

## StayWell Student Accommodation Project

### Section 5 Output Results

1. a.

| PROPERTY_ID | OFFICE_NUM | BDRMS | FLOORS | MONTHLY_RENT | OWNER_NUM |
|-------------|------------|-------|--------|--------------|-----------|
| 3           | 1          | 2     | 1      | 1200         | BI109     |
| 5           | 1          | 2     | 1      | 1160         | SI105     |
| 9           | 2          | 2     | 1      | 1050         | PA101     |
| 11          | 2          | 2     | 1      | 1100         | JO110     |

CREATE VIEW SMALL\_PROPERTY AS

(SELECT PROPERTY\_ID, OFFICE\_NUM, BDRMS, FLOORS, MONTHLY\_RENT,  
OWNER\_NUM

FROM PROPERTY

WHERE (SQR\_FT < 1250)

);

b.

| OFFICE_NUM | PROPERTY_ID | MONTHLY_RENT |
|------------|-------------|--------------|
| 1          | 3           | 1200         |
| 1          | 5           | 1160         |

SELECT OFFICE\_NUM, PROPERTY\_ID, MONTHLY\_RENT

FROM SMALL\_PROPERTY

WHERE MONTHLY\_RENT >= 1150;

*\*Note: This is the query that the DBMS actually executes:*

SELECT PROPERTY.OFFICE\_NUM, PROPERTY.PROPERTY\_ID, PROPERTY.MONTHLY\_RENT

FROM PROPERTY

WHERE PROPERTY.SQR\_FT < 1250 AND PROPERTY.MONTHLY\_RENT >= 1150;

2. a.

| PROPERTY_ID | OFFICE_NUM | SQR_FT | BDRMS | FLOORS | MONTHLY_RENT | LAST_NAME |
|-------------|------------|--------|-------|--------|--------------|-----------|
| 1           | 1          | 1600   | 3     | 1      | 1400         | Burke     |
| 4           | 1          | 1750   | 3     | 1      | 1650         | Kowalczyk |
| 7           | 2          | 1675   | 3     | 2      | 1700         | Cole      |
| 10          | 2          | 1300   | 3     | 1      | 1600         | Lopez     |
| 12          | 2          | 1400   | 3     | 2      | 1700         | Redman    |

CREATE VIEW PROPERTY\_OWNERS AS

(SELECT P.PROPERTY\_ID, P.OFFICE\_NUM, P.SQR\_FT, P.BDRMS, P.FLOORS,  
P.MONTHLY\_RENT, O.LAST\_NAME

FROM PROPERTY P, OWNER O

WHERE P.OWNER\_NUM = O.OWNER\_NUM AND P.BDRMS = 3

);

b.

| PROPERTY_ID | OFFICE_NUM | MONTHLY_RENT | SQR_FT | LAST_NAME |
|-------------|------------|--------------|--------|-----------|
| 1           | 1          | 1400         | 1600   | Burke     |
| 4           | 1          | 1650         | 1750   | Kowalczyk |
| 10          | 2          | 1600         | 1300   | Lopez     |

SELECT PROPERTY\_ID, OFFICE\_NUM, MONTHLY\_RENT, SQR\_FT, LAST\_NAME

FROM PROPERTY\_OWNERS

WHERE MONTHLY\_RENT < 1675;

*\*Note: This is the query that the DBMS actually executes:*

SELECT P.PROPERTY\_ID, P.OFFICE\_NUM, P.MONTHLY\_RENT, P.SQR\_FT, O.LAST\_NAME

FROM PROPERTY P, OWNER O

WHERE P.OWNER\_NUM = O.OWNER\_NUM

AND P.BDRMS = 3

AND P.MONTHLY\_RENT < 1675;

3. a.

| BDRMS | AVERAGE_RENT |
|-------|--------------|
| 2     | 1127.5       |
| 3     | 1610         |
| 4     | 1975         |
| 5     | 2750         |

CREATE VIEW MONTHLY\_RENTS AS

(SELECT BDRMS, AVG(MONTHLY\_RENT) AS AVERAGE\_RENT

FROM PROPERTY

GROUP BY BDRMS

ORDER BY BDRMS

);

4. a. GRANT SELECT ON PROPERTY TO Oliver;
- b. GRANT INSERT ON OWNER TO Crandall, Perez;  
GRANT INSERT ON PROPERTY TO Crandall, Perez;
- c. GRANT UPDATE (MONTHLY\_RENT) ON PROPERTY TO Johnson, Klein;
- d. GRANT SELECT (OFFICE\_NUM, MONTHLY\_RENT, OWNER\_NUM) ON  
PROPERTY TO PUBLIC;
- e. GRANT INSERT, DELETE ON SERVICE\_CATEGORY TO Klein;
- f. GRANT INDEX ON SERVICE\_REQUEST TO Adams;
- g. GRANT ALTER ON PROPERTY TO Adams, Klein;
- h. GRANT ALL PRIVILEGES ON OFFICE TO Klein;  
GRANT ALL PRIVILEGES ON OWNER TO Klein;  
GRANT ALL PRIVILEGES ON PROPERTY TO Klein;

5. REVOKE ALL ON PROPERTY FROM Adams;

6.
  - a. CREATE INDEX OWNER\_INDEX1 ON OWNER (STATE);
  - b. CREATE INDEX OWNER\_INDEX2 ON OWNER (LAST\_NAME);
  - c. CREATE INDEX OWNER\_INDEX3 ON OWNER (STATE DESC, CITY);

7. DROP INDEX OWNER\_INDEX3 ON OWNER;

8.
  - a.

| COLUMN_NAME  | DATA_TYPE |
|--------------|-----------|
| ADDRESS      | varchar   |
| BDRMS        | tinyint   |
| FLOORS       | tinyint   |
| MONTHLY_RENT | smallint  |
| OFFICE_NUM   | tinyint   |
| OWNER_NUM    | char      |
| PROPERTY_ID  | smallint  |
| SQR_FT       | smallint  |

```
SELECT COLUMN_NAME, DATA_TYPE
      FROM INFORMATION_SCHEMA.COLUMNS
      WHERE TABLE_SCHEMA = 'STAYWELL' AND TABLE_NAME = 'PROPERTY';
```

- b.

| TABLE_NAME     |
|----------------|
| OWNER          |
| PROPERTY       |
| small_property |

```
SELECT TABLE_NAME
      FROM INFORMATION_SCHEMA.COLUMNS
      WHERE COLUMN_NAME = 'OWNER_NUM' AND TABLE_SCHEMA =
'STAYWELL';
```

9.

| PROPERTY_ID | OFFICE_NUM | ADDRESS                | SQR_FT | BDRMS | FLOORS | MONTHLY_RENT | OWNER_NUM |
|-------------|------------|------------------------|--------|-------|--------|--------------|-----------|
| 1           | 1          | 30 West Thomas Rd.     | 1600   | 3     | 1      | 1400         | BU106     |
| 2           | 1          | 782 Queen Ln.          | 2100   | 4     | 2      | 1900         | AK102     |
| 3           | 1          | 9800 Sunbeam Ave.      | 1005   | 2     | 1      | 1200         | BI109     |
| 4           | 1          | 105 North Illinois Rd. | 1750   | 3     | 1      | 1650         | KO104     |
| 5           | 1          | 887 Vine Rd.           | 1125   | 2     | 1      | 1160         | SI105     |
| 6           | 1          | 8 Laurel Dr.           | 2125   | 4     | 2      | 2050         | MO100     |
| 7           | 2          | 447 Goldfield St.      | 1675   | 3     | 2      | 1700         | CO103     |
| 8           | 2          | 594 Leatherwood Dr.    | 2700   | 5     | 2      | 2750         | KO104     |
| 9           | 2          | 504 Windsor Ave.       | 700    | 2     | 1      | 1050         | PA101     |
| 10          | 2          | 891 Alton Dr.          | 1300   | 3     | 1      | 1600         | LO108     |
| 11          | 2          | 9531 Sherwood Rd.      | 1075   | 2     | 1      | 1100         | JO110     |
| 12          | 2          | 2 Bow Ridge Ave.       | 1400   | 3     | 2      | 1700         | RE107     |

ALTER TABLE PROPERTY

ADD FOREIGN KEY (OWNER\_NUM) REFERENCES OWNER (OWNER\_NUM);

10.

ALTER TABLE PROPERTY

ADD CHECK (BDRMS IN (1, 2, 3));