Ali Kolenovic

Assignment 3

1.)

$$\pi_{gName}(\sigma_{hCity="NYC" \wedge (fromDate \leq "Jan\ 31" \wedge fromDate \geq "Jan\ 01") \wedge year=2020}\ (Guest \bowtie Booking \bowtie Hotel))$$

2.)

$$\pi_{gname}(\sigma_{hCity = "NYC" \wedge type="suite" \wedge noOfDays > 10}(Guest \bowtie Booking \bowtie Hotel \bowtie Room))$$

3.)

$$P(S1,\ \pi_{gId}(\sigma_{noOfDays > 5}(Guest \bowtie Booking))$$
$$P(S2,\ \pi_{gId}(Guest)\ -\ S1)$$
$$P(S3,\ \pi_{gName}(S2 \bowtie Guest))$$
$$S3$$

4.)

$$P(S1,\ \pi_{hId}(\sigma_{year=2020}(Hotel \bowtie Booking))$$
$$P(S2,\ \pi_{hId}(Hotel)\ -\ S1)$$
$$P(S3,\ \pi_{hName}(\sigma_{hCity="NYC"}(S2 \bowtie Hotel))$$
$$S3$$

5.)

$$P(S1,\ \pi_{hId}(\sigma_{hCity="NYC"}(Hotel))$$
$$P(S2,\ \sigma_{type="suite"}(Booking \bowtie Room))$$
$$P(S3,\ \pi_{gId,\ hId}(S2)/S1))$$
$$P(S4,\ \pi_{gName}(S3 \bowtie Guest))$$
$$S4$$