

Homework 6

Logan Hunt

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1 Question One

$\sigma_{(\text{name}=\text{'Peter Smith'})}(\text{Client})$

2 Question Two

$\sigma_{(\text{frequency} > 5)}(\text{AirtimePackage})$

3 Question Three

$\pi_{(\text{videoCode})}(\sigma_{(\text{siteCode}=\text{'S345'})}(\text{Broadcasts}))$

4 Question Four

$\pi_{(\text{serialNo})}(\sigma_{(\text{type}=\text{'restaurant'})}(\text{DigitalDisplay} \bowtie_{(\text{serialNo}=\text{serialNo})} \text{Locates} \bowtie_{(\text{siteCode}=\text{siteCode})} \text{Site}))$

5 Question Five

$\pi_{(\text{empId}, \text{name})}(\sigma_{(\text{modelNo}=\text{'M456781'})}(\text{Specializes} \bowtie_{(\text{empId}=\text{empId})} \text{TechnicalSupport}))$

6 Question Six

$\pi_{(\text{modelNo})}(\sigma_{(\text{name}=\text{'Peter'})}(\text{Specializes} \bowtie_{(\text{empId}=\text{empId})} \text{TechnicalSupport}))$

7 Question Seven

$\pi_{(\text{videoCode}, \text{videoLength})}(\text{Video} \bowtie_{(\text{videoCode}=\text{videoCode})} (\pi_{(\text{videoCode})}(\sigma_{(\text{siteCode}=111)}(\text{Broadcasts}))$
– $\pi_{(\text{videoCode})}(\sigma_{(\text{siteCode}=112)}(\text{Broadcasts})))$

8 Question Eight

$$\pi_{(\text{name})}(\text{TechnicalSupport}) \cup \pi_{(\text{name})}(\text{Administrator}) \cup \pi_{(\text{name})}(\text{Salesman})$$

9 Question Nine

$$\pi_{(\text{empId}, \text{name})}(\sigma_{(\text{modelNo}=\text{'MO1' AND siteCode}=111)} \text{TechnicalSupport} \bowtie_{(\text{empId}=\text{empId})} (\text{Specializes}) \bowtie_{(\text{modelNo}=\text{modelNo})} (\text{DigitalDisplay}) \bowtie_{(\text{serialNo}=\text{serialNo})} (\text{Locates}))$$

10 Question Ten

$$\pi_{(\text{empId}, \text{name})}(\text{SalesMan} - \pi_{(\text{empId})}(\text{SalesMan} \bowtie_{(\text{empId}=\text{empId})} (\text{Purchases})))$$