1. List the members of your group below. Underline your name.

2. Consider the relational instance from the previous class exercise: $R_1(B, N, C, D)$, representing the building name (B), room number (N), capacity (C), and description (D) of rooms on campus.

$$R_1$$

B	N	C	D
Neville	227	30	cramped seating, blackboard
Neville	120	25	nice chairs, whiteboard, videoconferencing
Neville	225	2	office
Neville	224	3	office
East Annex	225	10	lab
East Annex	227	3	office

Evaluate the following SQL queries on this instance.

(a)   `select C,D from R1`

(b)   ```
select *
from R1
where lower(D) like '%board%' and not lower(N) like '%office%'
```

(c)       `select 1, 2+3 from R1`

(d)       `select min(S.N), sum(T.C)`
            `from R1 S, R1 T`

(e)       `select B, N, C`
            `from R1`
            `where B = (select B from R1 where C = 30)`

3. Provide SQL queries for the following.

   (a) The building names and room numbers of rooms with a capacity between 10 and 50.

   (b) Pairs of rooms $(a, b)$ in the same building with the capacity of $b$ greater than that of $a$.

   (c) Pairs as in Question 3b, but with the added constraint that there is no room $c$ in the same building with capacity between those of $a$ and $b$.

   (d) The rooms with the largest capacities in each building.

4. Provide relational algebra equivalents of the SQL queries in Questions 2 and 3.