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FOL: Eine "FOL-Sprache" besteht aus

- $\wedge \vee \neg \exists \forall (\dots)$

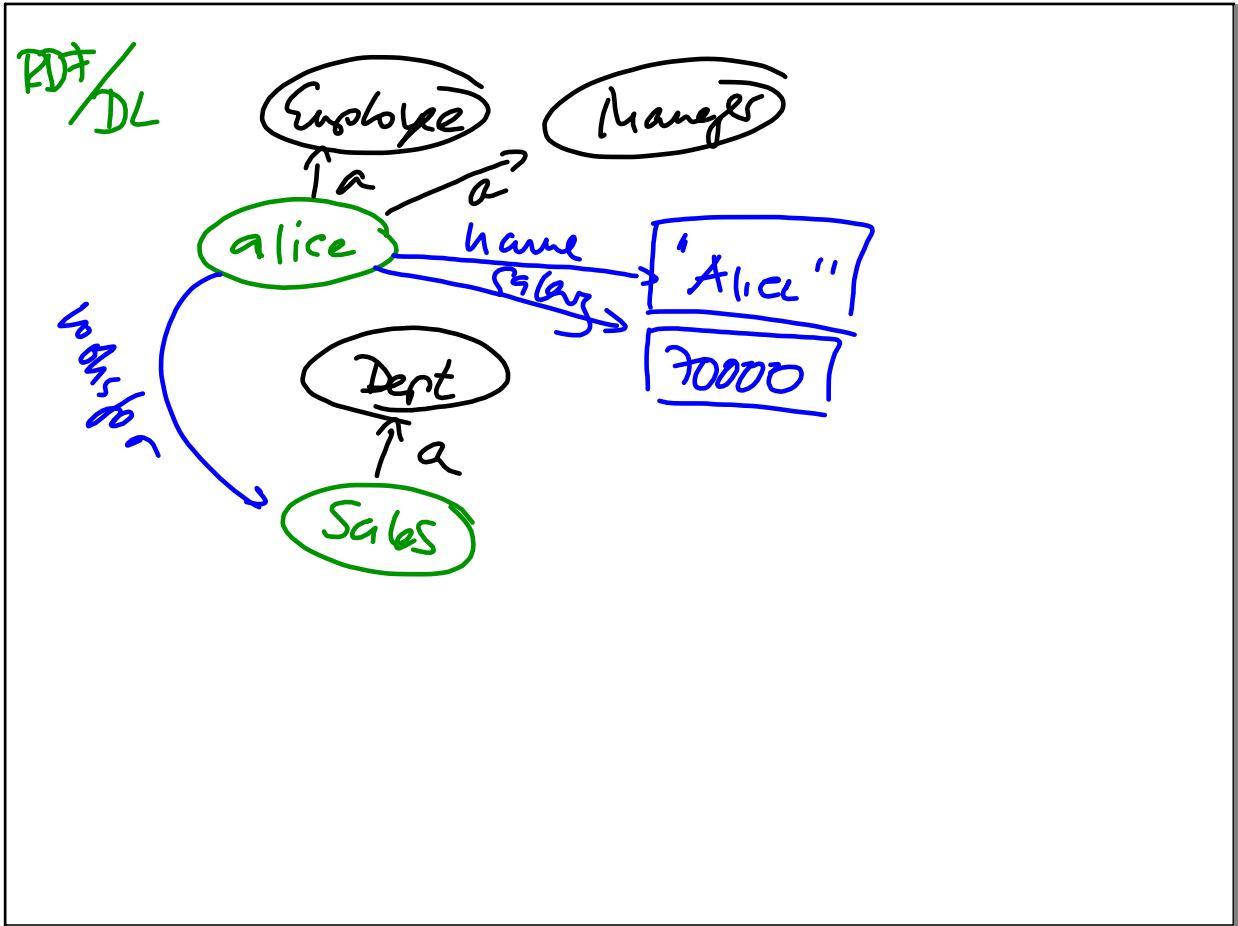
- konkrete Signaturen  $\Sigma = \Sigma_{Pred} \cup \Sigma_{Fkt}$   
 $\hat{=}$  Symbole aus der Logik

$\Sigma_{Pred, rel} = Employee/2, works\_for/2, susnd/2$

$\Sigma_{Pred, DL} = Employee/1, name/2, salary/2,$   
 $works\_for/2$

klasse  $\rightarrow$  1 Parameter  $\rightarrow$  /2

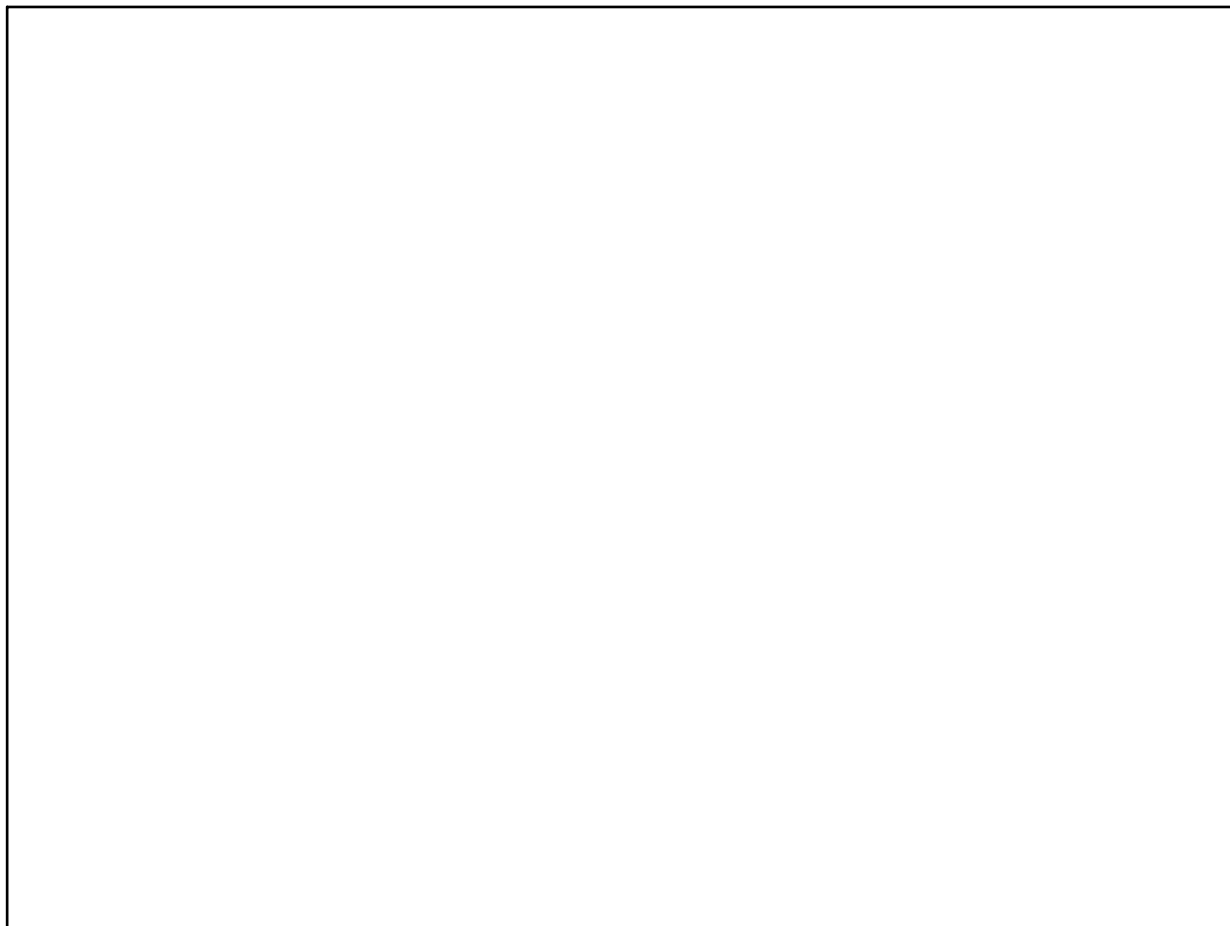
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FOL/DL - Einführung zum "Datenbankkurs"   
 bes. "Struktur"  $\mathcal{F} = (\mathcal{D}, I)$    
 Interpretation I Domain   
 {alice, bob, sales, ...}   
 DB: Achte Domain  $\cup$  string  $\cup$  int  $\cup$  Dates   
 z.B. alle (Employees), die nicht für Sales Dept. arbeiten   
 SQL: select name   
 from Emp e   
 where not exists (select \* from worksfor w   
 where w.employee = e.name   
 and w.dept = 'Sales')   
 Rel. Calc  $\forall s: Emp(x, s)$    
 $\forall x: Res(x) \leftarrow \neg worksfor(x, 'Sales')$    
 $\rightarrow$  Safety  $x/1, x/2, x/3, x/13, x/14, \dots$    
 $\forall x, y: (s4)ordrate(x, y) \leftarrow \exists d: worksfor(x, d) \wedge manager(y, d)$

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