TEST PLAN

ID	TEST	ELEMENT TESTED	EXPECTED RESULT	ACTUAL RESULT
1	SELECT tnt_id, name, surname FROM tenants WHERE surname LIKE 'A%S';	Query #1	Surnames starting with A and ending with S	As expected

```
SQL> SELECT tnt_id, name, surname FROM tenants WHERE surname LIKE 'A%S';

   TNT_ID NAME                                           SURNAME
---------- ---------------------------------------- -------------
       17 ELEONORA                                       ANDREWS
       18 NIKOLA                                         ADAMS
```

ID	TEST	ELEMENT TESTED	EXPECTED RESULT	ACTUAL RESULT
2	select country, count(*) from tenants group by country;	Query #2	9 rows returned(count(*) sums up to 18)	As expected

```
SQL>     select country, count(*) from tenants group by country;

COUNTRY                COUNT(*)
-------------------- ----------
GREECE                       7
ARGENTINA                    1
UNITED STATES                4
CANADA                       1
CYPRUS                       1
ITALY                        1
SERBIA                       1
ROMANIA                      1
MEXICO                       1

9 rows selected.
```

ID	TEST	ELEMENT TESTED	EXPECTED RESULT	ACTUAL RESULT
3	SELECT apt_id,COUNT(*) AS rental_count FROM Rentals GROUP BY apt_id ORDER BY rental_count DESC;	Query #3	The apartment that was rented the most times	As expected

```
SQL> SELECT apt_id,COUNT(*) AS rental_count FROM Rentals GROUP BY apt_id ORDER BY rental_count DESC;

    APT_ID RENTAL_COUNT
---------- ------------
         1            3
         7            3
         3            3
        11            2
         4            2
        19            1
         2            1
        10            1
        12            1
        17            1
         6            1
         5            1
         8            1

13 rows selected.
```

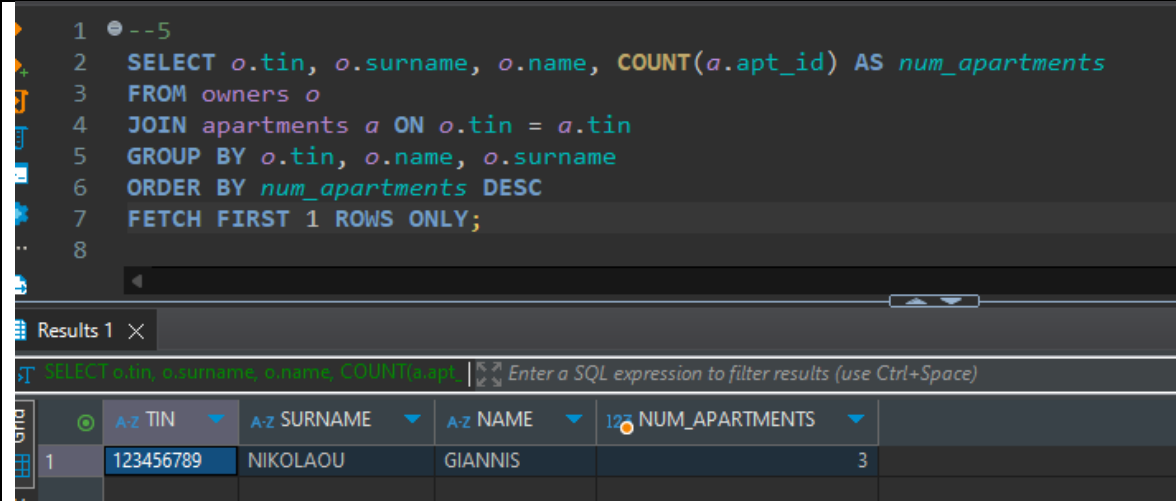| 4 | SELECT o.surname AS Owner_Surname, o.name AS Owner_Name, o.TIN AS Owner_TIN,

        a.apt_id AS Apartment_ID, a.street_name AS Apartment_Street, a.street_num AS Apartment_Street_Number, a.city AS Apartment_City
FROM Owners o
LEFT JOIN Apartments a ON o.TIN = a.tin
ORDER BY o.surname ASC, o.name ASC; | Query #4 | Owners displayed in ascending order, along with the apartments they own | As expected |

```sql
1 •  SELECT o.surname AS Owner_Surname, o.name AS Owner_Name, o.TIN AS Owner_TIN,
2        a.apt_id AS Apartment_ID, a.street_name AS Apartment_Street, a.street_num AS Apartment_Street_Number, a.city AS Apartment_City
3    FROM Owners o
4    LEFT JOIN Apartments a ON o.TIN = a.tin
5    ORDER BY o.surname ASC, o.name ASC;
```
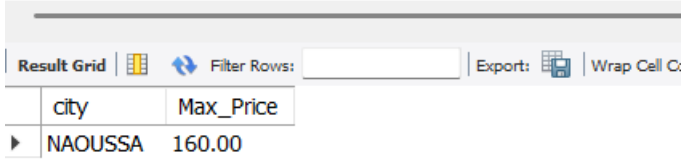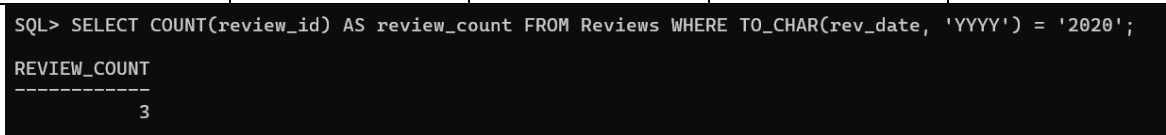
Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Owner_Surname	Owner_Name	Owner_TIN	Apartment_ID	Apartment_Street	Apartment_Street_Number	Apartment_City
ANTONIOU	LOUKIA	456789012	7	KNOSSOU	5	HERAKLION
DELEONARDI	EVA	432108765	16	TRIKOUPI	16	KATERINI
DELEONARDI	EVA	432108765	17	OMONIAS	17	KATERINI
GEORGIOU	GIORGOS	234567890	4	TSIMISKI	3	THESSALONIKI
GEORGIOU	GIORGOS	234567890	5	SAINT DIMITRIOU	3	THESSALONIKI
IOANNIDIS	XRISTOS	901234567	11	SPYROU VASILEIOU	10	CORFU
MICHAELIDOU	DESPOINA	210986543	14	MAVRIKIOU	14	KOMOTINI
NIKOLAOU	GIANNIS	123456789	1	ERMOU	1	ATHENS
NIKOLAOU	GIANNIS	123456789	2	SAINT ANARGYROU	2	ATHENS
NIKOLAOU	GIANNIS	123456789	3	KIFISIAS	13	LAMIA
OIKONOMOU	NATASA	012345678	12	ERMIONIS	11	KAVALA
PAPADAKI	DORA	321098654	15	SALAMINOS	15	CHALKIDA
PAPADIMITRIOU	SOFIA	890123456	10	KON/NOU PALAIOL...	9	RHODES
PAPADOPOULOS	MIXALIS	345678901	6	KORINTHOU	4	PATRA
PAPADOPOULOU	EMILIA	678901234	18	NIKITARA	7	VOLOS
PAPAGEORGIOU	KOSTAS	109876542	13	CHATZOPOULOU	12	LAMIA
PAPAGEORGIOU	KOSTAS	109876542	19	THEOFILOU	19	NAOUSSA
PAPPAS	DIMITRIS	789012345	9	TSIROGIANNI	8	IOANNINA
VLACHOS	ACHILLEAS	567890123	8	PAPANASTASIOU	6	LARISSA

5	SELECT o.tin, o.surname, o.name, COUNT(a.apt_id) AS num_apartments FROM owners o JOIN apartments a ON o.tin = a.tin GROUP BY o.tin, o.name, o.surname ORDER BY num_apartments DESC FETCH FIRST 1 ROWS ONLY;	Query #5	Owner with the most apartments	As expected

```sql
1  ● --5
2  SELECT o.tin, o.surname, o.name, COUNT(a.apt_id) AS num_apartments
3  FROM owners o
4  JOIN apartments a ON o.tin = a.tin
5  GROUP BY o.tin, o.name, o.surname
6  ORDER BY num_apartments DESC
7  FETCH FIRST 1 ROWS ONLY;
8
```

Results 1 ×

SELECT o.tin, o.surname, o.name, COUNT(a.apt_ | Enter a SQL expression to filter results (use Ctrl+Space)

A-Z TIN	A-Z SURNAME	A-Z NAME	123 NUM_APARTMENTS
1	123456789	NIKOLAOU	GIANNIS	3

6	SELECT city, MAX(price) AS Max_Price	Query #6	The city with the most expensive	As expected

	FROM Apartments GROUP BY city ORDER BY Max_Price DESC LIMIT 1;		apartment, in this case Naousa	

```
1 •   SELECT city, MAX(price) AS Max_Price
2     FROM Apartments
3     GROUP BY city
4     ORDER BY Max_Price DESC
5     LIMIT 1;
```

Result Grid | Filter Rows: | Export: | Wrap Cell C

city	Max_Price
▶ NAOUSSA	160.00

7	SELECT COUNT(review_id) AS review_count FROM Reviews WHERE TO_CHAR(rev_date, 'YYYY') = '2020';	Query #7	The number of reviews that were written in 2020	As expected

```
SQL> SELECT COUNT(review_id) AS review_count FROM Reviews WHERE TO_CHAR(rev_date, 'YYYY') = '2020';

REVIEW_COUNT
------------
           3
```

8	SELECT t.surname, t.name, COUNT(r.review_id) AS num_reviews FROM tenants t JOIN reviews r ON t.tnt_id = r.tnt_id GROUP BY t.surname, t.name ORDER BY num_reviews	Query #8	Name and surname of the tenant with the most reviews	As expected

	DESC FETCH FIRST 1 ROWS ONLY;			

```
10  ●--8
11  SELECT t.surname, t.name, COUNT(r.review_id) AS num_reviews
12  FROM tenants t
13  JOIN reviews r ON t.tnt_id = r.tnt_id
14  GROUP BY t.surname, t.name
15  ORDER BY num_reviews DESC
16  FETCH FIRST 1 ROWS ONLY;
17
```

Results 1 ✕

SELECT t.surname, t.name, COUNT(r.review_id) / Enter a SQL expression to filter results (use Ctrl+Space)

	A-Z SURNAME ▼	A-Z NAME ▼	123 NUM_REVIEWS ▼	
1	CHALKIA	STAVROULA	2	

9	SELECT DISTINCT a.apt_id, a.street_name, a.street_num, a.city, r.start_date FROM apartments a JOIN rentals r ON a.apt_id = r.apt_id WHERE TO_CHAR(r.start_date, 'MM') = '08';	Query #9	apartments rented in August	As expected

```
SQL> SELECT DISTINCT a.apt_id, a.street_name, a.street_num, a.city, r.start_date FROM apartments a JOIN rentals r ON a.apt_id = r.apt_id W
HERE TO_CHAR(r.start_date, 'MM') = '08';

   APT_ID STREET_NAME                                          STREE CITY                         START_DAT
--------- -------------------------------------------------    ----- --------------------------   ---------
        6 KORINTHOU                                                4  PATRA                        02-AUG-20
       10 KON/NOU PALAIOLOGOU                                      9  RHODES                       14-AUG-20
```

10	SELECT COUNT(*) AS Unrented_Apartments FROM apartments a LEFT JOIN rentals r ON a.APT_ID = r.APT_ID WHERE	Query #10	6 apartments(apt_ids : 9,13,14,15,16,18)	As expected

	r.APT_ID IS NULL;			

```
SQL> SELECT COUNT(*) AS Unrented_Apartments
  2      FROM apartments a
  3      LEFT JOIN rentals r ON a.APT_ID = r.APT_ID WHERE r.APT_ID IS NULL;

UNRENTED_APARTMENTS
-------------------
                  6
```

11	SELECT NAME, SURNAME, DATE_OF_BIRTH FROM tenants t WHERE t.GENDER = 'F' ORDER BY DATE_OF_BIRTH ASC FETCH FIRST 1 ROWS ONLY;	Query #11	Oldest female tenant	As expected

```
18  ●--11
19  SELECT NAME, SURNAME, DATE_OF_BIRTH FROM tenants t
20  WHERE t.GENDER = 'F'
21  ORDER BY DATE_OF_BIRTH ASC
22  FETCH FIRST 1 ROWS ONLY;
```

Results 1 ✕

SELECT NAME, SURNAME, DATE_OF_BIRTH FRO| Enter a SQL expression to filter results (use C

	A-Z NAME	A-Z SURNAME	DATE_OF_BIRTH
1	ILIANA	VASILIADOU	1988-11-11 00:00:00.000

12	SELECT o.TIN, o.name, o.surname FROM owners o WHERE o.TIN NOT IN (SELECT DISTINCT a.tin FROM apartments a JOIN rentals r ON a.apt_id = r.apt_id);	Query #12	Owners without rentals for any of their property	As expected

```
SQL> SELECT o.TIN, o.name, o.surname FROM owners o WHERE o.TIN NOT IN (
  2       SELECT DISTINCT a.tin FROM apartments a JOIN rentals r ON a.apt_id = r.a
pt_id);

TIN        NAME                                  SURNAME
---------- ------------------------------------  ------------------------------------
210986543 DESPOINA                               MICHAELIDOU
321098654 DORA                                   PAPADAKI
678901234 EMILIA                                 PAPADOPOULOU
789012345 DIMITRIS                               PAPPAS
```

| 13 | SELECT t.name AS Tenant_Name, t.surname AS Tenant_Surname, t.email AS Tenant_Email, a.street_name AS Apartment_Street, a.city AS Apartment_City FROM Rentals r JOIN Tenants t ON r.tnt_id = t.tnt_id JOIN Apartments a ON r.apt_id = a.apt_id WHERE a.street_name LIKE '%SAINT%'; | Query #13 | Tenants Kuriakos Kuriakou and Luigi Mario, which are the ones that have rented an apartment with an address containing the word "Saint" in it | As expected |

```
1 •  SELECT t.name AS Tenant_Name, t.surname AS Tenant_Surname, t.email AS Tenant_Email,
2        a.street_name AS Apartment_Street, a.city AS Apartment_City
3    FROM Rentals r
4    JOIN Tenants t ON r.tnt_id = t.tnt_id
5    JOIN Apartments a ON r.apt_id = a.apt_id
6    WHERE a.street_name LIKE '%SAINT%';
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

Tenant_Name	Tenant_Surname	Tenant_Email	Apartment_Street	Apartment_City
KYRIAKOS	KYRIAKOU	KYRKYR@GMAIL.COM	SAINT ANARGYROU	ATHENS
LUIGI	MARIO	MARIOLUI@GMAIL.COM	SAINT DIMITRIOU	THESSALONIKI

| 14 | select a.apt_id, a.street_name, a.street_num, a.zip_code,a.city,a.floor, avg(r.stars) as Average_Stars from apartments a JOIN reviews r ON a.APT_ID = r.APT_ID group by a.apt_id, a.street_name, a.street_num, a.zip_code, a.city,a.floor order by Average_Stars desc; | Query #14 | 9 rows returned(apt ids of 1 and 4 having the highest scores while apt ids of 2 and 12 having the lowest scores | As expected |

```
SQL> select a.apt_id, a.street_name,a.street_num,a.zip_code,a.city,a.floor, avg(r.stars) as Average_Stars from apartments a
  2     JOIN reviews r ON a.APT_ID = r.APT_ID
  3     group by a.apt_id, a.street_name,a.street_num,a.zip_code, a.city,a.floor order by Average_Stars desc;

    APT_ID STREET_NAME              STREE ZIP_C CITY              FLOOR AVERAGE_STARS
---------- -------------------- ----- ----- -------------------- ---------- -------------
         1 ERMOU                    1     12345 ATHENS               1             5
         4 TSIMISKI                 3     54321 THESSALONIKI         3             5
         6 KORINTHOU                4     26890 PATRA                4             4
         7 KNOSSOU                  5     71876 HERAKLION            5             4
         3 KIFISIAS                 13    35100 LAMIA                13            4
        10 KON/NOU PALAIOLOGOU      9     85165 RHODES               9             4
        11 SPYROU VASILEIOU         10    49223 CORFU                10            2
         2 SAINT ANARGYROU          2     12246 ATHENS               2             1
        12 ERMIONIS                 11    65445 KAVALA               5             1

9 rows selected.
```

| 15 | SELECT r.apt_id,AVG(r. stars) AS review_averag e FROM Reviews r JOIN Apartments a ON r.apt_id=a.apt_ id WHERE a.city='THESS ALONIKI' GROUP BY r.apt_id ORDER BY review_averag e DESC FETCH | Query #15 | The apartment in Thessaloniki that has the highest review average | As expected |

	FIRST 1 ROWS ONLY;			

```
SQL> SELECT r.apt_id,AVG(r.stars) AS review_average
  2   FROM Reviews r
  3   JOIN Apartments a ON r.apt_id=a.apt_id
  4   WHERE a.city='THESSALONIKI'
  5   GROUP BY r.apt_id
  6   ORDER BY review_average DESC
  7   FETCH FIRST 1 ROWS ONLY;

    APT_ID REVIEW_AVERAGE
---------- --------------
         4              5
```

16	SELECT t.name, t.surname, COUNT(r.apt_id) AS num_rentals FROM tenants t JOIN rentals r ON t.tnt_id = r.tnt_id GROUP BY t.name, t.surname ORDER BY num_rentals DESC FETCH FIRST 1 ROWS ONLY;	Query #16	Tenant with the most apartments rented	As expected

```
24  ●--16
25   SELECT t.name, t.surname, COUNT(DISTINCT(r.apt_id)) AS num_rentals
26   FROM tenants t
27   JOIN rentals r ON t.tnt_id = r.tnt_id
28   GROUP BY t.name, t.surname
29   ORDER BY num_rentals DESC
30   FETCH FIRST 1 ROWs ONLY;
```

Results 1 ✕

SELECT t.name, t.surname, COUNT(DISTINCT(r.a | Enter a SQL expression to filter results (use Ctrl+Space)

	A-z NAME	A-z SURNAME	123 NUM_RENTALS	
1	STAVROULA	CHALKIA	3	

17	SELECT t.gender AS Tenant_Gender, AVG(r.stars)	Query #17	Average review score of apartments, split in reviews	As expected

	AS Average_Score FROM Reviews r JOIN Tenants t ON r.tnt_id = t.tnt_id WHERE t.gender IN ('F', 'M') GROUP BY t.gender;		made by male and female	

```sql
1 •  SELECT t.gender AS Tenant_Gender, AVG(r.stars) AS Average_Score
2    FROM Reviews r
3    JOIN Tenants t ON r.tnt_id = t.tnt_id
4    WHERE t.gender IN ('F', 'M')
5    GROUP BY t.gender;
```

Result Grid	Filter Rows:	Export:	Wrap Cell Content:

Tenant_Gender	Average_Score
F	4.3333
M	1.3333

18	SELECT t.gender, a.city, COUNT(*) AS rental_count FROM rentals r JOIN apartments a ON r.apt_id = a.apt_id JOIN tenants t ON r.tnt_id = t.tnt_id GROUP BY t.gender, a.city ORDER BY t.gender, rental_count DESC;	Query #18	The city that its apartments were rented the most times per gender	As expected

```
50  ●--18
51    SELECT t.gender, a.city, COUNT(*) AS rental_count
52    FROM rentals r
53    JOIN apartments a ON r.apt_id = a.apt_id
54    JOIN tenants t ON r.tnt_id = t.tnt_id
55    GROUP BY t.gender, a.city
56    ORDER BY t.gender, rental_count DESC; |
57
```

Results 1 ✕

SELECT t.gender, a.city, COUNT(*) AS rental_cou   Enter a SQL expression to filter results (use

	A-Z GENDER	A-Z CITY	123 RENTAL_COUNT
1	F	LAMIA	1
2	F	LARISSA	1
3	F	HERAKLION	1
4	M	HERAKLION	2
5	M	ATHENS	2
6	M	CORFU	2
7	M	NAOUSSA	1
8	M	THESSALONIKI	1
9	M	LAMIA	1
10	M	PATRA	1
11	M	KATERINI	1
12	M	KAVALA	1
13	O	ATHENS	2
14	O	RHODES	1
15	O	LAMIA	1
16	O	THESSALONIKI	1

19	select tnt_id, name, surname, concat(substr(name, 1, 4), substr(surnam e, 1, 4)) as username from tenants;	Query #19	Concatenation of the first 4 letters of the first names and the first 4 letters of the surnames	As expected

```
SQL> select tnt_id, name, surname, concat(substr(name, 1, 4), substr(surname, 1, 4)) as username
  2     from tenants;

   TNT_ID NAME                 SURNAME            USERNAME
---------- -------------------- ------------------ ----------------
        1 GEORGIOS             TACHTSIDIS         GEORTACH
        2 GEORGIA              VALASIOTI          GEORVALA
        3 ILIANA               VASILIADOU         ILIAVASI
        4 CHRYSOVALANTIS       ELEFTHERIADIS      CHRYELEF
        5 STAVROULA            CHALKIA            STAVCHAL
        6 JULIO                ALVAREZ            JULIALVA
        7 JAMES                CARTER             JAMECART
        8 EMILY                JOHNSON            EMILJOHN
        9 MARIA                PAPADOPOULOU       MARIPAPA
       10 KYRIAKOS             KYRIAKOU           KYRIKYRI
       11 DA SILVA SANTOS JR   NEYMAR             DA SNEYM
       12 OLIVIA               RODRIGO            OLIVRODR
       13 LUIGI                MARIO              LUIGMARI
       14 ANTONIS              ANARGIROU          ANTOANAR
       15 GEORGE               BIDENIDIS          GEORBIDE
       16 HELEN                MARIGONA           HELEMARI
       17 ELEONORA             ANDREWS            ELEOANDR
       18 NIKOLA               ADAMS              NIKOADAM

18 rows selected.
```

| 20 | SELECT TO_CHAR(r.start_date, 'YYYY') AS rental_year, SUM(a.price * (r.end_date - r.start_date)) AS total_revenue FROM apartments a JOIN rentals r ON a.apt_id = r.apt_id GROUP BY TO_CHAR(r.start_date, 'YYYY') ORDER BY rental_year; | Query #20 | Total revenue per year for all rentals | As expected |

```
SQL> SELECT TO_CHAR(r.start_date, 'YYYY') AS rental_year, SUM(a.price * (r.end_da
te - r.start_date)) AS total_revenue FROM apartments a JOIN rentals r ON a.apt_id
 = r.apt_id GROUP BY TO_CHAR(r.start_date, 'YYYY') ORDER BY rental_year;

RENT TOTAL_REVENUE
---- -------------
2020          1875
2022         23500
2023         16925
2024          9865
2025          1300
```

| (a1) | select * from rentals; | All the records from one table | All rentals | As expected |

```
SQL> select * from rentals;

    APT_ID     TNT_ID START_DAT END_DATE
---------- ---------- --------- ---------
        11         11 05-MAR-22 10-MAR-22
         1          5 06-NOV-24 15-NOV-24
         7         10 10-JAN-22 10-MAR-22
         3          4 15-MAY-22 20-AUG-22
        19         14 01-SEP-22 30-SEP-22
        17         13 05-NOV-22 15-NOV-22
         1          5 01-JAN-23 15-FEB-23
         7          9 10-MAR-23 10-MAY-23
         2         10 01-JUL-23 30-JUL-23
         5         13 05-SEP-23 15-SEP-23
         3          3 01-NOV-23 21-NOV-23
        12         11 15-JAN-24 20-JAN-24
         4          5 05-MAR-24 01-APR-24
         3          5 15-MAY-24 30-MAY-24
         7          6 01-JUL-24 01-AUG-24
        11         13 10-OCT-24 20-OCT-24
         1         15 01-JAN-25 02-JAN-25
         8          8 05-APR-25 15-APR-25
         4         17 10-MAR-20 15-MAR-20
         6          1 02-AUG-20 16-AUG-20
        10          7 14-AUG-20 19-AUG-20

21 rows selected.
```

(a2)	select * from owners;	All the records from one table	14 rows returned	As expected

```
SQL> select * from owners;

TIN       NAME            SURNAME         G DATE_OF_B EMAIL                            TEL        CITY
--------- --------------- --------------- - --------- -------------------------------- ---------- -------------
123456789 GIANNIS         NIKOLAOU        M 01-JAN-80 NIKOLAOU.DOE@GMAILE.COM          6916436458 ATHENS
234567890 GIORGOS         GEORGIOU        F 15-FEB-85 GEORGIOU.SMITH@GMAIL.COM         6976431115 THESSALONIKI
345678901 MIXALIS         PAPADOPOULOS    M 20-MAR-75 PAPADOPOULOS.JOHNSON@GMAIL.COM   6997664364 PATRA
456789012 LOUKIA          ANTONIOU        F 05-APR-90 ANTONIOU.BROWN@GMAIL.COM         6976764589 HERAKLION
567890123 ACHILLEAS       VLACHOS         M 10-MAY-82 VLACHOS.DAVIS@GMAIL.COM          6996352648 LARISSA
678901234 EMILIA          PAPADOPOULOU    F 25-JUN-78 PAPADOPOULOU.MILLER@GMAIL.COM    6944663254 VOLOS
789012345 DIMITRIS        PAPPAS          M 30-JUL-95 PAPPAS.WILSON@GMAIL.COM          6997643151 IOANNINA
890123456 SOFIA           PAPADIMITRIOU   F 15-AUG-88 VLAXOU.MOORE@GMAIL.COM           6998665534 RHODES
901234567 XRISTOS         IOANNIDIS       M 10-SEP-83 IOANNIDIS.TAYLOR@GMAIL.COM       6977643361 CORFU
012345678 NATASA          OIKONOMOU       F 05-OCT-77 OIKONOMOU.ANDERSON@GMAIL.COM     6997948819 KAVALA
109876542 KOSTAS          PAPAGEORGIOU    M 25-NOV-92 PAPAGEORGIOU.THOMAS@GMAIL.COM    6930482939 LAMIA
210986543 DESPOINA        MICHAELIDOU     F 30-DEC-86 MICHAELIDOU.JACKSON@GMAIL.COM    6903264080 KOMOTINI
321098654 DORA            PAPADAKI        F 10-JAN-81 PAPADAKI.WRIGHT@GMAIL.COM        6906313058 CHALKIDA
432108765 EVA             DELEONARDI      F 15-FEB-84 DELEONARDI.HARRIS@GMAIL.COM      6990336594 KATERINI

14 rows selected.
```

(b1)	select apt_id,city,area from apartments order by apt_id desc;	Data returned sorted in reverse alphabetical order	3 columns sorted by reverse ID	As expected

```
SQL> select apt_id,city,area from apartments order by apt_id desc;

    APT_ID CITY                                    AREA
---------- ------------------------------ ----------
        19 NAOUSSA                               160
        18 VOLOS                                 110
        17 KATERINI                              145
        16 KATERINI                              135
        15 CHALKIDA                              125
        14 KOMOTINI                              115
        13 LAMIA                                 105
        12 KAVALA                                140
        11 CORFU                                 130
        10 RHODES                                 80
         9 IOANNINA                               90
         8 LARISSA                               120
         7 HERAKLION                              95
         6 PATRA                                  75
         5 THESSALONIKI                           85
         4 THESSALONIKI                           85
         3 LAMIA                                 115
         2 ATHENS                                120
         1 ATHENS                                100

19 rows selected.
```

(b2)	select tnt_id, surname, date_of_birth from tenants order by tnt_id desc;	Data returned sorted in reverse alphabetical order	3 columns sorted by reverse ID	As expected

```
SQL> select tnt_id, surname, date_of_birth from tenants order by tnt_id desc;

    TNT_ID SURNAME                                                    DATE_OF_B
---------- -------------------------------------------------------- ----------
        18 ADAMS                                                     22-JAN-00
        17 ANDREWS                                                   20-MAY-93
        16 MARIGONA                                                  22-APR-01
        15 BIDENIDIS                                                 30-SEP-59
        14 ANARGIROU                                                 22-JUN-97
        13 MARIO                                                     13-SEP-85
        12 RODRIGO                                                   20-FEB-03
        11 NEYMAR                                                    05-FEB-92
        10 KYRIAKOU                                                  11-JAN-03
         9 PAPADOPOULOU                                              02-MAY-97
         8 JOHNSON                                                   23-JUL-01
         7 CARTER                                                    15-JAN-87
         6 ALVAREZ                                                   22-OCT-97
         5 CHALKIA                                                   30-JAN-78
         4 ELEFTHERIADIS                                             12-AUG-96
         3 VASILIADOU                                                11-NOV-88
         2 VALASIOTI                                                 14-MAY-92
         1 TACHTSIDIS                                                23-SEP-62

18 rows selected.
```

(c1)	select * from tenants where country='UNITED STATES';	Tenants from a specific country	4 rows returned	As expected

```
SQL> select * from tenants where country='UNITED STATES';

    TNT_ID NAME                 SURNAME         G COUNTRY        EMAIL                          TEL        DATE_OF_B NUM_OF_TENANTS
---------- -------------------- --------------- - -------------- ------------------------------ ---------- --------- --------------
         7 JAMES                CARTER          O UNITED STATES  CARTERJ@GMAIL.COM                         15-JAN-87              4
        11 DA SILVA SANTOS JR   NEYMAR          M UNITED STATES  NEYMARJR@GMAIL.COM                        05-FEB-92              2
        12 OLIVIA               RODRIGO         F UNITED STATES  RODRIGOLIV@GMAIL.COM                      20-FEB-03              5
        15 GEORGE               BIDENIDIS       M UNITED STATES  BIDENIDISG@GMAIL.COM                      30-SEP-59              3
```

(c2)	select * from tenants where name like 'A%IS' or name like '%IA';	Names that contain a specific pattern	GEORGIA, MARIA, OLIVIA, ANTONIS	As expected

```
SQL> select * from tenants where name like 'A%IS' or name like '%IA';

    TNT_ID NAME         SURNAME         G COUNTRY        EMAIL                          TEL        DATE_OF_B NUM_OF_TENANTS
---------- ------------ --------------- - -------------- ------------------------------ ---------- --------- --------------
         2 GEORGIA      VALASIOTI       F GREECE         VALASGEO@GMAIL.COM             2310423525 14-MAY-92              5
         9 MARIA        PAPADOPOULOU    F GREECE         MPAPAD@GMAIL.COM               6980851450 02-MAY-97              3
        12 OLIVIA       RODRIGO         F UNITED STATES  RODRIGOLIV@GMAIL.COM                      20-FEB-03              5
        14 ANTONIS      ANARGIROU       M GREECE         ANARGANT@GMAIL.COM                        22-JUN-97              4
```

(c3)	select * from tenants where country not in ('GREECE','UNITED STATES') and TO_CHAR(date_of_birth, 'YYYY')	Negative condition predicate	4 rows returned	As expected

	between '1980' and '2000';			

```
SQL> select * from tenants where country not in ('GREECE','UNITED STATES') and TO_CHAR(date_of_birth, 'YYYY') between '1980' and '2000';

    TNT_ID NAME          SURNAME        G COUNTRY      EMAIL                           TEL        DATE_OF_B NUM_OF_TENANTS
---------- ------------- -------------- - ------------ ------------------------------- ---------- --------- --------------
         6 JULIO         ALVAREZ        M ARGENTINA    ALVAREZJ@GMAIL.COM                         22-OCT-97              2
        13 LUIGI         MARIO          M ITALY        MARIOLUI@GMAIL.COM                         13-SEP-85              1
        17 ELEONORA      ANDREWS        F ROMANIA      ANDREWSE@GMAIL.COM                         20-MAY-93              2
        18 NIKOLA        ADAMS          M MEXICO       ADAMSN@GMAIL.COM                           22-JAN-00              3
```

(d1)	select t.name,t.surname,t.country from tenants t inner join rentals ren on ren.tnt_id=t.tnt_id where ren.apt_id=11;	Join of 2 tables	Info about tenants who had rented apartment 11	As expected

```
SQL> select t.name,t.surname,t.country from tenants t inner join rentals ren on ren.tnt_id=t.tnt_id where ren.apt_id=11;

NAME                                        SURNAME                         COUNTRY
------------------------------------------- ------------------------------- -------------------------------
DA SILVA SANTOS JR                          NEYMAR                          UNITED STATES
LUIGI                                       MARIO                           ITALY
```

(d2)	select distinct t.name,t.surname,t.email, apt.price from tenants t inner join rentals ren on ren.tnt_id=t.tnt_id inner join apartments apt on apt.apt_id=ren.apt_id where t.num_of_tenants<=3 and apt.price<92;	Join of 3 tables	4 rows returned	As expected

```
SQL> select distinct t.name,t.surname,t.email, apt.price
  2      from tenants t
  3      inner join rentals ren on ren.tnt_id=t.tnt_id
  4      inner join apartments apt on apt.apt_id=ren.apt_id
  5      where t.num_of_tenants<=3 and apt.price<92;

NAME            SURNAME          EMAIL                                PRICE
--------------- ---------------- ----------------------------------- ----------
STAVROULA       CHALKIA          STAVCHALKIA@GMAIL.COM                   85
ELEONORA        ANDREWS          ANDREWSE@GMAIL.COM                      85
LUIGI           MARIO            MARIOLUI@GMAIL.COM                      85
GEORGIOS        TACHTSIDIS       TACHTSG@GMAIL.COM                       75
```

(d3)	select o.name as	Join of all tables	3 rows returned since	As expected

	oname,o.surname as osurname,o.email as oemail,ren.apt_id,t.name as tname,t.surname as tsurname, t.email as temail,rev.start_date as rent_date,rev.stars from owners o inner join apartments apt on apt.tin=o.tin inner join rentals ren on ren.apt_id=apt.apt_id inner join tenants t on t.tnt_id=ren.tnt_id INNER JOIN reviews rev ON rev.tnt_id = ren.tnt_id AND rev.apt_id = ren.apt_id AND rev.start_date = ren.start_date where rev.stars<=2;		there are 3 reviews in the reviews table in total, with a review score of 2 or less	

```
SQL> select distinct o.name as oname,o.surname as osurname,o.email as oemail,ren.apt_id,t.name as tname,t.surname as tsurname,
  2         t.email as temail,rev.start_date as rent_date,rev.stars  from owners o
  3    inner join apartments apt on apt.tin=o.tin
  4    inner join rentals ren on ren.apt_id=apt.apt_id
  5    inner join tenants t on t.tnt_id=ren.tnt_id
  6    INNER JOIN reviews rev ON rev.tnt_id = ren.tnt_id AND rev.apt_id = ren.apt_id AND rev.start_date = ren.start_date
  7    where rev.stars<=2;

ONAME           OSURNAME         OEMAIL                            APT_ID TNAME              TSURNAME        TEMAIL                RENT_DATE      STARS
--------------- ---------------- -------------------------------- ------- ------------------ --------------- --------------------- --------- ----------
XRISTOS         IOANNIDIS        IOANNIDIS.TAYLOR@GMAIL.COM            11 LUIGI              MARIO           MARIOLUI@GMAIL.COM    10-OCT-24          2
NATASA          OIKONOMOU        OIKONOMOU.ANDERSON@GMAIL.COM          12 DA SILVA SANTOS JR NEYMAR          NEYMARJR@GMAIL.COM    15-JAN-24          1
GIANNIS         NIKOLAOU         NIKOLAOU.DOE@GMAILE.COM                2 KYRIAKOS           KYRIAKOU        KYRKYR@GMAIL.COM      01-JUL-23          1
```

(e1)	SELECT city, ROUND(AVG(price),2) AS average_price	Aggregate function (Average)	Average Apartment Price by City	As expected

	FROM Apartments GROUP BY city;			

```
SQL> SELECT city, ROUND(AVG(price),2) AS average
_price FROM Apartments GROUP BY city;

CITY                              AVERAGE_PRICE
-------------------------------- --------------
ATHENS                                      110
LAMIA                                       110
THESSALONIKI                                 85
PATRA                                        75
HERAKLION                                    95
LARISSA                                     120
IOANNINA                                     90
RHODES                                       80
CORFU                                       130
KAVALA                                      140
KOMOTINI                                    115
CHALKIDA                                    125
KATERINI                                    140
VOLOS                                       110
NAOUSSA                                     160

15 rows selected.
```

(e2)	SELECT t.tnt_id, t.name, t.surname, COUNT(*) AS rental_count FROM Rentals r JOIN Tenants t ON r.tnt_id = t.tnt_id GROUP BY t.tnt_id, t.name, t.surname;	Aggregate function (Count)	Number of Rentals per Tenant	As expected

```
SQL> SELECT t.tnt_id, t.name, t.surname, COUNT(*) AS rental_count FROM Rentals r JOIN Tenants t ON r.tnt_id = t.tnt_id GROUP BY
t.tnt_id, t.name, t.surname;

   TNT_ID NAME                                       SURNAME                                 RENTAL_COUNT
--------- ------------------------------------------ -------------------------------------- -------------
        1 GEORGIOS                                   TACHTSIDIS                                         1
        3 ILIANA                                     VASILIADOU                                         1
        4 CHRYSOVALANTIS                             ELEFTHERIADIS                                      1
        5 STAVROULA                                  CHALKIA                                            4
        6 JULIO                                      ALVAREZ                                            1
        7 JAMES                                      CARTER                                             1
        8 EMILY                                      JOHNSON                                            1
        9 MARIA                                      PAPADOPOULOU                                       1
       10 KYRIAKOS                                   KYRIAKOU                                           2
       11 DA SILVA SANTOS JR                         NEYMAR                                             2
       13 LUIGI                                      MARIO                                              3
       14 ANTONIS                                    ANARGIROU                                          1
       15 GEORGE                                     BIDENIDIS                                          1
       17 ELEONORA                                   ANDREWS                                            1

14 rows selected.
```

(e3)	SELECT o.TIN AS owner_tin, o.name AS owner_name, o.surname AS owner_surname, COUNT(*) AS apartment_count FROM Apartments a JOIN Owners o ON a.tin = o.TIN GROUP BY o.TIN, o.name, o.surname;	Aggregate function (Count)	Number of apartments per owner	As expected

```
SQL> SELECT o.TIN AS owner_tin, o.name AS owner_name, o.surname AS owner_surname, COUNT(*) AS apa
rtment_count FROM Apartments a JOIN Owners o ON a.tin = o.TIN GROUP BY o.TIN, o.name, o.surname;

OWNER_TIN OWNER_NAME                          OWNER_SURNAME                          APARTMENT_COUNT
--------- ----------------------------------- ------------------------------------- ---------------
012345678 NATASA                              OIKONOMOU                                            1
109876542 KOSTAS                              PAPAGEORGIOU                                         2
123456789 GIANNIS                             NIKOLAOU                                             3
210986543 DESPOINA                            MICHAELIDOU                                          1
234567890 GIORGOS                             GEORGIOU                                             2
321098654 DORA                                PAPADAKI                                             1
345678901 MIXALIS                             PAPADOPOULOS                                         1
432108765 EVA                                 DELEONARDI                                           2
456789012 LOUKIA                              ANTONIOU                                             1
567890123 ACHILLEAS                           VLACHOS                                              1
678901234 EMILIA                              PAPADOPOULOU                                         1
789012345 DIMITRIS                            PAPPAS                                               1
890123456 SOFIA                               PAPADIMITRIOU                                        1
901234567 XRISTOS                             IOANNIDIS                                            1

14 rows selected.
```

(t1)	select * from tab where tname not like 'BIN%';	Table Creation	Tables created: OWNERS, APARTMENTS, TENANTS, RENTALS, REVIEWS	As expected

```
SQL> select * from tab where tname not like 'BIN%';

TNAME
                                        TABTYPE CLUSTERID
-------------------------------------------------------
-------------------------------------------------------
 ----------
OWNERS
                                        TABLE

APARTMENTS
                                        TABLE

TENANTS
                                        TABLE

RENTALS
                                        TABLE

REVIEWS
                                        TABLE
```

(t2)	SELECT CONSTRAINT_NAME, TABLE_NAME FROM USER_CONSTRAINTS WHERE CONSTRAINT_NAME LIKE 'PK%';	primary key creation	Primary keys created for all tables	As expected

```
SQL> SELECT CONSTRAINT_NAME, TABLE_NAME FROM USER_CONSTRAINTS WHERE CONSTRAINT_NAME LIKE 'PK%';

CONSTRAINT_NAME
                TABLE_NAME
--------------------------------------------------------------------------
----------------------------------------
PK_APARTMENT
                APARTMENTS
PK_OWNER
                OWNERS
PK_RENTAL
                RENTALS
PK_REVIEW
                REVIEWS
PK_TENANT_ID
                TENANTS
```

(t3)	SELECT CONSTRAINT_NAME, TABLE_NAME FROM USER_CONST RAINTS	Foreign key creation	Foreign keys created	As expected

	WHERE CONSTRAINT_ NAME LIKE 'FK%';			

```
SQL> SELECT CONSTRAINT_NAME, TABLE_NAME FROM USER_CONSTRAINTS WHERE CONSTRAINT_NAME LIKE 'FK%';

CONSTRAINT_NAME       TABLE_NAME
-------------------- --------------------------------------------------------------
FK_REN_APT_ID         RENTALS
FK_REN_TNT_ID         RENTALS
FK_REVIEWS_RENTALS    REVIEWS
FK_TIN                APARTMENTS
```

(t4)	SELECT CONSTRAINT_ NAME, TABLE_NAME FROM USER_CONST RAINTS WHERE CONSTRAINT_ NAME LIKE 'CHK%';	Constraint creation	Constraints created for all tables	As expected

```
SQL> SELECT CONSTRAINT_NAME, TABLE_NAME FROM USER_CONSTRAINTS WHERE CONSTRAINT_NAME LIKE 'CHK%';

CONSTRAINT_NAME
                    TABLE_NAME
------------------------------------------------------------------------------------
------------------- ------------------------------------------------------------------
-----------------------------------
CHK1_ODOF
                    OWNERS
CHK1_OEMAIL
                    OWNERS
CHK1_TDOF
                    TENANTS
CHK1_TEMAIL
                    TENANTS
CHK2_OEMAIL
                    OWNERS
CHK2_TEMAIL
                    TENANTS
CHK_ACITY
                    APARTMENTS
CHK_AREA
                    APARTMENTS
CHK_COUNTRY
                    TENANTS
CHK_END_DATE
                    RENTALS
CHK_NUM_OF_TENANTS
                    TENANTS
CHK_OCITY
                    OWNERS
CHK_OGENDER
                    OWNERS
CHK_ONAME
                    OWNERS
CHK_OSURNAME
                    OWNERS
CHK_OTEL
                    OWNERS
CHK_PRICE
                    APARTMENTS
CHK_STARS
                    REVIEWS
CHK_START_DATE
                    RENTALS
CHK_STREETNAME
                    APARTMENTS
CHK_TEXT
                    REVIEWS
CHK_TGENDER
                    TENANTS
CHK_TIN
                    OWNERS
CHK_TNAME
                    TENANTS
CHK_TSURNAME
                    TENANTS
CHK_TTEL
                    TENANTS
CHK_ZIP_CODE
                    APARTMENTS
27 rows selected.
```

(t5)	SELECT sequence_name FROM user_sequences;	Sequence creation	All sequences created	As expected

```
SQL> SELECT sequence_name FROM user_sequences;

SEQUENCE_NAME
------------------------------------------------
APARTMENT_ID_SEQ
REVIEW_ID_SEQ
SEQUENCE_NAME
TNT_ID_SEQ
```

(t6)	Select * from tab;	Drop whole database	Everything succesfully dropped and purged	As expected

```
SQL> select * from tab;
```