

Alex Johnson

I pledge my honor that I have abided by the Stevens Honor System.

HW3

1. $\pi_{gName}(\sigma_{fromDate=fromDate \leq 'Jan31' \wedge fromDate \geq 'Jan1' \wedge hCity='NYC'}(Guest \text{ join } Booking \text{ join } Hotel))$
2. $\pi_{gName}(\sigma_{type='suite' \wedge noOfDays > 10 \wedge hCity='NYC'}(Room \text{ join } Hotel \text{ join } Booking \text{ join } Guest))$
3.
 - a. $\rho(S1, \pi_{gId}(\sigma_{noOfDays > 5}(Guest \text{ join } Booking)))$
 - b. $\pi_{gName}((\pi_{gId}(Guest) - S1) \text{ join } Guest)$
4.
 - a. $\rho(S1, \pi_{hId}(\sigma_{year=2020}(Hotel \text{ join } Booking)))$
 - b. $\rho(S2, (\pi_{hId}(Hotel) - S1))$
 - c. $\pi_{hName}(S2 \text{ join } Hotel)$
5.
 - a. $\rho(S1, \pi_{hId}(\sigma_{city='NYC'}(Hotel)))$
 - b. $\rho(S2, \sigma_{type='suite'}(Booking \text{ join } Room))$
 - c. $\rho(S3, (\pi_{gId, hId}(S2)/S1))$
 - d. $\pi_{gName}((S3 \text{ join } Guest) - S1)$