

Problem Set 1

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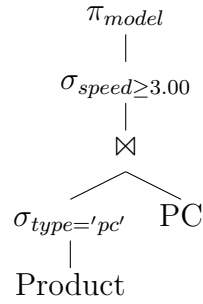
November 26, 2012

2.4.1

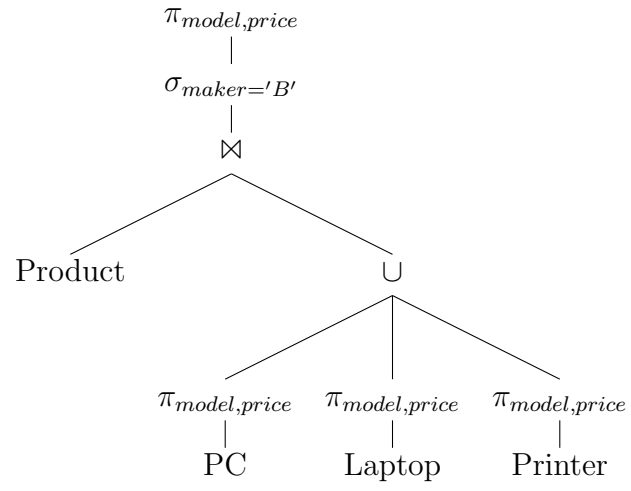
- a) $\pi_{model} \sigma_{speed \geq 3.00} (\sigma_{type='pc'}(Product) \bowtie PC)$
- c) $\pi_{model,price} \sigma_{maker='B'} (Product \bowtie (\pi_{model,price}(PC) \cup \pi_{model,price}(Laptop) \cup \pi_{model,price}(Printer)))$
- e) $\pi_{maker} (\sigma_{type='laptop'}(Product) - \sigma_{type='PC'}(Product))$
- f) $\pi_{hd} \sigma_{model \neq model'} (PC \bowtie \rho_{PC'(model',hd)}(\pi_{model,hd}(PC)))$
- i) $\pi_{maker} (Product \bowtie (\pi_{model}(PC) - \pi_{model}(\sigma_{speed < speed'}(PC \times \rho_{PC'(speed')}(\pi_{speed}(PC)))))$

2.4.2

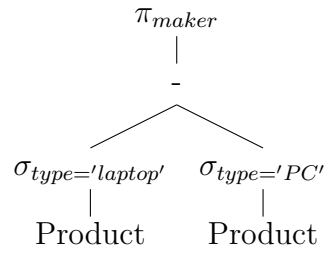
a)



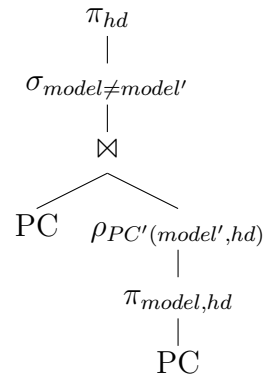
c)



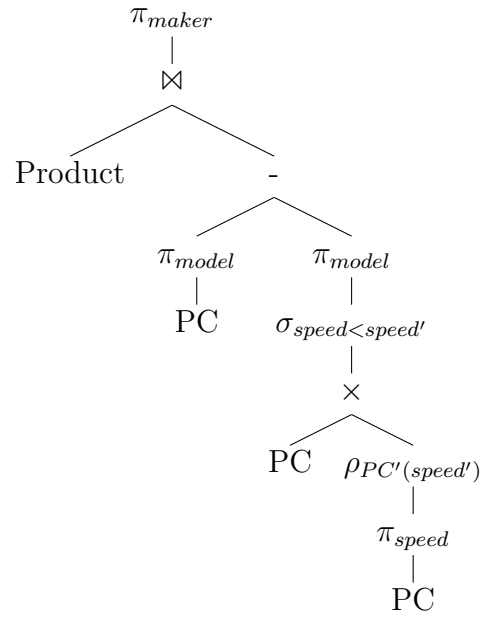
e)



f)



i)



5.1.3a

As a set,

bore

15

16

14

18

As a bag,

bore

15

16

14

16

15

15

14

18