



# Rapport PFR

AGENCE ESCAPADE

PERIER Hugo | Base de données | 27/03/18

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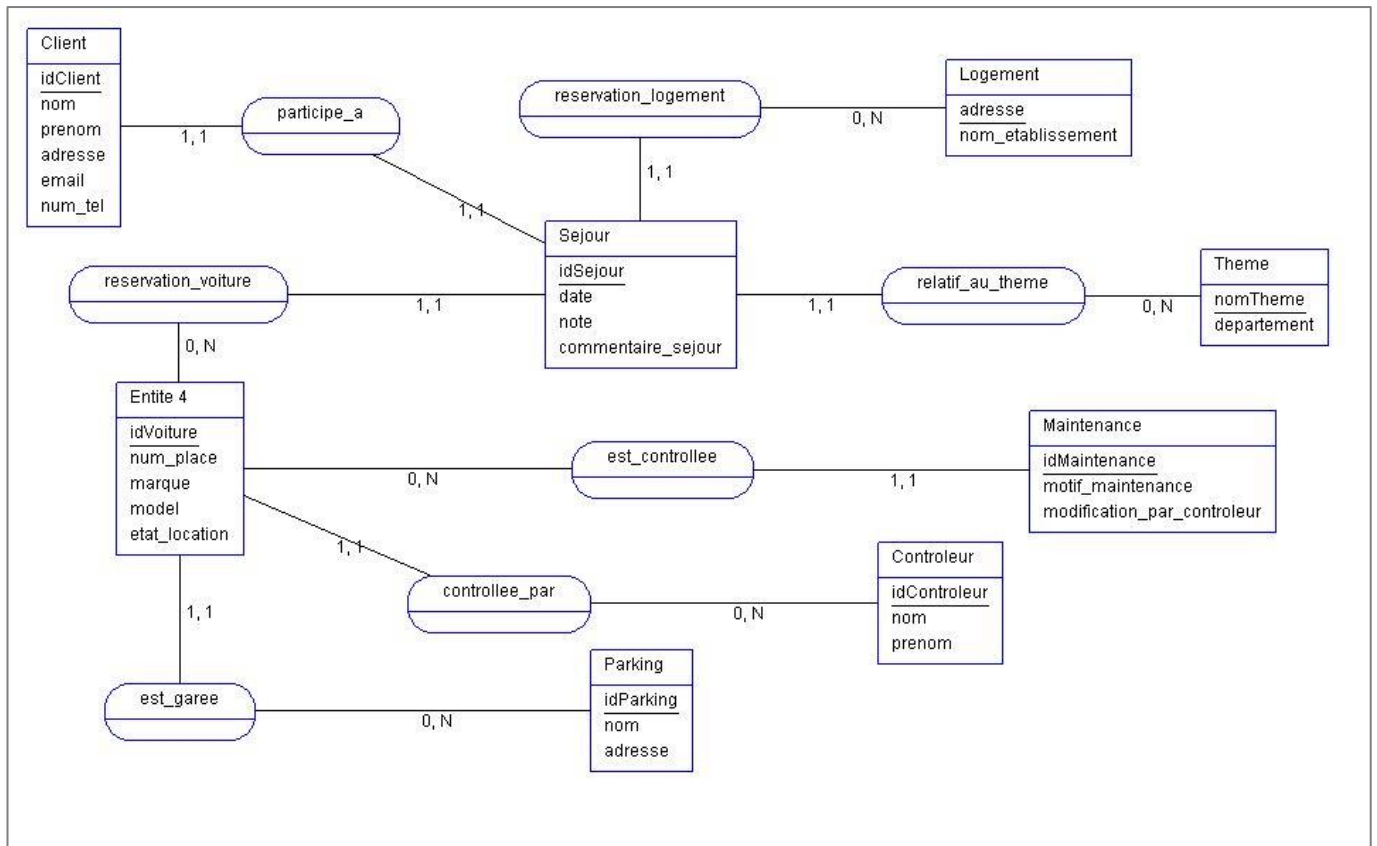
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## PARTIE n°1

### 1. Schéma conceptuel de la base de données :



### 2. Schéma relationnel de la base de donnée :

**Client** (idClient\_Client, nom\_Client, prenom\_Client, adresse\_Client, email\_Client, num\_tel\_Client, #sejour\_idsejour\_sejour)

**Logement** (adresse\_Logement, nom\_etablissement\_Logement)

**Sejour** (idSejour\_Sejour, date\_Sejour, note\_Sejour, commentaire\_sejour\_Sejour, #client\_idclient\_client, #adresse\_Logement, idVoiture\_Entite\_4, #nomTheme\_Theme)

**Voiture** (idVoiture\_Entite\_4, num\_place\_Entite\_4, marque\_Entite\_4, model\_Entite\_4, etat\_location\_Entite\_4, #idParking\_Parking, #idControlleur\_Controlleur)

**Parking** (idParking\_Parking, nom\_Parking, adresse\_Parking)

**Controlleur** (idControlleur\_Controlleur, nom\_Controlleur, prenom\_Controlleur)

**Maintenance** (idMaintenance\_Maintenance, motif\_maintenance\_Maintenance, modification\_par\_controlleur\_Maintenance, idVoiture\_Entite\_4)

**Theme** (nomTheme\_Theme, departement\_Theme)

### 3. Scripts de construction de table

```
CREATE DATABASE `ESCAPADE` ;

SET @GOLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS, UNIQUE_CHECKS=0;
SET @GOLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS, FOREIGN_KEY_CHECKS=0;
SET @GOLD_SQL_MODE=@@SQL_MODE, SQL_MODE='TRADITIONAL,ALLOW_INVALID_DATES';

-- -----
-- Schema mydb
-- -----

USE `ESCAPADE` ;

-- -----
-- Table `Client`
-- -----

CREATE TABLE IF NOT EXISTS `Client` (
  `idClient` VARCHAR(15) NOT NULL,
  `nom` VARCHAR(45) NULL,
  `prenom` VARCHAR(45) NULL,
  `adresse` VARCHAR(50) NULL,
  `email` VARCHAR(50) NULL,
  `num_tel` VARCHAR(20) NULL,
  PRIMARY KEY (`idClient`))
ENGINE = InnoDB;

-- -----
-- Table `Parking`
-- -----

CREATE TABLE IF NOT EXISTS `Parking` (
  `idParking` INT NOT NULL,
  `nom` VARCHAR(45) NULL,
  `adresse` VARCHAR(100) NULL,
  PRIMARY KEY (`idParking`))
ENGINE = InnoDB;

-- -----
-- Table `Controleur`
-- -----

CREATE TABLE IF NOT EXISTS `Controleur` (
  `idControleur` INT NOT NULL,
  `nom` VARCHAR(45) NULL,
  `prenom` VARCHAR(45) NULL,
  PRIMARY KEY (`idControleur`))
ENGINE = InnoDB;

-- -----
-- Table `Voiture`
-- -----

CREATE TABLE `Voiture` (
  `idVoiture` VARCHAR(20) NOT NULL,
  `num_place` VARCHAR(2) NULL,
  `marque` VARCHAR(25) NULL,
  `model` VARCHAR(45) NULL,
  `etat_location` VARCHAR(45) NULL,
  `Parking_idParking` INT NOT NULL,
  `Controleur_idControleur` INT NOT NULL,
  PRIMARY KEY (`idVoiture`, `Parking_idParking`, `Controleur_idControleur`),
```

```
INDEX `fk_Voiture_Parking1_idx` (`Parking_idParking` ASC),
INDEX `fk_Voiture_Controlleur1_idx` (`Controlleur_idControlleur` ASC),
CONSTRAINT `fk_Voiture_Parking1`
  FOREIGN KEY (`Parking_idParking`)
  REFERENCES `Parking` (`idParking`)
  ON DELETE NO ACTION
  ON UPDATE NO ACTION,
CONSTRAINT `fk_Voiture_Controlleur1`
  FOREIGN KEY (`Controlleur_idControlleur`)
  REFERENCES `Controlleur` (`idControlleur`)
  ON DELETE NO ACTION
  ON UPDATE NO ACTION)
ENGINE = InnoDB;
```

```
-- -----
-- Table `Logement`
-- -----
```

```
CREATE TABLE IF NOT EXISTS `Logement` (
  `adresse` VARCHAR(20) NOT NULL,
  `nom_etablissement` VARCHAR(45) NULL,
  PRIMARY KEY (`adresse`))
ENGINE = InnoDB;
```

```
-- -----
-- Table `Theme`
-- -----
```

```
CREATE TABLE IF NOT EXISTS `Theme` (
  `nomTheme` VARCHAR(3) NOT NULL,
  `departement` INT NULL,
  PRIMARY KEY (`nomTheme`))
ENGINE = InnoDB;
```

```
-- -----
-- Table `Sejour`
-- -----
```

```
CREATE TABLE IF NOT EXISTS `Sejour` (
  `idSejour` VARCHAR(25) NOT NULL,
  `date` VARCHAR(45) NULL,
  `note` INT NULL,
  `commentaire_sejour` VARCHAR(100) NULL,
  `Voiture_idVoiture` VARCHAR(20) NOT NULL,
  `Logement_adresse` VARCHAR(20) NOT NULL,
  `Client_idClient` VARCHAR(15) NOT NULL,
  `Theme_nomTheme` VARCHAR(3) NOT NULL,
  PRIMARY KEY (`idSejour`, `Voiture_idVoiture`, `Logement_adresse`, `Client_idClient`,
  `Theme_nomTheme`),
  INDEX `fk_Sejour_Voiture1_idx` (`Voiture_idVoiture` ASC),
  INDEX `fk_Sejour_Logement1_idx` (`Logement_adresse` ASC),
  INDEX `fk_Sejour_Client1_idx` (`Client_idClient` ASC),
  INDEX `fk_Sejour_Theme1_idx` (`Theme_nomTheme` ASC),
  CONSTRAINT `fk_Sejour_Voiture1`
    FOREIGN KEY (`Voiture_idVoiture`)
    REFERENCES `Voiture` (`idVoiture`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION,
  CONSTRAINT `fk_Sejour_Logement1`
    FOREIGN KEY (`Logement_adresse`)
    REFERENCES `Logement` (`adresse`)
    ON DELETE NO ACTION
```

```
        ON UPDATE NO ACTION,
CONSTRAINT `fk_Sejour_Client1`
    FOREIGN KEY (`Client_idClient`)
    REFERENCES `Client` (`idClient`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION,
CONSTRAINT `fk_Sejour_Theme1`
    FOREIGN KEY (`Theme_nomTheme`)
    REFERENCES `Theme` (`nomTheme`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION)
ENGINE = InnoDB;

-- -----
-- Table `Maintenance`
-- -----
CREATE TABLE IF NOT EXISTS `Maintenance` (
    `idMaintenance` INT NOT NULL,
    `motif_maintenance` VARCHAR(45) NULL,
    `modification_par_controleur` VARCHAR(200) NULL,
    `Voiture_idVoiture` VARCHAR(20) NOT NULL,
    PRIMARY KEY (`idMaintenance`, `Voiture_idVoiture`),
    INDEX `fk_Maintenance_Voiture1_idx` (`Voiture_idVoiture` ASC),
    CONSTRAINT `fk_Maintenance_Voiture1`
        FOREIGN KEY (`Voiture_idVoiture`)
        REFERENCES `Voiture` (`idVoiture`)
        ON DELETE NO ACTION
        ON UPDATE NO ACTION)
ENGINE = InnoDB;

SET SQL_MODE=@OLD_SQL_MODE;
SET FOREIGN_KEY_CHECKS=@OLD_FOREIGN_KEY_CHECKS;
SET UNIQUE_CHECKS=@OLD_UNIQUE_CHECKS;
```

## 4. Scripts de peuplement de la base de données

### # Peuplement Client :

```
INSERT INTO `Client` (`idClient`, `nom`, `prenom`, `adresse`, `email`, `num_tel`) VALUES

("QOZ30GVG9TK", "Nasim", "Lane", "1221 St.", "sapien.molestie@Pellentesquehabitantmorbi.org", "06 33 17 44 64"), Odio

("QTP17SWC7LO", "Nigel", "Lang", "664-5650 Non Avenue", "luctus@Fusce.co.uk", "06 96 53 98 29"),

("JTS96KPG2GC", "Casey", "Newton", "Ap Ave", "tellus.Nunc.lectus@interdumNunc.com", "06 93 76 71 21"), #883-2797 Ac,

("CDC00KZF1HX", "Abel", "Wolfe", "P.O. Box 529, 4011 Tempus Ave", "eismod@iaculisnec.co.uk", "06 63 55 45 65"),

("USV71WIB4DP", "Orla", "Riggs", "5650 Semper St.", "sed@Sedauctor.org", "06 68 65 77 77"),

("EHQ06GLN8SQ", "Akeem", "Stokes", "P.O. Box 816, 6150 Phasellus Ave", "In.at.pede@purus.com", "06 46 41 07 37"),
```

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("SPT22ENW7VC","Kim","Stone","Ap #222-2411 Donec Av.,"tempor@rhoncusProin.net","06 59 42 10 50"),

("KZK40AJM7ET","Ashely","Johnson","P.O. Box 882, 6410 Iaculis, Ave","Donec.elementum@Donectincidunt.com","06 60 55 14 51"),

("ASW84QJJ2SX","Aristotle","Fuentes","659-6609 Nulla Ave","lorem@Suspendissealiquetmolestie.co.uk","06 81 06 09 84"),

("YYO27OQM4JW","Brynn","Moses","673-7868 Dui Road","non.luctus@Morbi.ca","06 45 87 04 03");

### # Peuplement Parking

INSERT INTO `Parking` (`idParking`,`nom`,`adresse`) VALUES

("75001","Rivoli","2 Rue Boucher 75001 Paris"),

("75002","Rivoli","2 Rue Boucher 75002 Paris"),

("75003","Beaubourg","31 Rue Beaubourg 75003 Paris"),

("75004","Lobau","4 rue Lobau 75004 Paris"),

("75005","Soufflot","22 Rue Soufflot75005 Paris"),

("75006","Jardin des plantes","25 Rue Geoffroy-Saint-Hilaire 75006 Paris"),

("75007","Maubourg","45 Quai d'Orsay 75007 Paris"),

("75008","Champs-Élysées","77 Avenue Marceau 75008 Paris"),

("75009","Pigalle","10 rue jean-baptiste Pigalle 75009 Paris"),

("75010","Lariboisière","1 bis Rue Ambroise Paré 75010 Paris"),

("75011","Oberkampf","11 Rue Ternaux 75011 Paris"),

("75012","Gare de Lyon","6 rue de Rambouillet 75012 Paris"),

("75013","Italie","25 rue Stephen Pichon 75013 Paris"),

("75014","Raspail","120 Boulevard du Montparnasse 75014 Paris"),

("75015","Beaugrenelle ","5 quai Andre citroen 75015 Paris"),

("75016","Victor Hugo","74 Avenue Victor Hugo 75016 Paris"),

("75017","Ternes","38 Avenue des Ternes 75017 Paris"),

("75018","Stalingrad ","13 rue d'Aubervillier 75018 Paris"),

("75019","Philharmonie","185 Boulevard Sérurier 75019 Paris"),

("75020","Rosa Parks","157 boulevard Macdonald 75020 Paris"),

("94310","Orly","Orly Airport 94310 Orly"),

("95700","Roissy","Roissy Airport 95700 Roissy en France");

## # Peuplement Controleurs

```
INSERT INTO `controleur`(`idControleur`, `nom`, `prenom`) VALUES ("1","Perret","Michel"),
("2","Bichat","Luise"), ("3","Ledore","Bernard");
```

## # Peuplement Voiture

```
INSERT INTO `Voiture`
(`idVoiture`, `num_place`, `marque`, `model`, `etat_location`, `Parking_idParking`, `Controleur_idControleur`)
VALUES ("Z9P 2S9", "A2", "Acura", "Cabriolet 2 places", "En Maintenance", "75002", "2"), ("H9Y 3C9", "1A", "Audi", "Cabriolet 2 places", "Disponibile", "75010", "1"), ("E8T 7U0", "A4", "Kia Motors", "Berline 4 places", "Disponibile", "75003", "1"), ("H1C 2M3", "A0", "Mazda", "Berline 4 places", "En cours d'utilisation", "75017", "1"), ("M9R 2X0", "A5", "BMW", "Cabriolet 2 places", "A verifier par controleur", "75010", "2"), ("R0J 5N0", "A6", "Smart", "Cabriolet 2 places", "Disponibile", "75010", "1"), ("B8M 208", "A5", "FAW", "Cabriolet 2 places", "Disponibile", "75006", "3"), ("P9Q 1F1", "A4", "Daihatsu", "Cabriolet 2 places", "Disponibile", "75012", "1"), ("M6P 8X9", "1A", "Dongfeng Motor", "Berline 4 places", "Disponibile", "75003", "1"), ("Z1C 3T5", "A0", "JLR", "Berline 4 places", "A verifier par controleur", "94310", "1");
```

```
INSERT INTO `Voiture`
(`idVoiture`, `num_place`, `marque`, `model`, `etat_location`, `Parking_idParking`, `Controleur_idControleur`)
VALUES ("A4X 002", "A6", "Chevrolet", "Berline 4 places", "A verifier par controleur", "75009", "3"), ("I4N 4A9", "A3", "Audi", "Berline 4 places", "A verifier par controleur", "75008", "3"), ("G8C 0F2", "A0", "Daimler", "Cabriolet 2 places", "Disponibile", "75017", "2"), ("M2J 0H7", "A5", "Kenworth", "Cabriolet 2 places", "A verifier par controleur", "75009", "1"), ("M3Y 3W2", "A8", "Porsche", "Cabriolet 2 places", "Disponibile", "75011", "3"), ("P9P 2M3", "A6", "Renault", "Berline 4 places", "A verifier par controleur", "75015", "1"), ("A5R 5E1", "A5", "Daihatsu", "Cabriolet 2 places", "A verifier par controleur", "75019", "3"), ("G0E 2G5", "A5", "Kia Motors", "Berline 4 places", "A verifier par controleur", "75014", "2"), ("G2Q 3W3", "A3", "FAW", "Berline 4 places", "Disponibile", "75014", "1"), ("E9Q 0E3", "1A", "Lexus", "Cabriolet 2 places", "Disponibile", "75007", "2");
```

```
INSERT INTO `Voiture`
(`idVoiture`, `num_place`, `marque`, `model`, `etat_location`, `Parking_idParking`, `Controleur_idControleur`)
VALUES ("T8S 4Z2", "A8", "Mazda", "Berline 4 places", "Disponibile", "75005", "3"), ("M4Q 1W8", "A8", "RAM Trucks", "Berline 4 places", "A verifier par controleur", "95700", "2"), ("H0I 1E1", "A2", "Cadillac", "Cabriolet 2 places", "Disponibile", "75015", "3"), ("F8Q 3V3", "A0", "Hyundai Motors", "Cabriolet 2 places", "A verifier par controleur", "75009", "1"), ("Z4V 7T6", "A2", "Tata Motors", "Berline 4 places", "Disponibile", "75001", "2"), ("T2Z 4Z5", "A6", "Honda", "Cabriolet 2 places", "En cours d'utilisation", "75014", "1"), ("X5S 6K1", "A2", "Dacia", "Berline 4 places", "A verifier par controleur", "75001", "1"), ("E2U 9G6", "A6", "MINI", "Berline 4 places", "A verifier par controleur", "75017", "2"), ("Q5W 7J0", "1A", "Chevrolet", "Cabriolet 2 places", "A verifier par controleur", "75010", "1"), ("M0R 3Y8", "A9", "Mitsubishi Motors", "Cabriolet 2 places", "Disponibile", "75002", "2");
```

```
INSERT INTO `Voiture`
(`idVoiture`, `num_place`, `marque`, `model`, `etat_location`, `Parking_idParking`, `Controleur_idControleur`)
VALUES ("K8J 8C9", "A0", "Suzuki", "Cabriolet 2 places", "A verifier par controleur", "75005", "3"), ("P7P 2V3", "A3", "FAW", "Berline 4 places", "En Maintenance", "94310", "1"), ("N3F 8W9", "A2", "Daimler", "Berline 4 places", "Disponibile", "75003", "2"), ("N7R 8I2", "1A", "Chrysler", "Berline 4 places", "En cours d'utilisation", "75019", "3"), ("A5E 2S3", "A2", "Daihatsu", "Cabriolet 2 places", "Disponibile", "75006", "3"), ("S1R 5B6", "A6", "Nissan", "Berline 4 places", "Disponibile", "75013", "1"), ("D3Q 7G2", "A3", "Hyundai Motors", "Cabriolet 2 places", "En Maintenance", "75004", "3"), ("S2U 5A3", "A9", "Renault", "Cabriolet 2 places", "Disponibile", "75007", "3"), ("F8G 2P9", "A9", "Maruti Suzuki", "Berline 4 places", "A verifier par controleur", "75009", "3"), ("G0G 9Q5", "1A", "Ford", "Berline 4 places", "Disponibile", "75006", "1");
```



### # Peuplement Logement

```
INSERT INTO `Logement` (`adresse`,`nom_etablissement`) VALUES
("75001","Concortel"),("75002","Concortel"),("75003","Sheraton"),("75004","Campanil"),("75005",
,"Ibis Hotel"),("75006","Concortel"),("75007","Sheraton"),("75008","Hilton"),("75009","Grand
Hotel"),("75010","Hotel Plaza Etoile"),("75011","Hilton"),("75012","Formule 1"),
("75013","Hilton"),("75014","Campanil"),("75015","Grand
Hotel"),("75016","Sheraton"),("75017","Sheraton"),("75018","Formule 1"),("75019","Formule
1"),("75020","Hotel Plaza Etoile"),("95700","Hilton"),("94310","Hilton");
```

### # Peuplement Theme

```
INSERT INTO `Theme` (`nomTheme`,`departement`) VALUES ("THE","7501"), ("CUL","75002"),
("FET","75003"),("MOR","75004"), ("DES","75005"), ("LAP","75006"), ("PAL","75007"),
("THX","75008"), ("NOE","75009"), ("MAT","75010"), ("KAS","75011"), ("KOA","75012"),
("TEF","75013"), ("FOD","75014"), ("MOD","75015"), ("CRE","75016"), ("LEP","75017"),
("PIR","75018"), ("CAB","75019"), ("MIL","75020"), ("ARC","95700"), ("POL","94310");
```

### # Peuplement sejour

```
INSERT INTO `Sejour` (`idSejour`,`date`,`note`,`commentaire_sejour`,`Voiture_idVoiture`,
`Logement_adresse`,`Client_idClient`,`Theme_nomTheme`) VALUES ("ZLZ47YNG7OU", 4, "5", "Sejour
genial, tranquille.", "Z9P 2S9", "75007", "QOZ30GVG9TK", "PAL"),("ZOV90UMZ9XK",9,"-1","", "H1C
2M3","75017","QTP17SWC7LO","LEP");
```

### # Peuplement maintenance

```
INSERT INTO `Maintenance`(`idMaintenance`,`motif_maintenance`,`modification_par_controlleur`,
`Voiture_idVoiture`) VALUES("1","Freins usés","Changement des freins","Z9P 2S9"),("2",
"Batteries", "Charge des batteries", "Z9P 2S9"),("1", "Pare-brise", "Changement du pare-brise",
"P7P 2V3");
```

## 5. Les requêtes demandées

### # 1. Liste des clients (par numéro de client)

```
SELECT * FROM Client ORDER BY idClient ;
```

### # 2. Saisie d'un nouveau client

```
INSERT INTO `ESCAPADE`.`Client` (`idClient`, `nom`, `prenom`, `adresse`, `email`, `num_tel`)
VALUES ("BSS90ROP3SR", "Mathilde", "Fauchoing", "249-9923 A Av.", "mathilde@Sedauctor.edu", "07 23
79 58 10") ;
```

### # 3. Liste des voitures, de leur position et de leur disponibilité

```
SELECT v.marque, v.model, v.etat_location ,v.num_place, p.adresse
FROM Voiture v JOIN Parking p ON v.Parking_idParking = p.idParking ;
```

### # 4. Sélection d'une voiture disponible dans un arrondissement

```
SELECT * from Voiture v JOIN Parking p ON v.Parking_idParking = p.idParking
WHERE p.adresse LIKE '%75007%' AND v.etat_location LIKE '%Disponible%';
```

### # 5. Requête de mise à jour de la place de parking d'un véhicule identifié par son immatriculation

```
UPDATE Voiture SET num_place = 'A2'
WHERE idVoiture = "E9Q 0E3" ;
```

### # 6. Combien d'opérations de maintenance sur une voiture identifiée par son immatriculation ?

```
SELECT count(*) from maintenance m JOIN voiture v ON m.Voiture_idVoiture = v.idVoiture;
```

### # 7. Enregistrement du retour d'une voiture

```
UPDATE Voiture SET num_place = 'A9' WHERE idVoiture = "N7R 8I2" ; #changement numero de place
UPDATE Voiture SET etat_location = 'A verifier par controleur' WHERE idVoiture = "N7R 8I2" ;
#changement etat de la voiture
```

### # 8. Nombre de voitures contrôlées par chacun des contrôleurs

```
SELECT Controleur_idControleur, count(*) FROM Voiture GROUP BY Controleur_idControleur ;
```

### # 9. Liste des voitures indisponible et du motif correspondant

```
SELECT v.idVoiture, v.etat_location, m.motif_maintenance from Voiture v JOIN Maintenance m ON
m.Voiture_idVoiture = v.idVoiture;
```

### # 10. Enregistrement d'une opération de maintenance par un des contrôleurs sur une voiture identifiée par son immatriculation

```
INSERT INTO `Maintenance` (`idMaintenance`, `motif_maintenance`, `modification_par_controleur`,
`Voiture_idVoiture`) VALUES ("1", "Poignée cassée", "Changement de toutes les poignets", "M2J
0H7");
UPDATE Voiture SET etat_location = 'En maintenance' WHERE idVoiture = "M2J 0H7" ; #changement
etat de la voiture
```

- Fin -