

π hotel.hname,tourist.name,stay.year,stay.days,stay.cost (σ days \leq 4 \wedge cost $>$ 400 (stay \bowtie tourist \bowtie (ρ hname \leftarrow name,hcountry \leftarrow country (hotel))))

2)

π hotel_name,city,hotel_country (σ tourist.country='Greece' \vee tourist.country='England' ((ρ hotel_name \leftarrow name,hotel_country \leftarrow country (hotel)) \bowtie stay \bowtie tourist))

3)

π name (σ year=2004 (participate) \bowtie tourist)

4)

σ gender='female' (
 $(\pi$ tcode,tname,tcountry,age,gender ((σ (name='Hilton') (hotel
 \bowtie stay
 \bowtie ρ tname \leftarrow name,tcountry \leftarrow country (tourist))))))
 $-(\pi$ tcode,tname,tcountry,age,gender ((σ (name='Continental') (hotel \bowtie stay
 \bowtie ρ tname \leftarrow name,tcountry \leftarrow country (tourist))))))
 $)$

5)

π name (σ age $>$ age2 \wedge age $>$ age3 (tourist \bowtie (

ρ
tcode2 \leftarrow tcode,name2 \leftarrow name,country2 \leftarrow country,age2 \leftarrow age,gender2 \leftarrow gender (σ name='Kostas' (tourist))) \bowtie
(ρ
tcode3 \leftarrow tcode,name3 \leftarrow name,country3 \leftarrow country,age3 \leftarrow age,gender3 \leftarrow gender (σ name='Maria' (tourist))))

6)

$\pi \text{ name } (((\sigma \text{ hcode}=\text{hcode2} \wedge \text{tcode} \neq \text{tcode2} \wedge \text{year}=\text{year2} ((\text{stay} - (\pi \text{ hcode}, \text{tcode}, \text{year}, \text{days}, \text{cost} (\text{stay} \bowtie \sigma \text{ name}='Maria' (\text{tourist})))) \times (\pi \text{ hcode2}, \text{tcode2}, \text{year2}, \text{days2}, \text{cost2} (\rho \text{ hcode2} \leftarrow \text{hcode}, \text{tcode2} \leftarrow \text{tcode}, \text{year2} \leftarrow \text{year}, \text{days2} \leftarrow \text{days}, \text{cost2} \leftarrow \text{cost} (\text{stay} \bowtie \sigma \text{ name}='Maria' (\text{tourist}))))))) \bowtie \text{tourist})$

7)

$\pi \text{ name}, \text{country}, \text{age} (\text{tourist} - (\pi \text{ tcode} (\text{participate}) \bowtie \text{tourist}))$

8)

Υ.Γ τώρα κατάλαβα πως μπορώ να χρησιμοποιήσω μεταβλητές.

$A = \gamma \text{ tcode} ; \text{count}(\text{hcode}) \rightarrow a (\pi \text{ hcode}, \text{tcode} (\text{stay}))$

$B = \sigma a \geq 3 (A \bowtie \text{tourist})$

$\pi \text{ tcode}, \text{name } B$

9)

$A = \gamma \text{ min}(\text{age}) \rightarrow \text{minAge} (\text{tourist})$

$\pi \text{ tcode}, \text{name}, \text{country}, \text{age}, \text{gender} (\sigma \text{ age} = \text{minAge} (A \times \text{tourist}))$

10)

$A = \text{tourist} \bowtie \text{participate}$

$B = \pi \text{ name}, \text{acode } (A) / \pi \text{ acode } \text{activity}$

$\pi \text{ name } (B)$

