project (**π**), select (**σ**), join (⋈)

HOTEL (hotel_no, hotel_name, hotel_city)

ROOM (room_no, hotel_no, room_type, room_price)

BOOKING (hotel_no, guest_no, bdate_from, bdate_to, room_no)

GUEST (guest_no, guest_name, guest_address)

1. List the number and name for all hotels

R = **π** hotel_no hotel_name (HOTEL)

2. List all single rooms with a price below $50

R = **σ** room_type = single and room_price < 50 (ROOM)

3. List the numbers and names of all hotels in Melbourne

R = **π** hotel_no hotel_name (**σ** hotel_city = Melbourne (HOTEL))

4. List all numbers and names of hotels which have a presidential suite room

R1 = **π** hotel_no (**σ** room_type = presidential suite(ROOM))

R = R1 ⋈ **π** hotel_no hotel_name (HOTEL)

5. List the price and type of all rooms at the Grosvenor Hotel

6. List all numbers, names, and addresses of guests currently staying in deluxe room of any hotel (assume that if the guest has a tuple in the BOOKING relation, then they are currently staying in the hotel)

7. List all numbers, names, and addresses of guests currently staying at the Grosvenor Hotel (assume that if the guest has a tuple in the BOOKING relation, then they are currently staying in the hotel)