

(1) Name of Guest ^{Booked} in NYC Jan 2020

Date of Booking $\rightarrow \rho(T1, (\sigma_{\text{FromDate} = \text{'January'} \wedge \text{year} = \text{'2020'}}(\text{Booking})))$

NYC Hotel $\rightarrow \rho(T2, (\sigma_{\text{hCity} = \text{'NYC'}}(\text{Hotel})))$

$\rho(T3, (\pi_{gID, hID}(T1) / \pi_{hID}(T2)))$

$\rightarrow \pi_{gName}(T3 \bowtie \text{Guest})$

(2) Name of Guest booked suite in NYC for 10 days

suite $\rightarrow \rho(T1, (\sigma_{\text{type} = \text{'suite'}}(\text{Room})))$

NYC $\rightarrow \rho(T2, (\sigma_{\text{hCity} = \text{'NYC'}}(\text{Hotel})))$

$\rho(T3, (\sigma_{\text{noOfDays} \geq 10}(\text{Booking})))$

$\rho(T4, (\pi_{gID, hID}(T3) / \pi_{hID}(T2 - (T2 - T1))))$

$\rightarrow \pi_{gName}(T4 \bowtie \text{Guest})$