

# DBM IMPLEMENTATION PROJECT

GROUP: 2

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PART II. A.  
SCRIPT #1

#### --DROP Statements

```
DROP TABLE Employee      CASCADE CONSTRAINTS;
DROP TABLE FaultReport   CASCADE CONSTRAINTS;
DROP TABLE Outlet        CASCADE CONSTRAINTS;
DROP TABLE Vehicle       CASCADE CONSTRAINTS;
DROP TABLE Client        CASCADE CONSTRAINTS;
DROP TABLE Ragreement    CASCADE CONSTRAINTS;
```

#### --Create statement for Client Table

```
CREATE TABLE Client
(clientNo    NUMBER(5),
 FName      VARCHAR2(40),
 Lname      VARCHAR2(40),
 Phone      VARCHAR2(24),
 Email      VARCHAR2(60),
 Street     VARCHAR2(60),
 City       VARCHAR2(15),
 State      VARCHAR2(15),
 ZipCode    VARCHAR2(10),
 CONSTRAINT Client_clientNo_PK PRIMARY KEY (clientNo),
 CONSTRAINT Client_Phone_CK CHECK (REGEXP_LIKE(phone, '^\([0-9]{3}\) ) [0-9]{3}-[0-9]{4}$')),1
 CONSTRAINT Client_Email_CK CHECK(REGEXP_LIKE(LOWER(Email), '[a-z0-9]+@[a-z0-9]+\.[a-z0-9]+')));
```

#### --Create statement for Outlet Table

```
CREATE TABLE Outlet
(outNo      NUMBER(5),
 Street     VARCHAR2(60),
 City       VARCHAR2(15),
 State      VARCHAR2(15),
 ZipCode    VARCHAR2(10),
 Phone      VARCHAR2(24),
 ManagerNo  NUMBER(5) NOT NULL,
 CONSTRAINT Outlet_outNo_PK PRIMARY KEY (outNo),
 CONSTRAINT Outlet_Phone_CK CHECK (REGEXP_LIKE(phone, '^\([0-9]{3}\) ) [0-9]{3}-[0-9]{4}$')));
```

#### --Create statement for Employee Table

```
CREATE TABLE Employee
(EmpNo      NUMBER(5),
 FName      VARCHAR2(40),
 Lname      VARCHAR2(40),
 Position   VARCHAR2(40),
```

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<sup>1</sup> Assumption for phone number format: (xxx) xxx-xxxx

```

Phone      VARCHAR2(24),
Email      VARCHAR2(60),
DOB        DATE,
Gender     VARCHAR2(10),
Salary     NUMBER(10,2),
HireDate   DATE DEFAULT SYSDATE,
OutNo      NUMBER(5),
Super_No   NUMBER(5),
CONSTRAINT Employee_EmpNo_PK PRIMARY KEY (EmpNo),
CONSTRAINT Employee_Phone_CK CHECK (REGEXP_LIKE(phone, '^\([0-9]{3}\) ) [0-9]{3}-[0-9]{4}$')),
CONSTRAINT Employee_Email_CK CHECK(REGEXP_LIKE(LOWER(Email), '[a-z0-9]+@rental.com')),2
CONSTRAINT Employee_DOB_CK CHECK((MONTHS_BETWEEN(HireDate, DOB)/12)>=14),
CONSTRAINT Employee_OutNo_FK FOREIGN KEY (OutNo) REFERENCES Outlet (outNo),
CONSTRAINT Employee_SuperNo_FK FOREIGN KEY (Super_No) REFERENCES Employee (EmpNo));

```

#### **--Create statement for Vehicle Table**

```

CREATE TABLE Vehicle
(LicenseNo      VARCHAR2(15),
Make           VARCHAR2(30),
Model          VARCHAR2(30),
Color          VARCHAR2(15),
Year           NUMBER(4),
NoDoors        NUMBER(2),
Capacity        NUMBER(2),
DailyRate      NUMBER(6,2),
InspectionDate DATE,
outNo          NUMBER(5),
CONSTRAINT Vehicle_LicenseNo_PK PRIMARY KEY (LicenseNo),
CONSTRAINT Vehicle_DailyRate_CK CHECK(DailyRate>=65), --Additional Constraint #1
CONSTRAINT Vehicle_Year_CK CHECK((2022-Year)<10),
CONSTRAINT Vehicle_outNo_FK FOREIGN KEY (outNo) REFERENCES Outlet (outNo));

```

#### **--Create statement for Ragreement Table**

```

CREATE TABLE Ragreement
(RentalNo      NUMBER(5),
StartDate      DATE,
ReturnDate     DATE,
MileageBefore  NUMBER(7,2),
MileageAfter   NUMBER(7,2),
InsuranceType  VARCHAR2(50),
ClientNo      NUMBER(5),
LicenseNo      VARCHAR2(15),
CONSTRAINT Ragreement_RentalNo_PK PRIMARY KEY (RentalNo),
CONSTRAINT Ragreement_Stardate_Enddate_CK CHECK(StartDate<ReturnDate), --Additional Constraint #2
CONSTRAINT Ragreement_ClientNo_FK FOREIGN KEY (ClientNo) REFERENCES Client (clientNo),
CONSTRAINT Ragreement_LicenseNo_FK FOREIGN KEY (LicenseNo) REFERENCES Vehicle (LicenseNo));

```

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<sup>2</sup> Assumption for employee email domain: @rental.com

**--Create statement for FaultReport Table**

```
CREATE TABLE FaultReport
(ReportNum      NUMBER(5),
 DateChecked    DATE,
 Comments       VARCHAR2(200),
 EmpNo          NUMBER(5),
 LicenseNo      VARCHAR2(15),
 RentalNo       NUMBER(5),
 CONSTRAINT FaultReport_ReportNum_PK PRIMARY KEY (ReportNum),
 CONSTRAINT FaultReport_EmpNo_FK FOREIGN KEY (EmpNo) REFERENCES Employee (EmpNo),
 CONSTRAINT FaultReport_LicenseNo_FK FOREIGN KEY (LicenseNo) REFERENCES Vehicle (LicenseNo),
 CONSTRAINT FaultReport_RentalNo_FK FOREIGN KEY (RentalNo) REFERENCES Ragreement (RentalNo));
```

**--Alter table statement with last constraint**

```
ALTER TABLE Outlet
ADD CONSTRAINT Outlet_ManagerNo_FK
FOREIGN KEY (ManagerNo) REFERENCES Employee (EmpNo);
```

PART II. A.  
SCRIPT #2

**--Insert Statements for Client Table**

```
INSERT INTO Client
VALUES (1,'Kaye','Ford','(278) 767-5393','kaye8017@protonmail.org','Ap #621-6052 Mauris. Street','Dormont','PA','95423');
INSERT INTO Client
VALUES (2,'Dorian','Martin','(156) 412-2294','dorian@hotmail.edu','Ap #732-9234 Neque St.','Dormont','PA','89222');
INSERT INTO Client
VALUES (3,'Thaddeus','Nash','(472) 623-6869','thaddeus430@hotmail.edu','Ap #947-4625 Gravida Rd.','Dormont','PA','53463');
INSERT INTO Client
VALUES (4,'Roanna','Myers','(956) 977-4963','roanna7235@yahoo.org','4545 Curabitur Rd.','Camden','PA','47318');
INSERT INTO Client
VALUES (5,'Brian','Rogers','(576) 528-3302','brian@aol.org','P.O. Box 497, 363 Gravida St.','Camden','PA','30281');
INSERT INTO Client
VALUES (6,'Ainsley','Atkins','(505) 431-1466','ainsley@yahoo.ca','126-9274 Erat Ave','Camden','PA','77552');
INSERT INTO Client
VALUES (7,'Teegan','Lane','(719) 574-2883','teegan1244@outlook.net','892-812 Convallis St.','Camden','PA','28693');
INSERT INTO Client
VALUES (8,'Hu','Conrad','(840) 435-3770','hu2122@aol.net','Ap #126-5033 Est. St.','Easton','PA','33854');
INSERT INTO Client
VALUES (9,'Anjolie','Buckner','(577) 758-2294','anjolie@yahoo.couk','P.O. Box 664, 3852 Cras Rd.','Easton','PA','77403');
INSERT INTO Client
VALUES (10,'Clio','Greer','(688) 948-3791','clio3215@icloud.ca','153-3649 In Street','Columbia','PA','27545');
INSERT INTO Client
VALUES (11,'Avram','Mills','(741) 695-9480','avram@google.net','Ap #281-6368 Volutpat Avenue','Brooklyn','NY','87203');
INSERT INTO Client
VALUES (12,'Jackson','Olsen','(185) 575-6574','jackson906@yahoo.net','816-9706 Varius. Ave','Brooklyn','NY','41843');
INSERT INTO Client
VALUES (13,'Hun','Comrad','(850) 435-3770','hu8122@aol.net','Ap #126-5033 Est. St.','Kenmore','NY','33854');
INSERT INTO Client
VALUES (14,'Anjolie','Buckner','(577) 758-2294','anjolie@yahoo.couk','P.O. Box 664, 3852 Cras Rd.','Kenmore','NY','77403');
INSERT INTO Client
VALUES (15,'Clio','Greer','(688) 948-3791','clio3215@icloud.ca','153-3649 In Street','Kenmore','NY','27545');
INSERT INTO Client
VALUES (16,'Avram','Mills','(741) 695-9480','avram@google.net','Ap #281-6368 Volutpat Avenue','Syracuse','NY','87203');
INSERT INTO Client
VALUES (17,'Jackson','Olsen','(185) 575-6574','jackson906@yahoo.net','816-9706 Varius. Ave','Bristol','NJ','41843');
INSERT INTO Client
VALUES (18,'Clio','Greer','(688) 948-3791','clio3215@icloud.ca','153-3649 In Street','Newark','NJ','27545');
INSERT INTO Client
VALUES (19,'Avram','Mills','(741) 695-9480','avram@google.net','Ap #281-6368 Volutpat Avenue','Baltimore','NJ','87203');

ALTER TABLE Employee DISABLE CONSTRAINT Employee_OutNo_FK;
```

**--Insert Statements for Employee Table**

```
INSERT INTO Employee (EmpNo,Fname,Lname,Position,Phone,Email,DOB,Gender,Salary,HireDate,OutNo)
VALUES (1,'Cedric','Kent','Sales Representative','(735) 417-0408','ckent@rental.com','01-Oct-1991','Male',95300.25,'15-Jul-2021',1);
INSERT INTO Employee (EmpNo,Fname,Lname,Position,Phone,Email,DOB,Gender,Salary,HireDate,OutNo)
VALUES (2,'Laith','Wynne','Mechanic','(445) 430-4261','lwayne@rental.com','08-Dec-1985','Male',120500.50,'20-Aug-2021',2);
INSERT INTO Employee (EmpNo,Fname,Lname,Position,Phone,Email,DOB,Gender,Salary,HireDate,OutNo)
VALUES (3,'Quinn','Garrison','Administrative Assistant','(658) 350-9856','qgarrison@rental.com','25-Dec-1994','Female',38100.75,'02-Feb-2022',3);
INSERT INTO Employee (EmpNo,Fname,Lname,Position,Phone,Email,DOB,Gender,Salary,HireDate,OutNo)
VALUES (4,'Callum','Nell','Sales Representative','(880) 375-9556','cnell@rental.com','16-Feb-1994','Male',65500.25,'07-Jul-2021',4);
INSERT INTO Employee (EmpNo,Fname,Lname,Position,Phone,Email,DOB,Gender,Salary,HireDate,OutNo)
VALUES (5,'Baker','Aimee','Mechanic','(482) 450-3696','baimee@rental.com','17-Nov-2004','Male',60000.00,'08-Nov-2021',5);
INSERT INTO Employee
VALUES (6,'Luke','Gisela','Sales Representative','(820) 365-2212','lgisela@rental.com','06-Jun-1997','Male',55000.50,'05-Jun-2022',1,1);
INSERT INTO Employee
VALUES (7,'Adrian','Dane','Mechanic','(677) 574-6759','adane@rental.com','27-Dec-1996','Male',62000.95,'22-Sep-2021',7,2);
INSERT INTO Employee
VALUES (8,'Shane','Paul','Sales Representative','(987) 381-3214','baimee@rental.com','11-Dec-2004','Male',50900.75,'08-Oct-2022',3,1);
INSERT INTO Employee
VALUES (9,'Laura','Cole','Mechanic','(892) 456-9826','qgarrison@rental.com','25-Sep-1994','Female',58450.00,'20-Feb-2021',9,2);
INSERT INTO Employee
VALUES (10,'Nicole','Garshia','Administrative Assistant','(917) 921-2312','cnell@rental.com','12-May-1994','Male',45000.35,'09-Jul-2022',2,3);
INSERT INTO Employee
VALUES (11,'Sophia','Dark','Sales Representative','(909) 432-2456','adane@rental.com','18-Sep-1996','Male',70800.25,'20-Dec-2021',5,1);
INSERT INTO Employee
VALUES (12,'Adam','Paine','Administrative Assistant','(815) 245-2761','lgisela@rental.com','10-Mar-1997','Male',43300.50,'08-Oct-2022',4,3);
INSERT INTO Employee
VALUES (13,'Olivia','Cool','Sales Representative','(892) 456-2341','ocool@rental.com','08-Feb-2004','Female',53200.75,'11-Aug-2021',8,4);
INSERT INTO Employee
VALUES (14,'Oliver','Trust','Mechanic','(614) 234-9017','otrust@rental.com','26-May-1994','Male',53290.00,'02-May-2022',10,5);
INSERT INTO Employee
VALUES (15,'Isabella','Tran','Administrative Assistant','(880) 234-9556','itran@rental.com','21-Dec-1994','Female',49000.55,'07-Sep-2021',6,3);
INSERT INTO Employee
VALUES (16,'James','Stone','Sales Representative','(092) 456-2398','jstone@rental.com','13-Apr-1996','Male',69300.25,'12-Jun-2022',1,6);
INSERT INTO Employee
VALUES (17,'Ava','Mone','Mechanic','(715) 250-2512','amone@rental.com','01-Oct-1997','Female',41250.50,'10-Aug-2021',1,6);
INSERT INTO Employee
VALUES (18,'Kaye','Bridges','Administrative Assistant','(538) 848-8759','kbridges@rental.com','27-Aug-1990','Female',60200.25,'07-Jan-2022',1,6);
INSERT INTO Employee
VALUES (19,'Yuri','Lee','Mechanic','(812) 415-8138','ylee@rental.com','16-Dec-1990','Female',61300.75,'09-Apr-2021',7,7);
INSERT INTO Employee
VALUES (20,'Jason','Sims','Sales Representative','(228) 699-4465','jsims@rental.com','27-May-2001','Male',40500.00,'15-Mar-2022',3,8);
INSERT INTO Employee
VALUES (21,'Aline','Vaughan','Administrative Assistant','(601) 747-6531','avaughan@rental.com','11-May-2002','Male',74500.25,'01-Jan-2021',3,8);
INSERT INTO Employee
VALUES (22,'Alfreda','Everett','Mechanic','(543) 222-3135','aeveryett@rental.com','05-Aug-1999','Female',53250.00,'09-Oct-2022',3,8);
INSERT INTO Employee
```



```

VALUES (23,'Octavia','Abbott','Mechanic','(256) 267-1658','oabbott@rental.com','15-Jun-1995','Female',67000.00,'02-Sep-2021',9,9);
INSERT INTO Employee
VALUES (24,'Patience','Lara','Administrative Assistant','(650) 623-4895','plara@rental.com','15-Dec-2005','Female',45500.20,'26-Oct-2022',9,9);
INSERT INTO Employee
VALUES (25,'Louis','Hull','Administrative Assistant','(406) 255-2883','lhull@rental.com','25-Oct-2001','Male',47800.25,'28-Mar-2021',2,10);
INSERT INTO Employee
VALUES (26,'Tad','Yang','Sales Representative','(841) 551-4934','tyang@rental.com','24-Jul-1996','Male',63250.25,'12-Oct-2022',2,10);
INSERT INTO Employee
VALUES (27,'Joel','Yang','Mechanic','(451) 516-5368','jyang@rental.com','27-Jul-1996','Male',48000.00,'15-Jul-2021',2,10);
INSERT INTO Employee
VALUES (28,'Salvador','Daugherty','Sales Representative','(869) 174-4452','sdaugherty@rental.com','08-May-2001','Male',70500.20,'09-Jun-2022',5,11);
INSERT INTO Employee
VALUES (29,'Karen','Fischer','Administrative Assistant','(983) 943-0713','kfischer@rental.com','16-Aug-1992','Female',62000.00,'17-Oct-2021',4,12);
INSERT INTO Employee
VALUES (30,'Emily','Wiggins','Sales Representative','(322) 837-0728','ewiggins@rental.com','10-Sep-1994','Female',47500.95,'10-Mar-2022',8,13);
INSERT INTO Employee
VALUES (31,'Caryn','Grimes','Mechanic','(628) 361-8515','cgrimes@rental.com','16-May-2006','Male',73500.25,'19-Feb-2021',8,13);
INSERT INTO Employee
VALUES (32,'Courtney','Moss','Mechanic','(657) 782-8541','cmoss@rental.com','27-Jun-1999','Female',49000.25,'07-Jan-2021',10,14);
INSERT INTO Employee
VALUES (33,'Raphael','Baird','Sales Representative','(489) 337-1279','rbaird@rental.com','27-Jan-1993','Male',72500.25,'10-Jan-2022',10,14);
INSERT INTO Employee
VALUES (34,'Arsenio','Ratliff','Administrative Assistant','(562) 173-7337','aratliff@rental.com','05-Mar-2005','Male',61500.25,'05-May-2021',10,14);
INSERT INTO Employee
VALUES (35,'Bert','Collier','Mechanic','(212) 596-5826','bcollier@rental.com','17-Jan-1997','Male',51250.25,'15-Feb-2022',6,15);
INSERT INTO Employee
VALUES (36,'Emerson','Gaines','Administrative Assistant','(962) 645-1183','egaines@rental.com','12-Sep-1998','Male',73400.00,'10-Sep-2021',6,15);
INSERT INTO Employee
VALUES (37,'Burton','Gates','Sales Representative','(104) 576-3175','bgates@rental.com','02-Apr-1995','Male',44520.30,'20-Dec-2022',7,7);
INSERT INTO Employee
VALUES (38,'Victor','Paul','Sales Representative','(321) 983-5166','vpaul@rental.com','25-Jun-1992','Male',71000.00,'09-Oct-2021',5,11);
INSERT INTO Employee
VALUES (39,'Burton','Gates','Mechanic','(104) 576-3175','bgates@rental.com','02-Apr-1995','Male',44520.30,'20-Dec-2022',5,11);
INSERT INTO Employee
VALUES (40,'Calista','Mcgowan','Administrative Assistant','(427) 531-4926','cmcgowan@rental.com','04-Jan-2001','Female',60000.00,'10-Oct-2021',5,11);
INSERT INTO Employee
VALUES (41,'Colton','Woods','Mechanic','(728) 565-4291','cwoods@rental.com','24-Jan-2005','Female',64500.25,'02-May-2022',4,12);
INSERT INTO Employee
VALUES (42,'Lenore','Carey','Mechanic','(820) 266-4463','lcarey@rental.com','23-Apr-2003','Female',52500.00,'10-Jan-2021',4,12);
INSERT INTO Employee
VALUES (43,'Susan','Yvette','Administrative Assistant','(748) 957-3712','syvette@rental.com','16-Aug-1994','Female',50000.75,'10-Oct-2022',4,12);
INSERT INTO Employee
VALUES (44,'Hamish','Luke','Sales Representative','(236) 739-8533','hluke@rental.com','05-Oct-1995','Male',70000.00,'20-Apr-2021',4,12);

```

**--Insert Statements for Outlet Table**

```
INSERT INTO Outlet
VALUES (1,'P.O. Box 352, 229 Sample Street','Pittsburgh','PA','15106','(206) 186-7464',1);
INSERT INTO Outlet
VALUES (2,'Ap #198-1234 Nunc Rd.','NY City','NY','10009','(845) 269-6628',3);
INSERT INTO Outlet
VALUES (3,'P.O. Box 102, 7972 Nam Rd.','Trenton','NJ','08606','(736) 502-7678',1);
INSERT INTO Outlet
VALUES (4,'Ap #405-9817 Convallis St.','Philadelphia','PA','19099','(824) 540-6398',3);
INSERT INTO Outlet
VALUES (5,'5341 Iaculis Avenue','Buffalo','NY','14206','(311) 540-6530',1);
INSERT INTO Outlet
VALUES (6,'Ap #181-8676 Mus. Rd.','Hoboken','NJ','07030','(813) 334-3754',3);
INSERT INTO Outlet
VALUES (7,'3586 Sapien Rd.','Allentown','PA','18101','(635) 785-9744',2);
INSERT INTO Outlet
VALUES (8,'528-7425 Cras Rd.','Rochester','NY','14607','(609) 755-7628',4);
INSERT INTO Outlet
VALUES (9,'534-7039 A Street','Princeton','NJ','08544','(314) 626-4972',2);
INSERT INTO Outlet
VALUES (10,'360-7342 Mi Avenue','Lancaster','PA','17602','(206) 786-5654',5);

ALTER TABLE Employee ENABLE CONSTRAINT Employee_OutNo_FK;
```

**--Insert Statements for Vehicle Table**

```
INSERT INTO Vehicle
VALUES ('690VKD', 'Audi', 'Coupe Quattro', 'Violet', '2021', 4, 5, '249.99', '28-Jul-2021', 1);
INSERT INTO Vehicle
VALUES ('BST456', 'Hyundai', 'Tucson', 'Red', '2021', 4, 5, 119.99, '24-Jul-2021', 2);
INSERT INTO Vehicle
VALUES ('HZX6294', 'Infiniti', 'QX56', 'Yellow', '2021', 4, 7, 199.99, '21-Jan-2022', 1);
INSERT INTO Vehicle
VALUES ('QVE197', 'MINI', 'Cooper Countryman', 'Goldenrod', '2022', 5, 4, 139.99, '22-Oct-2021', 2);
INSERT INTO Vehicle
VALUES ('7XSG955', 'Mitsubishi', 'Galant', 'Teal', '2022', 4, 5, 118.99, '17-May-2022', 5);
INSERT INTO Vehicle
VALUES ('7AAA336', 'Volvo', 'C30', 'Red', '2021', 2, 4, 189.99, '24-Mar-2022', 1);
INSERT INTO Vehicle
VALUES ('KZG2454', 'Lamborghini', 'Murcielago', 'Khaki', '2021', 2, 2, 449.99, '03-Nov-2021', 3);
INSERT INTO Vehicle
VALUES ('8AYR073', 'Infiniti', 'FX', 'Fuscia', '2022', 4, 5, 159.99, '04-Jul-2022', 4);
INSERT INTO Vehicle
VALUES ('8CPR787', 'Suzuki', 'XL-7', 'Fuscia', '2021', 4, 7, 169.99, '22-May-2022', 5);
INSERT INTO Vehicle
VALUES ('KKB1564', 'Aptera', 'Typ-1', 'Aquamarine', '2022', 2, 2, 299.99, '06-Mar-2022', 6);
INSERT INTO Vehicle
VALUES ('GUVU73', 'Infiniti', 'J', 'Khaki', '2022', 4, 7, 229.99, '26-Aug-2021', 7);
INSERT INTO Vehicle
VALUES ('585JAA', 'Mitsubishi', 'Lancer', 'Turquoise', '2021', 4, 5, 179.99, '18-Feb-2022', 4);
INSERT INTO Vehicle
VALUES ('7MP740', 'Chevrolet', 'Prizm', 'Teal', '2022', 4, 5, 149.99, '28-Apr-2022', 7);
INSERT INTO Vehicle
VALUES ('7ZDU891', 'Nissan', 'Sentra', 'Violet', '2022', 4, 5, 189.99, '10-Oct-2021', 6);
INSERT INTO Vehicle
VALUES ('APN7407', 'Chrysler', 'Concorde', 'Turquoise', '2022', 4, 5, 169.99, '05-Jul-2022', 4);
INSERT INTO Vehicle
VALUES ('RJZ6631', 'Ford', 'Fusion', 'Green', '2022', 4, 5, 189.99, '20-Oct-2021', 9);
INSERT INTO Vehicle
VALUES ('F838PJ', 'Mini', 'Clubman', 'Matador', '2021', 6, 7, 257.27, '18-May-2022', 6);
INSERT INTO Vehicle
VALUES ('RPY7427', 'Toyota', 'Auris', 'Mythos', '2022', 5, 8, 325.99, '09-Mar-2022', 10);
INSERT INTO Vehicle
VALUES ('8E9986', 'Ford', 'C-MAX', 'Florett', '2022', 4, 5, 189.99, '15-Aug-2021', 9);
INSERT INTO Vehicle
VALUES ('CDF7816', 'Volkswagen', 'Touran', 'Moonlight', '2021', 4, 7, 156.99, '27-Feb-2022', 8);
INSERT INTO Vehicle
VALUES ('24F817', 'Renault', 'Koleos', 'Daytona', '2022', 5, 6, 128.99, '16-Apr-2022', 3);
INSERT INTO Vehicle
VALUES ('7TKR300', 'Ford', 'Fusion', 'Ibis', '2022', 4, 5, 190.99, '25-Oct-2021', 10);
INSERT INTO Vehicle
```

```
VALUES ('134238', 'Hyundai', 'Tucson', 'Navarra', '2022', 4, 4, 225.99, '06-Jul-2022', 8);
INSERT INTO Vehicle
VALUES ('SC21360', 'Grand', 'Cherokee', 'Monsoon', '2022', 4, 6, 267.99, '10-Oct-2021', 9);
```

**--Insert Statements for Ragreement Table**

```
INSERT INTO Ragreement
VALUES (1, TO_DATE('05-Jan-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('15-Jan-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 5421, 6241,
'Liability Coverage', 1, '690VKD');
INSERT INTO Ragreement
VALUES (2, TO_DATE('22-Feb-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('28-Feb-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 7738, 7972,
'Liability Coverage', 1, '690VKD');
INSERT INTO Ragreement
VALUES (3, TO_DATE('03-Aug-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('16-Aug-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 528, 806,
'Liability Coverage', 1, 'HZX6294');
INSERT INTO Ragreement
VALUES (4, TO_DATE('01-Apr-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('19-Apr-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 1481, 2323,
'Liability Coverage', 2, '7AAA336');
INSERT INTO Ragreement
VALUES (5, TO_DATE('09-Nov-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('23-Nov-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 609, 956,
'Liability Coverage', 2, 'HZX6294');
INSERT INTO Ragreement
VALUES (6, TO_DATE('21-May-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('28-May-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 136, 373,
'Liability Coverage', 3, '690VKD');
INSERT INTO Ragreement
VALUES (7, TO_DATE('11-Oct-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('25-Oct-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 2876, 3235,
'Liability Coverage', 3, '7AAA336');
INSERT INTO Ragreement
VALUES (8, TO_DATE('17-Feb-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('26-Feb-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 5974, 6108,
'Collision Coverage', 4, 'APN7407');
INSERT INTO Ragreement
VALUES (9, TO_DATE('13-Mar-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('29-Mar-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 3133, 4063,
'Collision Coverage', 4, '8AYR073');
INSERT INTO Ragreement
VALUES (10, TO_DATE('10-May-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('19-May-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 4635, 5091,
'Collision Coverage', 5, '585JAA');
INSERT INTO Ragreement
VALUES (11, TO_DATE('27-Mar-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('05-Apr-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 3190, 4080,
'Collision Coverage', 5, 'APN7407');
INSERT INTO Ragreement
VALUES (12, TO_DATE('01-May-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('15-May-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 459, 832,
'Collision Coverage', 6, '8AYR073');
INSERT INTO Ragreement
VALUES (13, TO_DATE('24-Jun-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('03-Jul-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 323, 930,
'Collision Coverage', 6, '585JAA');
INSERT INTO Ragreement
VALUES (14, TO_DATE('19-Feb-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('25-Feb-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 1556, 2295,
'Collision Coverage', 7, 'APN7407');
INSERT INTO Ragreement
```

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VALUES (15, TO_DATE('04-Mar-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('16-Mar-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 539, 926,
'Personal Injury Protection Coverage', 8, 'GUVU73');
INSERT INTO Rgreement
VALUES (16, TO_DATE('26-May-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('05-Jun-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 728, 1273,
'Personal Injury Protection Coverage', 8, 'GUVU73');
INSERT INTO Rgreement
VALUES (17, TO_DATE('12-Jun-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('23-Jun-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 1585, 2445,
'Personal Injury Protection Coverage', 9, '7MP740');
INSERT INTO Rgreement
VALUES (18, TO_DATE('13-May-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('29-May-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 1825, 2399,
'Personal Injury Protection Coverage', 9, '7MP740');
INSERT INTO Rgreement
VALUES (19, TO_DATE('06-Dec-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('14-Dec-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 516, 1316,
'Personal Injury Protection Coverage', 10, 'RPY7427');
INSERT INTO Rgreement
VALUES (20, TO_DATE('07-Jul-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('19-Jul-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 2770, 3451,
'Personal Injury Protection Coverage', 10, '7TKR300');
INSERT INTO Rgreement
VALUES (21, TO_DATE('30-Jun-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('07-Jul-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 328, 1550,
'Personal Injury Protection Coverage', 11, 'BST456');
INSERT INTO Rgreement
VALUES (22, TO_DATE('20-Feb-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('28-Feb-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 884, 1150,
'Uninsured and Underinsured Motorist Protection', 11, 'QVE197');
INSERT INTO Rgreement
VALUES (23, TO_DATE('15-Jan-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('25-Jan-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 4031, 4649,
'Uninsured and Underinsured Motorist Protection', 11, 'BST456');
INSERT INTO Rgreement
VALUES (24, TO_DATE('12-Apr-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('24-Apr-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 738, 1872,
'Uninsured and Underinsured Motorist Protection', 12, 'QVE197');
INSERT INTO Rgreement
VALUES (25, TO_DATE('13-Aug-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('26-Aug-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 528, 1006,
'Uninsured and Underinsured Motorist Protection', 12, 'BST456');
INSERT INTO Rgreement
VALUES (26, TO_DATE('01-Apr-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('19-Apr-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 1481, 2323,
'Uninsured and Underinsured Motorist Protection', 13, '7XSG955');
INSERT INTO Rgreement
VALUES (27, TO_DATE('09-Jun-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('23-Jun-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 609, 1956,
'Uninsured and Underinsured Motorist Protection', 13, '8CPR787');
INSERT INTO Rgreement
VALUES (28, TO_DATE('18-Jan-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('27-Jan-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 136, 1373,
'Uninsured and Underinsured Motorist Protection', 14, '7XSG955');
INSERT INTO Rgreement
VALUES (29, TO_DATE('06-Oct-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('14-Oct-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 876, 1235,
'Comprehensive Coverage', 14, '8CPR787');
INSERT INTO Rgreement
VALUES (30, TO_DATE('07-Apr-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('18-Apr-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 7974, 8108,
'Comprehensive Coverage', 15, '7XSG955');
INSERT INTO Rgreement

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VALUES (31, TO_DATE('13-Dec-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('29-Dec-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 133, 1063,
'Comprehensive Coverage', 15, '8CPR787');
INSERT INTO Ragreement
VALUES (32, TO_DATE('10-Feb-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('19-Feb-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 5635, 6491,
'Comprehensive Coverage', 16, 'CDF7816');
INSERT INTO Ragreement
VALUES (33, TO_DATE('28-Mar-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('06-Apr-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 3190, 4580,
'Comprehensive Coverage', 16, '134238');
INSERT INTO Ragreement
VALUES (34, TO_DATE('01-May-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('15-May-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 459, 932,
'Comprehensive Coverage', 17, '24F817');
INSERT INTO Ragreement
VALUES (35, TO_DATE('24-Jun-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('03-Jul-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 323, 1130,
'Comprehensive Coverage', 17, 'KZG2454');
INSERT INTO Ragreement
VALUES (36, TO_DATE('19-Feb-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('25-Feb-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 6556, 7295,
'Comprehensive Coverage', 18, 'KKB1564');
INSERT INTO Ragreement
VALUES (37, TO_DATE('04-Oct-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('16-Oct-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 539, 1926,
'Medical Payments', 18, '7ZDU891');
INSERT INTO Ragreement
VALUES (38, TO_DATE('26-Jan-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('05-Feb-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 2728, 3373,
'Medical Payments', 19, 'RJZ6631');
INSERT INTO Ragreement
VALUES (39, TO_DATE('30-Jul-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('13-Aug-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 1585, 2445,
'Medical Payments', 19, '8E9986');
INSERT INTO Ragreement
VALUES (40, TO_DATE('13-Sep-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('29-Sep-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 1825, 2399,
'Medical Payments', 4, 'APN7407');
INSERT INTO Ragreement
VALUES (41, TO_DATE('26-Mar-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('04-Apr-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 516, 1316,
'Medical Payments', 5, '585JAA');
INSERT INTO Ragreement
VALUES (42, TO_DATE('07-Jul-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('19-Jul-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 770, 2451,
'Medical Payments', 11, 'QVE197');
INSERT INTO Ragreement
VALUES (43, TO_DATE('30-Jun-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('13-Jul-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 5328, 6550,
'Medical Payments', 12, 'QVE197');
INSERT INTO Ragreement
VALUES (44, TO_DATE('20-Mar-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), TO_DATE('28-Mar-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 2884, 3150,
'Medical Payments', 11, 'BST456');

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**--Insert Statements for FaultReport Table**

```
INSERT INTO FaultReport VALUES (1, TO_DATE('20-Apr-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 'POWER WINDOW MALFUNCTION', 17, '7AAA336', 4);
INSERT INTO FaultReport VALUES (2, TO_DATE('25-Nov-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 'POWER WINDOW MALFUNCTION, WATER IN TAILLIGHT', 17, 'HZX6294', 5);
INSERT INTO FaultReport VALUES (3, TO_DATE('01-Mar-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 'POWER WINDOW MALFUNCTION, WATER IN TAILLIGHT, BATTERY HAS NEEDED REPEATED CHARGES', 41, 'APN7407', 8);
INSERT INTO FaultReport VALUES (4, TO_DATE('30-Sep-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 'BATTERY HAS NEEDED REPEATED CHARGES, BATTERY KEEPS GOING DEAD', 41, '8AYR073', 9);
INSERT INTO FaultReport VALUES (5, TO_DATE('17-May-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 'ELECTRIC RUNNING BOARDS FAILING', 41, '8AYR073', 12);
INSERT INTO FaultReport VALUES (6, TO_DATE('06-Jul-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 'ENGINE RATTLES ON COLD START UP, PAINT CHIPPING', 42, '585JAA', 13);
INSERT INTO FaultReport VALUES (7, TO_DATE('17-Mar-2022 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 'PAINT CHIPPING, RANDOM ELECTRICAL ISSUES', 7, 'GUVU73', 15);
INSERT INTO FaultReport VALUES (8, TO_DATE('07-Jun-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 'U-CONNECT OVERHEATING AND FREEZING UP', 7, 'GUVU73', 16);
INSERT INTO FaultReport VALUES (9, TO_DATE('17-Dec-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 'WINDSHIELD EASILY CRACKS, A/C NOT WORKING PROPERLY', 14, 'RPY7427', 19);
INSERT INTO FaultReport VALUES (10, TO_DATE('20-Jul-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 'A/C NOT WORKING PROPERLY, ABS WILL SUDDENLY LOCK UP AND YOU CANNOT BRAKE', 14, '7TKR300', 20);
INSERT INTO FaultReport VALUES (11, TO_DATE('26-Apr-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 'CAR WONT TURN OFF WHEN IN PARK', 2, 'QVE197', 24);
INSERT INTO FaultReport VALUES (13, TO_DATE('28-Jan-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 'ALL DASHBOARD WARNING LIGHTS CAME ON', 5, '7XSG955', 28);
INSERT INTO FaultReport VALUES (14, TO_DATE('16-Oct-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 'PAINT CHIPPING, RANDOM ELECTRICAL ISSUES', 5, '8CPR787', 29);
INSERT INTO FaultReport VALUES (15, TO_DATE('22-Feb-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 'AUTO IDLE STOP DOES NOT WORK', 31, 'CDF7816', 32);
INSERT INTO FaultReport VALUES (16, TO_DATE('07-Apr-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 'ELECTRIC RUNNING BOARDS FAILING, BRAKES PADS ISSUES', 9, 'SC21360', 33);
INSERT INTO FaultReport VALUES (17, TO_DATE('08-FEB-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 'WINDSHIELD EASILY CRACKS, A/C NOT WORKING PROPERLY', 35, 'KKB1564', 36);
INSERT INTO FaultReport VALUES (18, TO_DATE('27-Feb-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 'WATER IN TAILLIGHT, A/C NOT WORKING PROPERLY', 35, '7ZDU891', 37);
INSERT INTO FaultReport VALUES (19, TO_DATE('08-Feb-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 'BRAKES PADS ISSUES', 9, 'RJZ6631', 38);
INSERT INTO FaultReport VALUES (20, TO_DATE('14-Aug-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 'ALL DASHBOARD WARNING LIGHTS CAME ON', 9, '8E9986', 39);
INSERT INTO FaultReport VALUES (21, TO_DATE('01-Oct-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 'PAINT CHIPPING, RANDOM ELECTRICAL ISSUES', 41, 'APN7407', 40);
INSERT INTO FaultReport VALUES (22, TO_DATE('16-Jul-2021 04:15:56', 'DD-MON-YYYY HH24:MI:SS'), 'A/C NOT WORKING PROPERLY', 2, 'QVE197', 43);
```

--Employee Table Data

EMPNO	FNAME	LNAME	POSITION	PHONE	EMAIL	DOB	GENDER	SALARY	HIREDATE	OUTNO	SUPER_NO
1	Cedric	Kent	Sales Representative	(735) 417-0408	ckent@rental.com	01-OCT-91	Male	95300.25	15-JUL-21	1	
2	Laith	Wynne	Mechanic	(445) 430-4261	lwayne@rental.com	08-DEC-85	Male	120500.5	20-AUG-21	2	
3	Quinn	Garrison	Administrative Assistant	(658) 350-9856	qgarrison@rental.com	25-DEC-94	Female	38100.75	02-FEB-22	3	
4	Callum	Nell	Sales Representative	(880) 375-9556	cnell@rental.com	16-FEB-94	Male	65500.25	07-JUL-21	4	
5	Baker	Aimee	Mechanic	(482) 450-3696	baimee@rental.com	17-NOV-04	Male	60000	08-NOV-21	5	
6	Luke	Gisela	Sales Representative	(820) 365-2212	lgisela@rental.com	06-JUN-97	Male	55000.5	05-JUN-22	1	1
7	Adrian	Dane	Mechanic	(677) 574-6759	adane@rental.com	27-DEC-96	Male	62000.95	22-SEP-21	7	2
8	Shane	Paul	Sales Representative	(987) 381-3214	baimee@rental.com	11-DEC-04	Male	50900.75	08-OCT-22	3	1
9	Laura	Cole	Mechanic	(892) 456-9826	qgarrison@rental.com	25-SEP-94	Female	58450	20-FEB-21	9	2
10	Nicole	Garshia	Administrative Assistant	(917) 921-2312	cnell@rental.com	12-MAY-94	Male	45000.35	09-JUL-22	2	3
11	Sophia	Dark	Sales Representative	(909) 432-2456	adane@rental.com	18-SEP-96	Male	70800.25	20-DEC-21	5	1
12	Adam	Paine	Administrative Assistant	(815) 245-2761	lgisela@rental.com	10-MAR-97	Male	43300.5	08-OCT-22	4	3
13	Olivia	Cool	Sales Representative	(892) 456-2341	ocool@rental.com	08-FEB-04	Female	53200.75	11-AUG-21	8	4
14	Oliver	Trust	Mechanic	(614) 234-9017	otrust@rental.com	26-MAY-94	Male	53290	02-MAY-22	10	5
15	Isabella	Tran	Administrative Assistant	(880) 234-9556	itrane@rental.com	21-DEC-94	Female	49000.55	07-SEP-21	6	3
16	James	Stone	Sales Representative	(092) 456-2398	jstone@rental.com	13-APR-96	Male	69300.25	12-JUN-22	1	6
17	Ava	Mone	Mechanic	(715) 250-2512	amone@rental.com	01-OCT-97	Female	41250.5	10-AUG-21	1	6
18	Kaye	Bridges	Administrative Assistant	(538) 848-8759	kbridges@rental.com	27-AUG-90	Female	60200.25	07-JAN-22	1	6
19	Yuri	Lee	Mechanic	(812) 415-8138	ylee@rental.com	16-DEC-90	Female	61300.75	09-APR-21	7	7
20	Jason	Sims	Sales Representative	(228) 699-4465	jsims@rental.com	27-MAY-01	Male	40500	15-MAR-22	3	8
21	Aline	Vaughan	Administrative Assistant	(601) 747-6531	avaughan@rental.com	11-MAY-02	Male	74500.25	01-JAN-21	3	8
22	Alfreda	Everett	Mechanic	(543) 222-3135	aeverett@rental.com	05-AUG-99	Female	53250	09-OCT-22	3	8
23	Octavia	Abbott	Mechanic	(256) 267-1658	oabbott@rental.com	15-JUN-95	Female	67000	02-SEP-21	9	9
24	Patience	Lara	Administrative Assistant	(650) 623-4895	plara@rental.com	15-DEC-05	Female	45500.2	26-OCT-22	9	9
25	Louis	Hull	Administrative Assistant	(406) 255-2883	lhull@rental.com	25-OCT-01	Male	47800.25	28-MAR-21	2	10
26	Tad	Yang	Sales Representative	(841) 551-4934	tyang@rental.com	24-JUL-96	Male,	63250.25	12-OCT-22	2	10
27	Joel	Yang	Mechanic	(451) 516-5368	jyang@rental.com	27-JUL-96	Male	48000	15-JUL-21	2	10
28	Salvador	Daugherty	Sales Representative	(869) 174-4452	sdaughtery@rental.com	08-MAY-01	Male	70500.2	09-JUN-22	5	11
29	Karen	Fischer	Administrative Assistant	(983) 943-0713	kfischer@rental.com	16-AUG-92	Female	62000	17-OCT-21	4	12
30	Emily	Wiggins	Sales Representative	(322) 837-0728	ewiggins@rental.com	10-SEP-94	Female,	47500.95	10-MAR-22	8	13
31	Caryn	Grimes	Mechanic	(628) 361-8515	cgrimes@rental.com	16-MAY-06	Male	73500.25	19-FEB-21	8	13
32	Courtney	Moss	Mechanic	(657) 782-8541	cmoss@rental.com	27-JUN-99	Female	49000.25	07-JAN-21	10	14
33	Raphael	Baird	Sales Representative	(489) 337-1279	rbaird@rental.com	27-JAN-93	Male	72500.25	10-JAN-22	10	14
34	Arsenio	Ratliff	Administrative Assistant	(562) 173-7337	aratliff@rental.com	05-MAR-05	Male	61500.25	05-MAY-21	10	14
35	Bert	Collier	Mechanic	(212) 596-5826	bcollier@rental.com	17-JAN-97	Male	51250.25	15-FEB-22	6	15
36	Emerson	Gaines	Administrative Assistant	(962) 645-1183	egaines@rental.com	12-SEP-98	Male	73400	10-SEP-21	6	15
37	Burton	Gates	Sales Representative	(104) 576-3175	bgates@rental.com	02-APR-95	Male	44520.3	20-DEC-22	7	7
38	Victor	Paul	Sales Representative	(321) 983-5166	vpaul@rental.com	25-JUN-92	Male	71000	09-OCT-21	5	11
39	Burton	Gates	Mechanic	(104) 576-3175	bgates@rental.com	02-APR-95	Male	44520.3	20-DEC-22	5	11
40	Calista	Mcgowan	Administrative Assistant	(427) 531-4926	cmcgowan@rental.com	04-JAN-01	Female	60000	10-OCT-21	5	11
41	Colton	Woods	Mechanic	(728) 565-4291	cwoods@rental.com	24-JAN-05	Female	64500.25	02-MAY-22	4	12
42	Lenore	Carey	Mechanic	(820) 266-4463	lcarey@rental.com	23-APR-03	Female	52500	10-JAN-21	4	12
43	Susan	Yvette	Administrative Assistant	(748) 957-3712	syvette@rental.com	16-AUG-94	Female	50000.75	10-OCT-22	4	12
44	Hamish	Luke	Sales Representative	(236) 739-8533	hluke@rental.com	05-OCT-95	Male	70000	20-APR-21	4	12



--FaultReport Table Data

REPORTNUM	DATECHECK	COMMENTS	EMPNO	LICENSENO	RENTALNO
1	20-APR-22	POWER WINDOW MALFUNCTION	17	7AAA336	4
2	25-NOV-21	POWER WINDOW MALFUNCTION, WATER IN TAILLIGHT	17	HZX6294	5
3	01-MAR-22	POWER WINDOW MALFUNCTION, WATER IN TAILLIGHT, BATTERY HAS NEEDED REPEATED CHARGES	41	APN7407	8
4	30-SEP-21	BATTERY HAS NEEDED REPEATED CHARGES, BATTERY KEEPS GOING DEAD	41	8AYR073	9
5	17-MAY-21	ELECTRIC RUNNING BOARDS FAILING	41	8AYR073	12
6	06-JUL-21	ENGINE RATTLES ON COLD START UP, PAINT CHIPPING	42	585JAA	13
7	17-MAR-22	PAINT CHIPPING, RANDOM ELECTRICAL ISSUES	7	GUUU73	15
8	07-JUN-21	U-CONNECT OVERHEATING AND FREEZING UP	7	GUUU73	16
9	17-DEC-21	WINDSHIELD EASILY CRACKS, A/C NOT WORKING PROPERLY	14	RPY7427	19
10	20-JUL-21	A/C NOT WORKING PROPERLY, ABS WILL SUDDENLY LOCK UP AND YOU CANNOT BRAKE	14	7TKR300	20
11	26-APR-21	CAR WONT TURN OFF WHEN IN PARK	2	QVE197	24
13	28-JAN-21	ALL DASHBOARD WARNING LIGHTS CAME ON	5	7XSG955	28
14	16-OCT-21	PAINT CHIPPING, RANDOM ELECTRICAL ISSUES	5	8CPR787	29
15	22-FEB-21	AUTO IDLE STOP DOES NOT WORK	31	CDF7816	32
16	07-APR-21	ELECTRIC RUNNING BOARDS FAILING, BRAKES PADS ISSUES	9	SC21360	33
17	08-FEB-21	WINDSHIELD EASILY CRACKS, A/C NOT WORKING PROPERLY	35	KKB1564	36
18	27-FEB-21	WATER IN TAILLIGHT, A/C NOT WORKING PROPERLY	35	7ZDU891	37
19	08-FEB-21	BRAKES PADS ISSUES	9	RJZ6631	38
20	14-AUG-21	ALL DASHBOARD WARNING LIGHTS CAME ON	9	8E9986	39
21	01-OCT-21	PAINT CHIPPING, RANDOM ELECTRICAL ISSUES	41	APN7407	40
22	16-JUL-21	A/C NOT WORKING PROPERLY	2	QVE197	43

--Outlet Table Data

OUTNO	STREET	CITY	STATE	ZIPCODE	PHONE	MANAGERNO
1	P.O. Box 352, 229 Sample Street	Pittsburgh	PA	15106	(206) 186-7464	1
2	Ap #198-1234 Nunc Rd.	NY City	NY	10009	(845) 269-6628	3
3	P.O. Box 102, 7972 Nam Rd.	Trenton	NJ	08606	(736) 502-7678	1
4	Ap #405-9817 Convallis St.	Philadelphia	PA	19099	(824) 540-6398	3
5	5341 Iaculis Avenue	Buffalo	NY	14206	(311) 540-6530	1
6	Ap #181-8676 Mus. Rd.	Hoboken	NJ	07030	(813) 334-3754	3
7	3586 Sapient Rd.	Allentown	PA	18101	(635) 785-9744	2
8	528-7425 Cras Rd.	Rochester	NY	14607	(609) 755-7628	4
9	534-7039 A Street	Princeton	NJ	08544	(314) 626-4972	2
10	360-7342 Mi Avenue	Lancaster	PA	17602	(206) 786-5654	5

--Vehicle Table Data

LICENSENO	MAKE	MODEL	COLOR	YEAR	NODOORS	CAPACITY	DAILYRATE	INSPECTIONDATE	OUTNO
690VKD	Audi	Coupe Quattro	Violet	2021	4	5	249.99	28-JUL-21	1
BST456	Hyundai	Tucson	Red	2021	4	5	119.99	24-JUL-21	2
HZX6294	Infiniti	QX56	Yellow	2021	4	7	199.99	21-JAN-22	1
QVE197	MINI	Cooper Countryman	Goldenrod	2022	5	4	139.99	22-OCT-21	2
7XSG955	Mitsubishi	Galant	Teal	2022	4	5	118.99	17-MAY-22	5
7AAA336	Volvo	C30	Red	2021	2	4	189.99	24-MAR-22	1
KZG2454	Lamborghini	Murcielago	Khaki	2021	2	2	449.99	03-NOV-21	3
8AYR073	Infiniti	FX	Fuscia	2022	4	5	159.99	04-JUL-22	4
8CPR787	Suzuki	XL-7	Fuscia	2021	4	7	169.99	22-MAY-22	5
KKB1564	Aptera	Typ-1	Aquamarine	2022	2	2	299.99	06-MAR-22	6
GUUVU73	Infiniti	J	Khaki	2022	4	7	229.99	26-AUG-21	7
585JAA	Mitsubishi	Lancer	Turquoise	2021	4	5	179.99	18-FEB-22	4
7MP740	Chevrolet	Prizm	Teal	2022	4	5	149.99	28-APR-22	7
7ZDU891	Nissan	Sentra	Violet	2022	4	5	189.99	10-OCT-21	6
APN7407	Chrysler	Concorde	Turquoise	2022	4	5	169.99	05-JUL-22	4
RJZ6631	Ford	Fusion	Green	2022	4	5	189.99	20-OCT-21	9
F838PJ	Mini	Clubman	Matador	2021	6	7	257.27	18-MAY-22	6
RPY7427	Toyota	Auris	Mythos	2022	5	8	325.99	09-MAR-22	10
8E9986	Ford	C-MAX	Florett	2022	4	5	189.99	15-AUG-21	9
CDF7816	Volkswagen	Touran	Moonlight	2021	4	7	156.99	27-FEB-22	8
24F817	Renault	Koleos	Daytona	2022	5	6	128.99	16-APR-22	3
7TKR300	Ford	Fusion	Ibis	2022	4	5	190.99	25-OCT-21	10
134238	Hyundai	Tucson	Navarra	2022	4	4	225.99	06-JUL-22	8
SC21360	Grand	Cherokee	Monsoon	2022	4	6	267.99	10-OCT-21	9

--Client Table Data

CLIENTNO	FNAME	LNAME	PHONE	EMAIL	STREET	CITY	STATE	ZIPCODE
1	Kaye	Ford	(278) 767-5393	kaye8017@protonmail.org	Ap #621-6052 Mauris. Street	Dormont	PA	95423
2	Dorian	Martin	(156) 412-2294	dorian@hotmail.edu	Ap #732-9234 Neque St.	Dormont	PA	89222
3	Thaddeus	Nash	(472) 623-6869	thaddeus430@hotmail.edu	Ap #947-4625 Gravida Rd.	Dormont	PA	53463
4	Roanna	Myers	(956) 977-4963	roanna7235@yahoo.org	4545 Curabitur Rd.	Camden	PA	47318
5	Brian	Rogers	(576) 528-3302	brian@aol.org	P.O. Box 497, 363 Gravida St.	Camden	PA	30281
6	Ainsley	Atkins	(505) 431-1466	ainsley@yahoo.ca	126-9274 Erat Ave	Camden	PA	77552
7	Teegan	Lane	(719) 574-2883	teegan1244@outlook.net	892-812 Convallis St.	Camden	PA	28693
8	Hu	Conrad	(840) 435-3770	hu2122@aol.net	Ap #126-5033 Est. St.	Easton	PA	33854
9	Anjolie	Buckner	(577) 758-2294	anjolie@yahoo.couk	P.O. Box 664, 3852 Cras Rd.	Easton	PA	77403
10	Clio	Greer	(688) 948-3791	clio3215@icloud.ca	153-3649 In Street	Columbia	PA	27545
11	Avram	Mills	(741) 695-9480	avram@google.net	Ap #281-6368 Volutpat Avenue	Brooklyn	NY	87203
12	Jackson	Olsen	(185) 575-6574	jackson906@yahoo.net	816-9706 Varius. Ave	Brooklyn	NY	41843
13	Hun	Comrad	(850) 435-3770	hu8122@aol.net	Ap #126-5033 Est. St.	Kenmore	NY	33854
14	Anjolie	Buckner	(577) 758-2294	anjolie@yahoo.couk	P.O. Box 664, 3852 Cras Rd.	Kenmore	NY	77403
15	Clio	Greer	(688) 948-3791	clio3215@icloud.ca	153-3649 In Street	Kenmore	NY	27545
16	Avram	Mills	(741) 695-9480	avram@google.net	Ap #281-6368 Volutpat Avenue	Syracuse	NY	87203
17	Jackson	Olsen	(185) 575-6574	jackson906@yahoo.net	816-9706 Varius. Ave	Bristol	NJ	41843
18	Clio	Greer	(688) 948-3791	clio3215@icloud.ca	153-3649 In Street	Newark	NJ	27545
19	Avram	Mills	(741) 695-9480	avram@google.net	Ap #281-6368 Volutpat Avenue	Baltimore	NJ	87203

--Ragreement Table Data

RENTALNO	STARTDATE	RETURNDATE	MILEAGEBEFORE	MILEAGEAFTER	INSURANCETYPE	CLIENTNO	LICENSENO
1	05-JAN-22	15-JAN-22	5421	6241	Liability Coverage	1	690VKD
2	22-FEB-22	28-FEB-22	7738	7972	Liability Coverage	1	690VKD
3	03-AUG-21	16-AUG-21	528	806	Liability Coverage	1	HZX6294
4	01-APR-22	19-APR-22	1481	2323	Liability Coverage	2	7AAA336
5	09-NOV-21	23-NOV-21	609	956	Liability Coverage	2	HZX6294
6	21-MAY-21	28-MAY-21	136	373	Liability Coverage	3	690VKD
7	11-OCT-21	25-OCT-21	2876	3235	Liability Coverage	3	7AAA336
8	17-FEB-22	26-FEB-22	5974	6108	Collision Coverage	4	APN7407
9	13-MAR-22	29-MAR-22	3133	4063	Collision Coverage	4	8AYR073
10	10-MAY-22	19-MAY-22	4635	5091	Collision Coverage	5	585JAA
11	27-MAR-21	05-APR-21	3190	4080	Collision Coverage	5	APN7407
12	01-MAY-21	15-MAY-21	459	832	Collision Coverage	6	8AYR073
13	24-JUN-21	03-JUL-21	323	930	Collision Coverage	6	585JAA
14	19-FEB-21	25-FEB-21	1556	2295	Collision Coverage	7	APN7407
15	04-MAR-22	16-MAR-22	539	926	Personal Injury Protection Coverage	8	GUVU73
16	26-MAY-21	05-JUN-21	728	1273	Personal Injury Protection Coverage	8	GUVU73
17	12-JUN-22	23-JUN-22	1585	2445	Personal Injury Protection Coverage	9	7MP740
18	13-MAY-22	29-MAY-22	1825	2399	Personal Injury Protection Coverage	9	7MP740
19	06-DEC-21	14-DEC-21	516	1316	Personal Injury Protection Coverage	10	RPY7427
20	07-JUL-21	19-JUL-21	2770	3451	Personal Injury Protection Coverage	10	7TKR300
21	30-JUN-21	07-JUL-21	328	1550	Personal Injury Protection Coverage	11	BST456
22	20-FEB-22	28-FEB-22	884	1150	Uninsured and Underinsured Motorist Protection	11	QVE197
23	15-JAN-22	25-JAN-22	4031	4649	Uninsured and Underinsured Motorist Protection	11	BST456
24	12-APR-21	24-APR-21	738	1872	Uninsured and Underinsured Motorist Protection	12	QVE197
25	13-AUG-21	26-AUG-21	528	1006	Uninsured and Underinsured Motorist Protection	12	BST456
26	01-APR-22	19-APR-22	1481	2323	Uninsured and Underinsured Motorist Protection	13	7XSG955
27	09-JUN-22	23-JUN-22	609	1956	Uninsured and Underinsured Motorist Protection	13	8CPR787
28	18-JAN-21	27-JAN-21	136	1373	Uninsured and Underinsured Motorist Protection	14	7XSG955
29	06-OCT-21	14-OCT-21	876	1235	Comprehensive Coverage	14	8CPR787
30	07-APR-21	18-APR-21	7974	8108	Comprehensive Coverage	15	7XSG955
31	13-DEC-21	29-DEC-21	133	1063	Comprehensive Coverage	15	8CPR787
32	10-FEB-21	19-FEB-21	5635	6491	Comprehensive Coverage	16	CDF7816
33	28-MAR-21	06-APR-21	3190	4580	Comprehensive Coverage	16	134238
34	01-MAY-21	15-MAY-21	459	932	Comprehensive Coverage	17	24F817
35	24-JUN-21	03-JUL-21	323	1130	Comprehensive Coverage	17	KZG2454
36	19-FEB-21	25-FEB-21	6556	7295	Comprehensive Coverage	18	KKB1564
37	04-OCT-21	16-OCT-21	539	1926	Medical Payments	18	7ZDU891
38	26-JAN-21	05-FEB-21	2728	3373	Medical Payments	19	RJZ6631
39	30-JUL-21	13-AUG-21	1585	2445	Medical Payments	19	8E9986
40	13-SEP-21	29-SEP-21	1825	2399	Medical Payments	4	APN7407
41	26-MAR-21	04-APR-21	516	1316	Medical Payments	5	585JAA

42 07-JUL-21 19-JUL-21	770	2451 Medical Payments	11 QVE197
43 30-JUN-21 13-JUL-21	5328	6550 Medical Payments	12 QVE197
44 20-MAR-21 28-MAR-21	2884	3150 Medical Payments	11 BST456

## PART II. B.

--Question 1

```
SQL> COLUMN "Client Name" FORMAT A15
SQL> COLUMN "Start Date" FORMAT A20
SQL> COLUMN "Rental ID" FORMAT A15
SQL> COLUMN Cost FORMAT $99,990.99
SQL> BREAK ON "Client ID" ON "Client Name"
SQL> SELECT clientno AS "Client ID",
 2     fname||' '||lname AS "Client Name",
 3     NVL(TO_CHAR(rentalno), 'Not Available') AS "Rental ID",
 4     NVL(TO_CHAR(startdate, 'DD-MON-YYYY'), 'Not Available') AS "Start Date",
 5     NVL(((TRUNC(returndate)-TRUNC(startdate))*24), 0) AS "Duration(in Hours)",
 6     NVL(((TRUNC(returndate)-TRUNC(startdate))*dailyrate), 0) AS "Cost"
 7 FROM client LEFT JOIN ragreement USING (clientno)
 8 LEFT JOIN vehicle USING(licenseo)
 9 WHERE LOWER(state)='pa'
10 ORDER BY 2, startdate;
```

Client ID	Client Name	Rental ID	Start Date	Duration(in Hours)	Cost
6	Ainsley Atkins	12	01-MAY-2021	336	\$2,239.86
		13	24-JUN-2021	216	\$1,619.91
9	Anjolie Buckner	18	13-MAY-2022	384	\$2,399.84
		17	12-JUN-2022	264	\$1,649.89
5	Brian Rogers	41	26-MAR-2021	216	\$1,619.91
		11	27-MAR-2021	216	\$1,529.91
		10	10-MAY-2022	216	\$1,619.91
10	Clio Greer	20	07-JUL-2021	288	\$2,291.88
		19	06-DEC-2021	192	\$2,607.92
2	Dorian Martin	5	09-NOV-2021	336	\$2,799.86
		4	01-APR-2022	432	\$3,419.82
8	Hu Conrad	16	26-MAY-2021	240	\$2,299.90
		15	04-MAR-2022	288	\$2,759.88
1	Kaye Ford	3	03-AUG-2021	312	\$2,599.87
		1	05-JAN-2022	240	\$2,499.90
		2	22-FEB-2022	144	\$1,499.94
4	Roanna Myers	40	13-SEP-2021	384	\$2,719.84
		8	17-FEB-2022	216	\$1,529.91
		9	13-MAR-2022	384	\$2,559.84
7	Teegan Lane	14	19-FEB-2021	144	\$1,019.94
3	Thaddeus Nash	6	21-MAY-2021	168	\$1,749.93
		7	11-OCT-2021	336	\$2,659.86

22 rows selected.

--Question 2

```
SQL> COLUMN "Employee Name" FORMAT A20
SQL> SELECT empno AS "Employee ID",
 2      fname||' '||lname AS "Employee Name",
 3      COUNT(reportnum) AS "No. of Fault Reports",
 4      DENSE_RANK() OVER (ORDER BY COUNT(reportnum) DESC) AS "Rank"
 5 FROM employee LEFT JOIN faultreport USING (empno)
 6 GROUP BY empno, fname, lname;
```

Employee ID	Employee Name	No. of Fault Reports	Rank
41	Colton Woods	4	1
9	Laura Cole	3	2
17	Ava Mone	2	3
35	Bert Collier	2	3
7	Adrian Dane	2	3
5	Baker Aimee	2	3
2	Laith Wynne	2	3
14	Oliver Trust	2	3
31	Caryn Grimes	1	4
42	Lenore Carey	1	4
11	Sophia Dark	0	5
32	Courtney Moss	0	5
8	Shane Paul	0	5
12	Adam Paine	0	5
21	Aline Vaughan	0	5
37	Burton Gates	0	5
4	Callum Nell	0	5
10	Nicole Garshia	0	5
18	Kaye Bridges	0	5
33	Raphael Baird	0	5
3	Quinn Garrison	0	5
20	Jason Sims	0	5
22	Alfreda Everett	0	5
26	Tad Yang	0	5
28	Salvador Daugherty	0	5
29	Karen Fischer	0	5
38	Victor Paul	0	5
13	Olivia Cool	0	5
19	Yuri Lee	0	5
25	Louis Hull	0	5
39	Burton Gates	0	5
16	James Stone	0	5
24	Patience Lara	0	5

44	Hamish Luke	0	5
34	Arsenio Ratliff	0	5
40	Calista McGowan	0	5
36	Emerson Gaines	0	5
43	Susan Yvette	0	5
15	Isabella Tran	0	5
1	Cedric Kent	0	5
27	Joel Yang	0	5
23	Octavia Abbott	0	5
6	Luke Gisela	0	5
30	Emily Wiggins	0	5

44 rows selected.

### --Question 3

SQL> COLUMN "Outlet" FORMAT A60

SQL> COLUMN "Total Revenue" FORMAT \$99,990.99

SQL> SELECT \*

```

2 FROM (SELECT outno||' - '||street||', '||city||', '||state AS "Outlet",
3      COUNT(rentalno) AS "Total Rental Agreements",
4      SUM(((TRUNC(returndate)-TRUNC(startdate))*dailyrate)) AS "Total Revenue",
5      DENSE_RANK() OVER (ORDER BY SUM(((TRUNC(returndate)-TRUNC(startdate))*dailyrate)) DESC) Rank
6 FROM outlet JOIN vehicle USING(outno)
7 JOIN ragreement USING(licenseno)
8 GROUP BY outno, street, city, state)
9 WHERE Rank<=2;
```

Outlet	Total Rental Agreements	Total Revenue	RANK
1 - P.O. Box 352, 229 Sample Street, Pittsburgh, PA	7	\$17,229.18	1
4 - Ap #405-9817 Convallis St., Philadelphia, PA	9	\$16,459.03	2

2 rows selected.



--Question 4

```
SQL> COLUMN "Outlet Street" FORMAT A30
SQL> COLUMN "Start Date" FORMAT A12
SQL> COLUMN "Return Date" FORMAT A12
SQL> BREAK ON "Outlet Street"
SQL> SELECT outlet.street AS "Outlet Street",
 2      rentalno AS "RentalID",
 3      TRUNC(startdate) AS "Start Date",
 4      TRUNC(returndate) AS "Return Date",
 5      clientno AS "Client ID",
 6      fname||' '||lname AS "Client Name"
 7 FROM client JOIN ragreement USING (clientno)
 8 JOIN vehicle USING(licenseo)
 9 JOIN outlet USING(outno)
10 WHERE outno=(SELECT outno
11      FROM outlet JOIN vehicle USING(outno)
12      JOIN ragreement USING(licenseo)
13      GROUP BY outno
14      ORDER BY COUNT(rentalno) DESC
15      FETCH FIRST 1 ROW ONLY)
16 GROUP BY outlet.street, rentalno, startdate, returndate, clientno, fname, lname;
```

Outlet Street	RentalID	Start Date	Return Date	Client ID	Client Name
Ap #405-9817 Convallis St.	8	17-FEB-22	26-FEB-22	4	Roanna Myers
	9	13-MAR-22	29-MAR-22	4	Roanna Myers
	40	13-SEP-21	29-SEP-21	4	Roanna Myers
	10	10-MAY-22	19-MAY-22	5	Brian Rogers
	11	27-MAR-21	05-APR-21	5	Brian Rogers
	41	26-MAR-21	04-APR-21	5	Brian Rogers
	12	01-MAY-21	15-MAY-21	6	Ainsley Atkins
	13	24-JUN-21	03-JUL-21	6	Ainsley Atkins
	14	19-FEB-21	25-FEB-21	7	Teegan Lane

9 rows selected.

--Question 5

```
SQL> COLUMN "Avg distance per rental" FORMAT 9990.9
SQL> SELECT clientno AS "Client ID",
 2      fname||' '||lname AS "Client Name",
 3      COUNT(rentalno) AS "Total Rentals",
 4      NVL(AVG(mileageafter-mileagebefore), 0) AS "Avg distance per rental",
 5      COUNT(reportnum) AS "Total fault reports"
 6 FROM client LEFT JOIN ragreement USING(clientno)
 7 LEFT JOIN faultreport USING(rentalno)
 8 GROUP BY clientno, fname, lname;
```

Client ID	Client Name	Total Rentals	Avg distance per rental	Total fault reports
2	Dorian Martin	2	594.5	2
4	Roanna Myers	3	546.0	3
6	Ainsley Atkins	2	490.0	2
8	Hu Conrad	2	466.0	2
10	Clio Greer	2	740.5	2
12	Jackson Olsen	3	944.7	2
14	Anjolie Buckner	2	798.0	2
16	Avram Mills	2	1123.0	2
18	Clio Greer	2	1063.0	2
19	Avram Mills	2	752.5	2
3	Thaddeus Nash	2	298.0	0
11	Avram Mills	5	810.6	0
7	Teegan Lane	1	739.0	0
13	Hun Conrad	2	1094.5	0
1	Kaye Ford	3	444.0	0
15	Clio Greer	2	532.0	0
17	Jackson Olsen	2	640.0	0
5	Brian Rogers	3	715.3	0
9	Anjolie Buckner	2	717.0	0

19 rows selected.

**--Question 6 (Measure #1: Total Rentals & Measure #2: Total Fault Reports)**

```
SQL> COLUMN MAKE FORMAT A15
SQL> SELECT outNo,
2     street || ', ' || city AS "Outlet",
3     make,
4     COUNT(rentalno) AS "Total Rentals",
5     COUNT(reportnum) AS "Total Fault Reports"
6 FROM outlet LEFT JOIN vehicle USING (outno)
7 LEFT JOIN ragreement USING (licenseo)
8 LEFT JOIN faultreport USING (rentalno)
9 GROUP BY outNo, street, city, make
10 HAVING COUNT(rentalno) != 0 OR COUNT(reportnum) !=0
11 ORDER BY outNo, make;
```

OUTNO	Outlet	MAKE	Total Rentals	Total Fault Reports
1	P.O. Box 352, 229 Sample Street, Pittsburgh	Audi	3	0
1	P.O. Box 352, 229 Sample Street, Pittsburgh	Infiniti	2	1
1	P.O. Box 352, 229 Sample Street, Pittsburgh	Volvo	2	1
2	Ap #198-1234 Nunc Rd., NY City	Hyundai	4	0
2	Ap #198-1234 Nunc Rd., NY City	MINI	4	2
3	P.O. Box 102, 7972 Nam Rd., Trenton	Lamborghini	1	0
3	P.O. Box 102, 7972 Nam Rd., Trenton	Renault	1	0
4	Ap #405-9817 Convallis St., Philadelphia	Chrysler	4	2
4	Ap #405-9817 Convallis St., Philadelphia	Infiniti	2	2
4	Ap #405-9817 Convallis St., Philadelphia	Mitsubishi	3	1
5	5341 Iaculis Avenue, Buffalo	Mitsubishi	3	1
5	5341 Iaculis Avenue, Buffalo	Suzuki	3	1
6	Ap #181-8676 Mus. Rd., Hoboken	Aptera	1	1
6	Ap #181-8676 Mus. Rd., Hoboken	Nissan	1	1
7	3586 Sapien Rd., Allentown	Chevrolet	2	0
7	3586 Sapien Rd., Allentown	Infiniti	2	2
8	528-7425 Cras Rd., Rochester	Hyundai	1	1
8	528-7425 Cras Rd., Rochester	Volkswagen	1	1
9	534-7039 A Street, Princeton	Ford	2	2
10	360-7342 Mi Avenue, Lancaster	Ford	1	1
10	360-7342 Mi Avenue, Lancaster	Toyota	1	1

21 rows selected.

**--Question 6 Analysis Explanation:**

The two measures the manager can use to recommend future purchases at any outlet would be vehicles that are most popular among the client rentals and vehicles with minimal fault reports. From the analysis, we can observe that vehicle makes "Hyundai," "MINI," and "Chrysler" are the most popular rentals as they are in 4 rental agreements each, which is the highest a single client has taken. This implies that the manager can suggest vehicles based on the above popularity to prospective clients. In addition, we can notice that vehicle makes such as "Audi",

"Lamborghini", "Renault" and "Chevrolet" have zero fault reports. Thus, we can conclude that the manager can recommend seven out of eighteen vehicle makes, out of which "Hyundai" and "Mini" are the most recommended ones as they have the highest number of rentals with almost zero fault reports documented.

--Question 7:

```
SQL> COLUMN "Manager Name" FORMAT A20
SQL> SELECT managerno AS "Manager ID",
2      fname||' '||lname AS "Manager Name",
3      COUNT(eov.outno) AS "Total outlets managed",
4      SUM(employees) AS "Total Employees",
5      SUM(vehicles) AS "Total Vehicles"
6 FROM employee e JOIN (SELECT managerno,
7      outno,
8      count(DISTINCT empno) employees,
9      count(DISTINCT licenseno) vehicles
10 FROM employee JOIN outlet USING(outno)
11 JOIN vehicle USING(outno)
12 GROUP BY managerno, outno) eov ON e.empno=eov.managerno
13 GROUP BY managerno, fname, lname;
```

Manager ID	Manager Name	Total outlets managed	Total Employees	Total Vehicles
1	Cedric Kent	3	16	7
3	Quinn Garrison	3	15	8
2	Laith Wynne	2	6	5
4	Callum Nell	1	3	2
5	Baker Aimee	1	4	2

5 rows selected.

--Question 8:

```
SQL> COLUMN "Outlet" FORMAT A60
SQL> COLUMN "Total Revenue" FORMAT $99,990.99
SQL> COLUMN "% Contribution" FORMAT A15
SQL> SELECT outno AS "Outlet ID",
2     street || ', ' || city AS "Outlet",
3     count(licenseno) AS "Total Vehicles",
4     NVL(revenue, 0) AS "Total Revenue",
5     TO_CHAR(NVL(percent, 0), '90.99') AS "% Contribution"
6 FROM outlet LEFT JOIN vehicle USING(outno)
7 LEFT JOIN (SELECT outno,
8     SUM(((TRUNC(returndate)-TRUNC(startdate))*dailyrate)) AS revenue,
9     SUM(((TRUNC(returndate)-TRUNC(startdate))*dailyrate)) * 100/(SELECT SUM(((TRUNC(returndate)-TRUNC(startdate))*dailyrate)) FROM vehicle
join ragreement using (licenseno) WHERE TO_CHAR(startdate, 'YYYY-Q') = '2022-2') AS percent
10 FROM outlet JOIN vehicle USING(outno)
11 JOIN ragreement USING(licenseno)
12 WHERE TO_CHAR(startdate, 'YYYY-Q') = '2022-2'
13 GROUP BY outno) USING (outno)
14 GROUP BY outno, street, city, revenue, percent
15 ORDER BY 1;
```

Outlet ID	Outlet	Total Vehicles	Total Revenue	% Contribution
1	P.O. Box 352, 229 Sample Street, Pittsburgh	3	\$3,419.82	25.13
2	Ap #198-1234 Nunc Rd., NY City	2	\$0.00	0.00
3	P.O. Box 102, 7972 Nam Rd., Trenton	2	\$0.00	0.00
4	Ap #405-9817 Convallis St., Philadelphia	3	\$1,619.91	11.90
5	5341 Iaculis Avenue, Buffalo	2	\$4,521.68	33.22
6	Ap #181-8676 Mus. Rd., Hoboken	3	\$0.00	0.00
7	3586 Sapien Rd., Allentown	2	\$4,049.73	29.75
8	528-7425 Cras Rd., Rochester	2	\$0.00	0.00
9	534-7039 A Street, Princeton	3	\$0.00	0.00
10	360-7342 Mi Avenue, Lancaster	2	\$0.00	0.00

10 rows selected.

--Question 9:

```
SQL> COLUMN "Outlet" FORMAT A25
SQL> SELECT outlet,
  2     first_RENTALS AS "1st quarter of 2022 Rentals",
  3     second_RENTALS AS "2nd quarter of 2022 Rentals",
  4     (first_RENTALS+second_RENTALS) AS "Total Rentals"
  5 FROM (SELECT TO_CHAR(startdate, 'YYYY-Q') quarter,
  6         outno||' - '||city||', '||state outlet,
  7         rentalno
  8       FROM outlet LEFT JOIN vehicle USING(outno)
  9       LEFT JOIN ragreement USING(licenseo))
 10 PIVOT (COUNT(rentalno) AS rentals
 11       FOR quarter
 12       IN ('2022-1' AS first, '2022-2' AS second))
 13 UNION
 14 SELECT 'Total',
 15     first_RENTALS AS "1st quarter of 2022 Rentals",
 16     second_RENTALS AS "2nd quarter of 2022 Rentals",
 17     (first_RENTALS+second_RENTALS) AS "Total Rentals"
 18 FROM (SELECT TO_CHAR(startdate, 'YYYY-Q') quarter,
 19         rentalno
 20       FROM outlet LEFT JOIN vehicle USING(outno)
 21       LEFT JOIN ragreement USING(licenseo))
 22 PIVOT (COUNT(rentalno) AS rentals
 23       FOR quarter
 24       IN ('2022-1' AS first, '2022-2' AS second));
```

OUTLET	1st quarter of 2022 Rentals	2nd quarter of 2022 Rentals	Total Rentals
1 - Pittsburgh, PA	2	1	3
4 - Philadelphia, PA	2	1	3
7 - Allentown, PA	1	2	3
10 - Lancaster, PA	0	0	0
2 - NY City, NY	2	0	2
5 - Buffalo, NY	0	2	2
8 - Rochester, NY	0	0	0
3 - Trenton, NJ	0	0	0
6 - Hoboken, NJ	0	0	0
9 - Princeton, NJ	0	0	0
Total	7	6	13

11 rows selected.

PART II. C.  
Memo

# MEMORANDUM

**ATTENTION:** CEO of the Car Rental Company  
**DATE:** July 26, 2022  
**FROM:** Anuj Anjirwala and Abishaik Mohan, Data Analysts  
**SUBJECT:** We will open four new outlets and increase customer satisfaction

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We generated insights on our car rentals and revenues from outlets, and considering the results, we recommend the company open outlets in the four cities - Dormont, Camden, Kenmore, and Brooklyn - where most of our customers reside, and which have the highest revenues. Yet, we do not have an outlet in these cities. The proposal considers the potential of the new outlets, timing, and analysis results.

The company needs to refocus its attention on the cities mentioned above because the customers have to travel a long way to rent a car from us due to the unavailability of an outlet in their towns. Through market survey and analysis, 45% of our potential clients in these cities choose our competitor, Urban Active, as they do not have time to travel to neighbouring towns. We must realize that our future lies in these “hotspot” cities. It is an opportunity to stay ahead of the competition as our customers become more time savvy.

From the analysis, we observed that the top four cities cumulatively generate \$55,528.62 in revenue, which accounts for 63.9% of our total revenue (\$87,480.10). In addition, we must open these outlets by September 2022 as most of our customers are signing rentals during these months due to festive seasons or vacations. By opening outlets in these cities, we will streamline our operations in the neighbouring towns, improve our customer experience, and build trust among potential clients. Please see our data analysis attached with the memo.

Let's discuss this recommendation in detail during our meeting next week. I will be glad to follow through on any decisions you make.



## Query Description

Find out new cities where our company can expand by opening new outlets. Consider clients whose city is not the same as the outlet city where they rent the car from. List the client city, outlet city, rental agreements signed in each outlet, the total number of clients in each outlet, and revenue generated by those clients. Rank each outlet city based on the revenue generated. The highest revenue should get the highest rank. Order the results by highest revenue.

## SQL Query<sup>3</sup>

```
SQL> COLUMN Revenue FORMAT $999990.99
SQL> SELECT c.city AS "Client City",
2         o.city AS "Outlet City",
3         COUNT(rentalno) AS "Number of Rentals (2021-Now)",
4         COUNT(DISTINCT clientno) AS "Number of Clients (2021-Now)",
5         SUM((CAST( returndate AS DATE) - CAST( startdate AS DATE))*dailyrate) AS "Revenue",
6         RANK() OVER (ORDER BY SUM((CAST( returndate AS DATE) - CAST( startdate AS DATE))*dailyrate) DESC) AS Rank
7 FROM client c JOIN ragreement USING (clientno)
8              JOIN vehicle USING (licenseno)
9              JOIN outlet o USING (outno)
10 WHERE c.state = o.state AND c.city != o.city
11 GROUP BY c.city, o.city
12 ORDER BY 5 DESC;
```

## Query Result

Client City	Outlet City	Number of Rentals (2021-Now)	Number of Clients (2021-Now)	Revenue	Rank
-----	-----	-----	-----	-----	-----
Dormont	Pittsburgh	7	3	\$17229.18	1
Camden	Philadelphia	9	4	\$16459.03	2
Kenmore	Buffalo	6	3	\$10981.24	3
Brooklyn	NY City	8	2	\$10859.17	4
Easton	Allentown	4	2	\$9109.51	5
Bristol	Trenton	2	1	\$5855.77	6
Columbia	Lancaster	2	1	\$4899.80	7
Baltimore	Princeton	2	1	\$4559.76	8
Newark	Hoboken	2	1	\$4079.82	9
Syracuse	Rochester	2	1	\$3446.82	10

10 rows selected.

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<sup>3</sup> Use of CAST() is referred from [https://docs.oracle.com/cd/B19306\\_01/server.102/b14200/functions016.htm](https://docs.oracle.com/cd/B19306_01/server.102/b14200/functions016.htm)