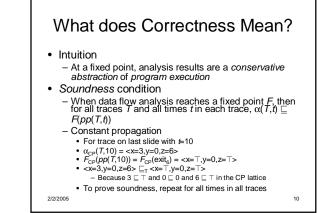


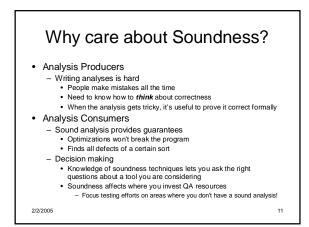


Execution Traces					
 Sequence of <pp,mem></pp,mem> 	рр	х	у	z	
pairs	1	3	0	0	
 pp is a program point 	2	3	3	0	
 Just before statement pp mem is the state of 	3	3	3	1	
variables in memory	4	3	3	1	
	5	3	3	3	
$[y := x]^1;$	3	3	2	3	
[z := 1] ² ;	4	3	2	3	
while [y>1] ³ do	5	3	2	6	
$[z := z * y]^4;$	3	3	1	6	
[y := y − 1] ⁵ ;	6	3	1	6	
[y := 0] ⁶ ;	-	3	0	6	
2/2/2005					7











- Formally define analysis
 - -We already know how
- Formalize trace semantics
- Define abstraction function
- Prove local soundness for flow functions
- Apply global soundness theorem

2/2/2005

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