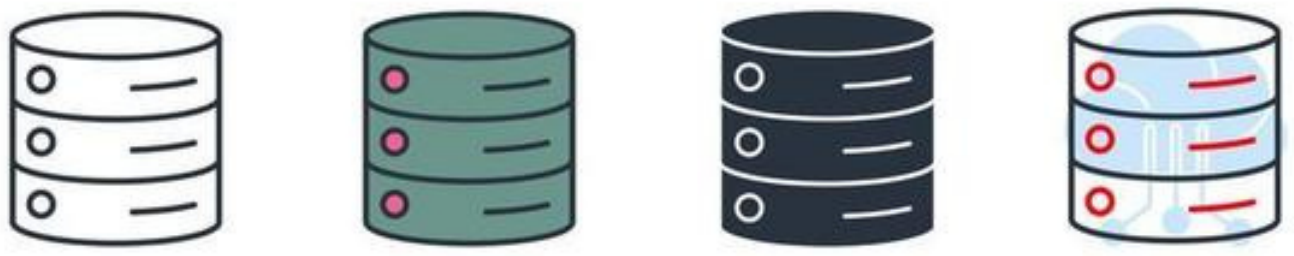
Screenshots for the queries execution



1. The number of customers who are over 60 years old:

```
SQL> --------Q1------------
SQL> SELECT COUNT(*) AS NumCustomersOver60
  2  FROM CUSTOMER
  3  WHERE MONTHS_BETWEEN(CURRENT_DATE, BIRTHDATE) / 12 > 60;

NUMCUSTOMERSOVER60
------------------
                11
```

2. The information details of the customers whose last name starts with the letter “T”

```
SQL> SELECT *
  2  FROM CUSTOMER
  3  WHERE LASTNAME LIKE 'T%';

CUSTOMER_NUMBER CIV   FIRSTNAME                     LASTNAME            BIRTHDAT CUSTOMER_ADDRESS
              TELPROF    TELPRIV       FAX
--------------- ----- ------------------------------ ------------------- -------- ------------------------------------------------------------
------- ---------- ---------- ----------
             2 Mme   Lamia                         TAHMI               31/12/55 CITE BACHEDJARAH BATIMENT 38 -Bach Djerrah-Alger
            562467849  561392487
             5 Mme   Noura                        TECHTACHE           22/03/49 16, ROUTE EL DJAMILA-AINBENIAN-ALGER
            562757834            562757843
             6 Mme   Widad                        TOUATI              14/08/65 14 RUE DES FRERES AOUDIA-EL MOURADIA-ALGER
            561243967  561401836
```

3. The number of female customers who own a vehicle from the year 1992

```
SQL> --------------Q3---------------
SQL> SELECT COUNT(*) AS NumFemaleCustomersWithVehicle1992
  2  FROM CUSTOMER c
  3  JOIN VEHICLE v ON c.CUSTOMER_NUMBER = v.CUSTOMER_NUMBER
  4  WHERE (c.CIV = 'Mme' OR c.CIV = 'Mle') AND v.YEAR = 1992;

NUMFEMALECUSTOMERSWITHVEHICLE1992
---------------------------------
                                2
```

4. The name and category of the five highest-paid employees

```
SQL> -- Q4---
SQL> SELECT FIRSTNAME_EMP, CATEGORY
  2  FROM EMPLOYEE
  3  ORDER BY SALARY DESC
  4  FETCH FIRST 5 ROWS ONLY;

FIRSTNAME_EMP        CATEGORY
-------------------- ---------------
Bouzid               Mécanicien
Elias                Assistant
Zouhir               Assistant
Hakim                Mécanicien
Abdelhamid           Assistant
```

5. The average salary for the employees of category “Assistant”, same for “Mechanic”

```
SQL> ----Q5-
SQL> SELECT CATEGORY, AVG(SALARY) AS AverageSalary
  2  FROM EMPLOYEE
  3  WHERE CATEGORY IN ('Assistant', 'Mécanicien')
  4  GROUP BY CATEGORY;

CATEGORY        AVERAGESALARY
--------------- -------------
Mécanicien            5000000
Assistant             5000000
```

6. The budget the administrator needs to pay all the employees

```
SQL> ----------------Q6-------------------
SQL> SELECT SUM(SALARY) AS TotalBudget
  2  FROM EMPLOYEE;

TOTALBUDGET
-----------
  100000000
```

7. The vehicles whose owners have provided a private phone number

```
SQL> -------Q7-----------
SQL> SELECT v.*
  2  FROM VEHICLE v
  3  JOIN CUSTOMER c ON v.CUSTOMER_NUMBER = c.CUSTOMER_NUMBER
  4  WHERE c.TELPRIV IS NOT NULL;

VEHICLE_NUMBER CUSTOMER_NUMBER MODEL_NUMBER REGISTRATION_NUMBER       YEAR
-------------- --------------- ------------ -------------------- ----------
            18               1            2           7973318216       1982
             1               2            6             12519216       1992
            26               3           10           1458919316       1993
            21               3           19           8429318516       1985
            15               4           19           6254319916       1999
             4               6           12           3145219816       1998
             7               7            8           1453119816       1998
            27              10            7           1256019804       1998
            28              10            3           1986219904       1999
            17              12           11           4563117607       1976
            25              13            5           1278919833       1998

VEHICLE_NUMBER CUSTOMER_NUMBER MODEL_NUMBER REGISTRATION_NUMBER       YEAR
-------------- --------------- ------------ -------------------- ----------
             9              13           15           3087319233       1992
            12              14           20           6025319733       1997
            16              16           21           9831419701       1997
             8              16           14           8365318601       1986
             5              16           23           1278919816       1998
             3              17            8           1452318716       1987
            13              19           17           5205319736       1997
             6              20            6           3853319735       1997
            10              20           22           9413119935       1999

20 lignes s0lectionn0es.
```

8. The brand and model of the vehicle that spent the longest period in the garage

```
SQL> SELECT B.MODEL_NAME, BRAND.BRAND_NAME FROM
  2  (SELECT MODEL.MODEL_NAME, MODEL.BRAND_NUMBER
  3  FROM (
  4       SELECT MODEL_NUMBER
  5       FROM VEHICLE
  6       JOIN INTERVENTIONS ON VEHICLE.VEHICLE_NUMBER = INTERVENTIONS.VEHICL
E_NUMBER
  7       ORDER BY (INTERV_END_DATE - INTERV_START_DATE) DESC
  8       FETCH FIRST 1 ROWS ONLY
  9  ) MN JOIN MODEL ON MN.MODEL_NUMBER= MODEL.MODEL_NUMBER)
 10  B JOIN BRAND ON B.BRAND_NUMBER = BRAND.BRAND_NUMBER;

MODEL_NAME           BRAND_NAME
-------------------- --------------------
Série 5              AUDI
```

9. The name of the employee of the year (employee who made the most interventions)

```
SQL> ----------Q9-----------
SQL> SELECT FIRSTNAME_EMP, LASTNAME_EMP FROM(
  2      (SELECT EMPLOYEE_NUMBER FROM
  3          PARTICIPANTS GROUP BY (EMPLOYEE_NUMBER) ORDER BY
  4          COUNT(*) DESC FETCH FIRST 1 ROWS ONLY) EN JOIN EMPLOYEE
  5          ON EN.EMPLOYEE_NUMBER = EMPLOYEE.EMPLOYEE_NUMBER
  6  );

FIRSTNAME_EMP        LASTNAME_EMP
-------------------- --------------------
Mourad               BELHAMIDI
```

10.The three vehicle brands that have the highest number of interventions.

```
SQL> --Q10
SQL> SELECT BRAND.BRAND_NAME FROM
  2  (
  3       SELECT MODEL.BRAND_NUMBER FROM
  4       (
  5            SELECT VEHICLE.MODEL_NUMBER FROM VEHICLE JOIN
  6            (
  7                 SELECT VEHICLE_NUMBER FROM INTERVENTIONS GROUP BY (VEHICLE_
NUMBER) ORDER BY COUNT(*) DESC FETCH FIRST 3 ROWS ONLY
  8            )VN ON VN.VEHICLE_NUMBER = VEHICLE.VEHICLE_NUMBER
  9       ) MN JOIN MODEL ON
 10       MN.MODEL_NUMBER = MODEL.MODEL_NUMBER
 11  )BN JOIN BRAND ON BN.BRAND_NUMBER = BRAND.BRAND_NUMBER;

BRAND_NAME
--------------------
RENAULT
LAMBORGHINI
LOTUS
```

11.The administrator wants to have the total number of interventions for each employee. To do this, the administrator adds an attribute:

TOTAL_INTERVENTIONS in the employee table.

- Add the attribute TOTAL_INTERVENTIONS in the employee table.

- Create a TOTAL_INTERVENTIONS_TRIGGER that updates the

TOTAL_INTERVENTIONS attribute.

```
SQL> ALTER TABLE EMPLOYEE DROP COLUMN TOTAL_INTERVENTIONS;

Table modifi0e.

SQL> ALTER TABLE EMPLOYEE
  2  ADD TOTAL_INTERVENTIONS NUMBER;

Table modifi0e.

SQL> CREATE OR REPLACE TRIGGER TOTAL_INTERVENTIONS_TRIGGER
  2  AFTER INSERT OR DELETE OR UPDATE ON PARTICIPANTS
  3  FOR EACH ROW
  4  DECLARE
  5      nb_interventions NUMBER;
  6  BEGIN
  7      -- In case of update
  8      IF UPDATING THEN
  9          IF :OLD.EMPLOYEE_NUMBER IS NOT NULL AND :NEW.EMPLOYEE_NUMBER IS NOT NULL THEN
 10              SELECT COUNT(*) INTO nb_interventions FROM PARTICIPANTS WHERE EMPLOYEE_NUMBER = :OLD.EMPLOYEE_NUMBER;
 11              UPDATE EMPLOYEE SET TOTAL_INTERVENTIONS = nb_interventions WHERE EMPLOYEE_NUMBER = :OLD.EMPLOYEE_NUMBER;
 12          END IF;
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 18          END IF;
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D0clencheur cr00.
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