GROUP #5

TEAM MEMBERS:

NAME	ANDREW ID	EMAIL
SHIVAANI KRISHNAKUMAR	shivaank	shivaank@andrew.cmu.edu
XIAOYUN GENG	xiaoyung	xiaoyung@andrew.cmu.edu

PART II A - 1. SCRIPT #1 (CREATION)

CHECK CONSTRAINTS ADDED:
1. Phone number validation
2. Zip Code validation
3. Salary value cannot be negative

```
DROP TABLE FAULTREPORT;
DROP TABLE RAGREEMENT;
DROP TABLE VEHICLE;
DROP TABLE CLIENT;
ALTER TABLE EMPLOYEE DROP CONSTRAINT out_no_fk drop index;
DROP TABLE OUTLET;
DROP TABLE EMPLOYEE;

CREATE TABLE Employee
(EmpNo      Number(10),
 FName   VARCHAR2(20),
 LName   VARCHAR2(20),
 Position      VARCHAR2(100),
 Phone    VARCHAR2(20) CHECK(REGEXP_LIKE(Phone,'^[0-9]{3}-[0-9]{3}-[0-9]{4}|[0-9]{10}$')),
 Email VARCHAR2(40) CHECK(REGEXP_LIKE(Email,'^[A-Za-z]+[A-Za-z0-9.]+@(rental)\.[A-Za-z]{2,4}$')),
 DOB Date default SYSDATE,
 Gender CHAR(1),
 Salary Number(10) CHECK( Salary >0 ),
 HireDate Date default SYSDATE,
 OutNo Number(10),
 Super_No Number(10),
 CONSTRAINT EmpNo_PK    PRIMARY KEY (EmpNo),
 CONSTRAINT Super_No_FK  FOREIGN KEY (Super_No) REFERENCES  Employee (EmpNo));


CREATE TABLE Outlet
(outNo      Number(10),
 Street   VARCHAR2(20),
 City   VARCHAR2(20),
 State      VARCHAR2(25),
 ZipCode    VARCHAR2(7) CHECK(REGEXP_LIKE(ZipCode,'^[0-9]{2}-[0-9]{3}|[0-9]{5}$')),
 Phone VARCHAR(15) CHECK(REGEXP_LIKE(Phone,'^[0-9]{3}-[0-9]{3}-[0-9]{4}|[0-9]{10}$')),
 ManagerNo Number(10) ,
```

```sql
  CONSTRAINT outNo_PK    PRIMARY KEY (outNo),
  CONSTRAINT ManagerNo_FK  FOREIGN KEY (ManagerNo) REFERENCES  Employee (EmpNo));

CREATE TABLE Vehicle
(LicenseNo VARCHAR2(20),
 Make     CHAR(20),
 Model    VARCHAR2(20),
 Color CHAR(20),
 Year Number(4),
 NoDoors CHAR(4),
 Capacity Number(3),
 DailyRate Number(10,2),
 InspectionDate Date default SYSDATE,
 outNo Number(10),
 CONSTRAINT  LicenseNo_PK  PRIMARY KEY (LicenseNo),
 CONSTRAINT OutNo_FK  FOREIGN KEY (outNo) REFERENCES  Outlet (outNo));

CREATE TABLE Client
(clientNo      Number(10),
 FName  VARCHAR2(30),
 LName  VARCHAR2(30),
 Phone  VARCHAR2(15) CHECK(REGEXP_LIKE(Phone,'^[0-9]{3}-[0-9]{3}-[0-9]{4}|[0-9]{10}$')),
 Email  VARCHAR2(30) CHECK(REGEXP_LIKE(Email,'^[A-Za-z]+[A-Za-z0-9.]+@[A-Za-z0-9.-]+\.[A-Za-z]{2,4}$')),
 WebAddress     VARCHAR2(300),
 Street  CHAR(30),
 City    CHAR(30),
 State      CHAR(25),
 ZipCode    VARCHAR2(7) CHECK(REGEXP_LIKE(ZipCode,'^[0-9]{2}-[0-9]{3}|[0-9]{5}$')),
 CONSTRAINT  clientNo_PK  PRIMARY KEY (clientNo));

CREATE TABLE RAgreement
(RentalNo   Number(10),
 StartDate  Date default SYSDATE,
 ReturnDate  Date default SYSDATE,
 MileageBefore Number(8,2),
 MileageAfter  Number(8,2),
 InsuranceType VARCHAR2(50),
 ClientNo     Number(10),
 LicenseNo    VARCHAR2(20),
 CONSTRAINT RentalNo_PK      PRIMARY KEY (RentalNo),
 CONSTRAINT clientNo_FK  FOREIGN KEY (ClientNo) REFERENCES  Client (clientNo),
 CONSTRAINT licenseNo_FK     FOREIGN KEY (LicenseNo)    REFERENCES  Vehicle   (LicenseNo));
```

```
CREATE TABLE FaultReport
(ReportNum   Number(10),
 DateChecked  Date default SYSDATE,
 Comments  VARCHAR2(100),
 EmpNo Number(10),
 LicenseNo  VARCHAR2(20),
 RentalNo Number(10),
 CONSTRAINT ReportNum      PRIMARY KEY (ReportNum),
 CONSTRAINT empNo_FK  FOREIGN KEY (EmpNo) REFERENCES  Employee (EmpNo),
 CONSTRAINT licenseNum_FK      FOREIGN KEY (LicenseNo)      REFERENCES  Vehicle   (LicenseNo),
 CONSTRAINT rentalNo_FK      FOREIGN KEY (RentalNo)      REFERENCES  RAgreement   (RentalNo));

ALTER TABLE Employee ADD CONSTRAINT out_no_fk FOREIGN KEY (OutNo) REFERENCES Outlet(outNo);
```

PART II A - 2. SCRIPT#2 (INSERTION)

```
INSERT INTO Employee
VALUES(110,'Ramesh','Sowjanya','Senior Outlet Manager','512-423-9967','sowjanyar@rental.com','16-DEC-1980','F',50000,'29-MAY-2014',NULL,NULL);
INSERT INTO Employee
VALUES (114, 'Trevor', 'David', 'Sales Rep', '316-993-0499', 'davidt@rental.com', '08-APR-1990', 'M', 35000, '15-JUL-2012', NULL, 110);
INSERT INTO Employee
VALUES (120, 'Noah', 'Lister', 'Sales Rep', '217-000-9289', 'noahl@rental.com', '27-MAY-1992', 'F',260000, '05-SEP-2021', NULL, 110);
INSERT INTO Employee
VALUES (121, 'Lucy', 'Bravo', 'Sales Rep', '677-673-7001', 'lucyb@rental.com', '13-JUL-1984', 'F', 190000, '31-OCT-2020', NULL, 110);
INSERT INTO Employee
VALUES (122, 'William', 'Henry', 'Mechanic', '512-600-0281', 'williamh@rental.com', '11-DEC-1994', 'M', 100000, '04-MAR-2021', NULL, 110);
INSERT INTO Employee
VALUES (123, 'Theodore', 'Harper', 'Administrative Assisstant', '510-600-0281', 'theodoreh@rental.com', '10-NOV-1995', 'M', 120000, '04-JUN-2022',
NULL, 110);


INSERT INTO Employee
VALUES (111, 'Sankar', 'Priya', 'Sales Rep', '709-108-1779', 'priyas@rental.com', '27-FEB-1987', 'F', 30000, '20-NOV-2019', NULL, 110);
INSERT INTO Employee
VALUES (112, 'Babloo', 'Prithviraj', 'Mechanic', '919-245-5800', 'prithvib@rental.com', '18-APR-1975', 'M', 25000, '20-NOV-2021', NULL, 122);
INSERT INTO Employee
VALUES (113, 'Rai', 'Sheetal', 'Mechanic', '819-230-1000', 'sheetalr@rental.com', '09-APR-2001', 'F', 5000, '20-NOV-2022', NULL, 110);
INSERT INTO Employee
VALUES (124, 'Benjamin', 'Isabella', 'Administrative Assistant', '910-120-1779', 'benjamini@rental.com', '25-FEB-1996', 'F', 30000, '20-NOV-2019',
NULL, 110);
```

```
INSERT INTO Employee
VALUES (109, 'Dashawn', 'Harding', 'Outlet Manager', '314-192-1823', 'dharding@rental.com', '29-JUN-1969', 'M', 900000, '26-SEP-2010', NULL, NULL);
INSERT INTO Employee
VALUES (100, 'John', 'Spears', 'Sales Rep', '217-673-9281', 'jspears@rental.com', '07-MAR-1978', 'M', 260000, '09-JAN-2015', NULL, 109);
INSERT INTO Employee
VALUES (116, 'Verissa', 'Begum', 'Sales Rep', '217-673-9289', 'verissab@rental.com', '17-APR-1998', 'F', 160000, '29-FEB-2020', NULL, 109);
INSERT INTO Employee
VALUES (117, 'Mark', 'Joy', 'Sales Rep', '677-673-9281', 'markj@rental.com', '08-JUN-1990', 'M', 160000, '29-AUG-2022', NULL, 109);
INSERT INTO Employee
VALUES (118, 'Oliver', 'Liam', 'Sales Rep', '512-600-0281', 'oliverl@rental.com', '11-DEC-1994', 'M', 100000, '04-MAR-2021', NULL, 117);
INSERT INTO Employee
VALUES (119, 'Emma', 'Noah', 'Sales Rep', '510-600-0281', 'emman@rental.com', '10-NOV-1995', 'F', 120000, '04-JUN-2022', NULL, 117);


INSERT INTO Employee
VALUES (105, 'Ruben', 'Vargas', 'Outlet Manager', '912-087-2736', 'rvargas@rental.com', '09-MAY-1971', 'M', 600000, '14-MAY-2005', NULL, NULL);
INSERT INTO Employee
VALUES (101, 'Jagger', 'Yu', 'Sales Rep', '312-028-8573', 'jyu@rental.com', '27-JAN-1977', 'M', 300000, '18-OCT-2013', NULL, 105);
INSERT INTO Employee
VALUES (107, 'Dulce', 'Franco', 'Sales Rep', '217-817-2847', 'dfranco@rental.com', '21-MAR-2000', 'M', 10000, '01-JUN-2018', NULL, 105);
INSERT INTO Employee
VALUES (102, 'Byron', 'Bryant', 'Mechanic', '412-127-7382', 'bbryant@rental.com', '24-JAN-1999', 'M', 20000, '21-OCT-2022', NULL, 105);
INSERT INTO Employee
VALUES (125, 'Ava', 'James', 'Administrative Assistant', '317-127-7382', 'avaj@rental.com', '24-NOV-2000', 'F', 22000, '21-DEC-2021', NULL, 105);


INSERT INTO Employee
VALUES (106, 'Angelique', 'Church', 'Outlet Manager', '912-376-4722', 'achurch@rental.com', '10-APR-1969', 'F', 650000, '09-JAN-2004', NULL, NULL);
INSERT INTO Employee
VALUES (108, 'Ashley', 'Velez', 'Sales Rep', '312-983-0129', 'avelez@rental.com', '18-MAY-2000', 'M', 10000, '01-JUL-2017', NULL, 106);
INSERT INTO Employee
VALUES (126, 'Mary', 'James', 'Mechanic', '600-983-0129', 'maryj@rental.com', '28-MAY-1996', 'F', 10000, '01-OCT-2018', NULL, 106);
INSERT INTO Employee
VALUES (127, 'David', 'Ebber', 'Sales Rep', '919-983-0129', 'davide@rental.com', '18-MAY-1990', 'M', 10000, '11-APR-2016', NULL, 106);
INSERT INTO Employee
VALUES (128, 'Thomas', 'Ryan', 'Mechanic', '414-983-0129', 'thomasr@rental.com', '18-MAY-1989', 'M', 10000, '01-MAR-2007', NULL, 126);
INSERT INTO Employee
VALUES (129, 'Betty', 'Mathew', 'Administrative Assisstant', '237-983-0129', 'bettym@rental.com', '23-JUN-1999', 'F', 10000, '16-AUG-2022', NULL, 106);


INSERT INTO Employee
VALUES (103, 'Danica', 'Potter', 'Sales Rep', '912-827-4756', 'dpotter@rental.com', '28-FEB-1971', 'F', 50000, '20-DEC-2007', NULL, 110);
INSERT INTO Employee
```

```
VALUES (115, 'Ryan', 'Trump', 'Sales Rep', '658-287-4726', 'ryant@rental.com', '13-NOV-1998', 'M', 100000, '17-JAN-2022', NULL, 110);
INSERT INTO Employee
VALUES (130, 'Karen', 'Charles', 'Administrative Assistant', '818-287-4726', 'karenc@rental.com', '13-NOV-1987', 'F', 400000, '17-JAN-2017', NULL,
110);
INSERT INTO Employee
VALUES (131, 'Christopher', 'Bowman', 'Mechanic', '908-287-4726', 'chrisb@rental.com', '13-NOV-1970', 'M', 400000, '10-OCT-2013', NULL, 110);
INSERT INTO Employee
VALUES (132, 'Antonio', 'Daniel', 'Mechanic', '900-287-4726', 'antoniod@rental.com', '13-NOV-1970', 'M', 400000, '07-FEB-2018', NULL, 122);

INSERT INTO Outlet
VALUES(3, '452 E. Nut Swamp Dr.', 'San Diego', 'CA', '92-115', '180-002-2928', 110);
INSERT INTO Outlet
VALUES(4, '9374 Ohio Street', 'New York', 'NY', '91351', '182-382-1928', 110);
INSERT INTO Outlet
VALUES(7, '44 Morris Ave', 'Pittsburgh', 'PA', 95127, '765-754-7163', 106);
INSERT INTO Outlet
VALUES(8, '9605 Blue Spring Ave', 'San Antonio', 'TX', '95111', '172-813-1923', 110);
INSERT INTO Outlet
VALUES(5, '7445 Poplar St', 'Vienna', 'VA', '92627', '810-029-1938', 109);
INSERT INTO Outlet
VALUES(6, '293 Vernon Dr', 'Portland', 'OR', '92647', '980-094-4353', 105);

UPDATE EMPLOYEE SET OUTNO = 8 WHERE EMPNO IN (103,115,130,131,132);
UPDATE EMPLOYEE SET OUTNO = 7 WHERE EMPNO IN (106,108,126,127,128,129);
UPDATE EMPLOYEE SET OUTNO = 6 WHERE EMPNO IN (105,101,107,102,125);
UPDATE EMPLOYEE SET OUTNO = 5 WHERE EMPNO IN (109,100,116,117,118,119);
UPDATE EMPLOYEE SET OUTNO = 4 WHERE EMPNO IN (111,112,113,124);
UPDATE EMPLOYEE SET OUTNO = 3 WHERE EMPNO IN (110,114,120,121,122,123);

INSERT INTO Vehicle
VALUES ('G192-029-173', 'Toyota', 'RAV4', 'White', 2016, 4, 5, 150.00, '03-OCT-2022', 3);
INSERT INTO Vehicle
VALUES ('G163-271-237', 'Acura', 'CL', 'Black', 2018, 4, 4, 120.00, '19-AUG-2022', 3);
INSERT INTO Vehicle
VALUES ('A902-019-746', 'Audi', 'Q7', 'Blue', 2013, 4, 5, 200.00, '02-OCT-2022', 4);
INSERT INTO Vehicle
VALUES ('N100-545-00', 'Audi', 'Q7', 'White', 2017, 4, 5, 250.00, '12-OCT-2022', 4);
INSERT INTO Vehicle
VALUES ('G192-294-136', 'BMW', 'x5', 'White', 2013, 4, 5, 200.00, '12-DEC-2021', 5);
INSERT INTO Vehicle
VALUES ('G192-024-176', 'Lexus', 'ES250 Sedan', 'White', 2020, 4, 5, 300.00, '04-JUL-2022', 5);
INSERT INTO Vehicle
VALUES ('G180-094-173', 'Mazda', 'CX-9', 'White', 2016, 4, 6, 125.00, '03-NOV-2022', 5);
```

```sql
INSERT INTO Vehicle
VALUES ('G100-029-736', 'Subaru', 'BRZ Coupe', 'Blue', '2018', 2, 4, 100.00, '03-NOV-2022', 6);
INSERT INTO Vehicle
VALUES ('G100-090-103', 'Innova', 'Crysta', 'Red', 2022, 4, 8, 140.00, '12-JUN-2022', 6);
INSERT INTO Vehicle
VALUES ('G201-133-699', 'Tesla', '3', 'Yellow', '2020', 4, 7, 200.00, '13-APR-2022', 6);
INSERT INTO Vehicle
VALUES ('G120-029-736', 'Tesla', '3', 'Blue', 2021, 4, 4, 200.00, '15-NOV-2022', 7);
INSERT INTO Vehicle
VALUES ('G210-090-103', 'Nisan', 'Sunny', 'Red', 2022, 4, 8, 80.00, '12-JUN-2022', 7);
INSERT INTO Vehicle
VALUES ('G301-133-699', 'Ford', 'Mustang', 'Black', 2013, 4, 5, 180.00, '13-OCT-2022', 7);
INSERT INTO Vehicle
VALUES ('G220-029-736', 'Volkswagen', 'Beatle', 'Sky Blue', 2021, 2, 2, 250.00, '25-OCT-2022', 8);
INSERT INTO Vehicle
VALUES ('G210-192-103', 'Nisan', 'Sunny', 'Yellow', 2022, 4, 4, 80.00, '14-SEP-2022', 8);
INSERT INTO Vehicle
VALUES ('G301-333-699', 'BMW', 'Mini Cooper', 'Grey', 2004, 4, 4, 260.00, '23-AUG-2022', 8);
INSERT INTO Client
VALUES (1000,'Siva','Ram','808-444-1099','sivar@gmail.com','http://www.cts.com','Darlington Rd','Pittsburgh','PA','15200');
INSERT INTO Client
VALUES (1001,'Prabhu','Kumar','810-400-1089','prabhuk@gmail.com','http://www.maxim.com','Tyson Oaks Cr','Virginia','VA','12201');
INSERT INTO Client
VALUES (1002,'KK','S','200-658-2079','kks@gmail.com','http://www.peekay.com','Shady Ave','Texas','TX','13140');
INSERT INTO Client
VALUES (1003,'Arthi','Krishna','456-444-1099','arthik@gmail.com','http://www.threesixty.org','Crooked St','San Fransisco','CA','09200');
INSERT INTO Client
VALUES (1004,'Andrew','Watson','777-444-1099','andyw@gmail.com','http://www.dostate.gov','Beeler St','Pittsburgh','PA','15210');
INSERT INTO Client
VALUES (1005,'Vanessa','Hudgens','810-444-1099','vanessah@gmail.com','http://www.savearth.org','Bakers Hall','Los Angeles','CA','13400');
INSERT INTO Client
VALUES (1006,'Nathan','Daniel','720-444-1099','nathand@gmail.com','http://www.homemakers.org','Park Blvd','Oregon','OR','18200');
INSERT INTO Client
VALUES (1007,'Doug','Hintz','840-400-1089','dough@gmail.com','http://www.bikersclub.org','Strip District','Santa Cruz','CA','87201');
INSERT INTO Client
VALUES (1008,'Lauradel','Holmes','201-658-2079','lauradelh@gmail.com','http://www.knitwithme.org','Jim Thorpe St','Eugene','OR','19140');
INSERT INTO Client
VALUES (1009,'Younus','Mohammed','378-444-1099','mmhammed@gmail.com','http://www.tcs.com','Times Square','New York','NY','06200');
INSERT INTO Client
VALUES (1010,'Mathew','Hall','650-444-1099','mathewh@gmail.com','http://www.usl.gov','Central Park','New York','NY','05210');
INSERT INTO Client
VALUES (1011,'Parveen','Singh','778-044-1099','parveens@gmail.com','','Margaret Morrison St','Pittsburgh','PA','15400');
INSERT INTO Client
```

```sql
VALUES (1012,'Mike','Ross','317-044-1099','miker@gmail.com','http://www.pearsonspectre.us','Wall St','New York City','NY','23400');

INSERT INTO RAGREEMENT
VALUES(1,TO_DATE('01-JUN-2022 8:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('15-JUN-2022 14:00:00','dd-MON-yyyy hh24:mi:ss'),115.0,500.0,
'COMPREHENSIVE',
1005,'G301-333-699');

INSERT INTO RAGREEMENT
VALUES(2,TO_DATE('10-JUL-2022 18:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('26-JUL-2022 12:00:00','dd-MON-yyyy hh24:mi:ss'),25.0,27.0,
'LIABILITY COVERAGE',
1000,'G210-192-103');

INSERT INTO RAGREEMENT
VALUES(3,TO_DATE('11-JUL-2022 15:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('16-JUL-2022 13:00:00','dd-MON-yyyy hh24:mi:ss'),20.0,145.0,
'COLLISION INSURANCE',
1000,'G220-029-736');

INSERT INTO RAGREEMENT
VALUES(4,TO_DATE('17-JUL-2022 07:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('08-AUG-2022 07:00:00','dd-MON-yyyy hh24:mi:ss'),145.0,220.0,
'COLLISION INSURANCE',
1001,'G220-029-736');

INSERT INTO RAGREEMENT
VALUES(5,TO_DATE('27-JUL-2022 17:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('17-SEP-2022 09:15:00','dd-MON-yyyy hh24:mi:ss'),27.0,574.0,
'COLLISION INSURANCE',
1002,'G210-192-103');

INSERT INTO RAGREEMENT
VALUES(6,TO_DATE('01-JUN-2022 18:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('09-JUL-2022 04:09:00','dd-MON-yyyy hh24:mi:ss'),565.0,700.0,
'MEDICAL PAYMENTS COVERAGE',
1001,'G301-133-699');

INSERT INTO RAGREEMENT
VALUES(7,TO_DATE('10-JUL-2022 23:47:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('12-JUL-2022 19:00:00','dd-MON-yyyy hh24:mi:ss'),700.0,750.0,
'PERSONAL INJURY PROTECTION',
1001,'G301-133-699');

INSERT INTO RAGREEMENT
VALUES(10,TO_DATE('17-JUL-2022 17:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('17-SEP-2022 09:15:00','dd-MON-yyyy hh24:mi:ss'),750.0,1300.0,
'GAP INSURANCE',
1002,'G301-133-699');

INSERT INTO RAGREEMENT
```

```sql
VALUES(8,TO_DATE('11-OCT-2022 15:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('16-OCT-2022 13:00:00','dd-MON-yyyy hh24:mi:ss'),1345.0,1400.0,
'COLLISION INSURANCE',
1002,'G210-090-103');

INSERT INTO RAGREEMENT
VALUES(9,TO_DATE('17-JUL-2022 07:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('08-AUG-2022 07:00:00','dd-MON-yyyy hh24:mi:ss'),574.0,1090.0,
'LIABILITY COVERAGE',
1002,'G210-090-103');

INSERT INTO RAGREEMENT
VALUES(11,TO_DATE('29-AUG-2022 10:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('10-SEP-2022 07:00:00','dd-MON-yyyy hh24:mi:ss'),1090.0,1345.0,
'LIABILITY COVERAGE',
1003,'G210-090-103');

INSERT INTO RAGREEMENT
VALUES(12,TO_DATE('01-JUL-2022 14:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('13-AUG-2022 07:00:00','dd-MON-yyyy hh24:mi:ss'),74.0,990.0,
'COLLISION COVERAGE',
1002,'G120-029-736');

INSERT INTO RAGREEMENT
VALUES(13,TO_DATE('29-AUG-2022 10:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('10-SEP-2022 07:00:00','dd-MON-yyyy hh24:mi:ss'),1345.0,1600.0,
'LIABILITY COVERAGE',
1004,'G201-133-699');

INSERT INTO RAGREEMENT
VALUES(14,TO_DATE('01-JUL-2022 14:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('13-AUG-2022 07:00:00','dd-MON-yyyy hh24:mi:ss'),1090.0,1345.0,
'MEDICAL PAYMENTS COVERAGE',
1005,'G201-133-699');

INSERT INTO RAGREEMENT
VALUES(15,TO_DATE('01-JUL-2022 14:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('13-AUG-2022 07:00:00','dd-MON-yyyy hh24:mi:ss'),1090.0,1345.0,
'GAP COVERAGE',
1006,'G100-090-103');

INSERT INTO RAGREEMENT
VALUES(17,TO_DATE('13-AUG-2022 14:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('31-OCT-2022 07:00:00','dd-MON-yyyy hh24:mi:ss'),1345.0,1890.0,
'COMPREHENSIVE',
1007,'G100-090-103');

INSERT INTO RAGREEMENT
VALUES(16,TO_DATE('13-AUG-2022 14:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('31-OCT-2022 16:13:00','dd-MON-yyyy hh24:mi:ss'),1345.0,3500.0,
'PERSONAL INJURY PROTECTION COVERAGE',
1008,'G100-029-736');
```

```
INSERT INTO RAGREEMENT
VALUES(18,TO_DATE('23-NOV-2022 14:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('26-NOV-2022 16:13:00','dd-MON-yyyy hh24:mi:ss'),365.0,500.0,
'PERSONAL INJURY PROTECTION COVERAGE',
1009,'G180-094-173');


INSERT INTO RAGREEMENT
VALUES(19,TO_DATE('23-OCT-2022 04:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('17-NOV-2022 16:13:00','dd-MON-yyyy hh24:mi:ss'),385.0,890.0,
'COLLISION COVERAGE',
1010,'G180-094-173');

INSERT INTO RAGREEMENT
VALUES(20,TO_DATE('10-NOV-2022 10:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('25-NOV-2022 16:13:00','dd-MON-yyyy hh24:mi:ss'),250.0,578.0,
'MEDICAL PAYMENTS COVERAGE',
1010,'G192-024-176');

INSERT INTO RAGREEMENT
VALUES(21,TO_DATE('10-NOV-2022 10:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('25-NOV-2022 16:13:00','dd-MON-yyyy hh24:mi:ss'),250.0,578.0,
'MEDICAL PAYMENTS COVERAGE',
1010,'G192-294-136');

INSERT INTO RAGREEMENT
VALUES(22,TO_DATE('24-SEP-2022 17:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('27-SEP-2022 09:15:00','dd-MON-yyyy hh24:mi:ss'),1300.0,1500.0,
'GAP INSURANCE',
1009,'G301-133-699');

INSERT INTO RAGREEMENT
VALUES(23,TO_DATE('27-SEP-2022 23:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('30-SEP-2022 09:31:00','dd-MON-yyyy hh24:mi:ss'),1500.0,1700.0,
'GAP INSURANCE',
1011,'G301-133-699');

INSERT INTO RAGREEMENT
VALUES(24,TO_DATE('19-SEP-2022 23:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('25-SEP-2022 09:31:00','dd-MON-yyyy hh24:mi:ss'),1500.0,1700.0,
'COMPREHENSIVE',
1006,'G163-271-237');


INSERT INTO RAGREEMENT
VALUES(25,TO_DATE('14-AUG-2022 23:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('30-SEP-2022 19:45:00','dd-MON-yyyy hh24:mi:ss'),100.0,509.0,
'GAP COVERAGE',
1007,'G192-029-173');
```

```
INSERT INTO RAGREEMENT
VALUES(26,TO_DATE('01-JUL-2022 23:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('27-SEP-2022 14:59:00','dd-MON-yyyy hh24:mi:ss'),1200.0,1763.0,
'PERSONAL INJURY PROTECTION COVERAGE',
1008,'A902-019-746');

INSERT INTO RAGREEMENT
VALUES(27,TO_DATE('10-OCT-2022 10:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('08-NOV-2022 16:13:00','dd-MON-yyyy hh24:mi:ss'),50.0,250.0,
'MEDICAL PAYMENTS COVERAGE',
1010,'G192-294-136');

INSERT INTO RAGREEMENT
VALUES(28,TO_DATE('10-SEP-2022 10:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('02-OCT-2022 16:13:00','dd-MON-yyyy hh24:mi:ss'),0.0,50.0,
'MEDICAL PAYMENTS COVERAGE',
1009,'G192-294-136');

INSERT INTO RAGREEMENT
VALUES(29,TO_DATE('30-SEP-2022 23:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('11-NOV-2022 14:59:00','dd-MON-yyyy hh24:mi:ss'),1763.0,2006.7,
'GAP COVERAGE',
1008,'A902-019-746');

INSERT INTO RAGREEMENT
VALUES(30,TO_DATE('30-NOV-2022 07:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('30-NOV-2022 14:59:00','dd-MON-yyyy hh24:mi:ss'),2006.7, 2090.0,
'GAP COVERAGE',
1008,'A902-019-746');

INSERT INTO RAGREEMENT
VALUES(31,TO_DATE('30-AUG-2022 07:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('31-AUG-2022 14:59:00','dd-MON-yyyy hh24:mi:ss'),20.0, 100.0,
'GAP COVERAGE',
1012,'N100-545-00');

INSERT INTO RAGREEMENT
VALUES(32,TO_DATE('20-NOV-2022 07:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('30-NOV-2022 14:59:00','dd-MON-yyyy hh24:mi:ss'),509.0, 700.0,
'GAP COVERAGE',
1001,'G192-029-173');

INSERT INTO RAGREEMENT
VALUES(33,TO_DATE('10-NOV-2022 07:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('30-NOV-2022 14:59:00','dd-MON-yyyy hh24:mi:ss'),3500.0, 3600.0,
'GAP COVERAGE',
1003,'G100-029-736');

INSERT INTO RAGREEMENT
VALUES(34,TO_DATE('11-NOV-2022 17:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('30-NOV-2022 14:59:00','dd-MON-yyyy hh24:mi:ss'),1400.0, 3600.0,
'GAP COVERAGE',
```

```
1005,'G210-090-103');

INSERT INTO RAGREEMENT
VALUES(35,TO_DATE('09-NOV-2022 17:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('30-NOV-2022 14:59:00','dd-MON-yyyy hh24:mi:ss'),500.0, 1765.0,
'GAP COVERAGE',
1012,'G301-333-699');

INSERT INTO RAGREEMENT
VALUES(36,TO_DATE('19-APR-2022 17:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('30-MAY-2022 14:59:00','dd-MON-yyyy hh24:mi:ss'),50.0, 565.0,
'GAP COVERAGE',
1007,'G301-133-699');

INSERT INTO RAGREEMENT
VALUES(37,TO_DATE('09-APR-2022 17:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('14-APR-2022 14:59:00','dd-MON-yyyy hh24:mi:ss'),10.0, 50.0,
'GAP COVERAGE',
1007,'G301-133-699');

INSERT INTO RAGREEMENT
VALUES(38,TO_DATE('09-FEB-2022 17:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('14-MAR-2022 14:59:00','dd-MON-yyyy hh24:mi:ss'),1000.0, 1500.0,
'GAP COVERAGE',
1008,'G163-271-237');

INSERT INTO RAGREEMENT
VALUES(39,TO_DATE('09-OCT-2022 17:30:00','dd-MON-yyyy hh24:mi:ss'),TO_DATE('14-OCT-2022 14:59:00','dd-MON-yyyy hh24:mi:ss'),1700.0, 1850.0,
'GAP COVERAGE',
1008,'G163-271-237');


INSERT INTO FAULTREPORT
VALUES(1,TO_DATE('17-SEP-2022 09:30:00','dd-MON-yyyy hh24:mi:ss'),'Rear view mirror broken',128,'G301-133-699',6);

INSERT INTO FAULTREPORT
VALUES(2,TO_DATE('12-JUL-2022 19:30:00','dd-MON-yyyy hh24:mi:ss'),'Wind shield issue',128,'G301-133-699',7);

INSERT INTO FAULTREPORT
VALUES(3,TO_DATE('09-JUL-2022 09:00:00','dd-MON-yyyy hh24:mi:ss'),'Horn not working',128,'G301-133-699',10);

INSERT INTO FAULTREPORT
VALUES(4,TO_DATE('27-SEP-2022 10:00:00','dd-MON-yyyy hh24:mi:ss'),'Head light working inconsistently. Needs repair',
128,'G301-133-699',22);

INSERT INTO FAULTREPORT
VALUES(5,TO_DATE('30-SEP-2022 10:00:00','dd-MON-yyyy hh24:mi:ss'),'Head light working inconsistently. Needs repair',
```

```
128,'G301-133-699',23);

INSERT INTO FAULTREPORT
VALUES(6,TO_DATE('31-OCT-2022 16:15:00','dd-MON-yyyy hh24:mi:ss'),'Gas tank leak. High priority.',
102,'G100-029-736',16);

INSERT INTO FAULTREPORT
VALUES(7,TO_DATE('27-SEP-2022 15:10:00','dd-MON-yyyy hh24:mi:ss'),'Bumper needs replacement',
112,'A902-019-746',26);

INSERT INTO FAULTREPORT
VALUES(8,TO_DATE('30-SEP-2022 19:50:00','dd-MON-yyyy hh24:mi:ss'),'Door jammed.',
122,'G192-029-173',25);

INSERT INTO FAULTREPORT
VALUES(9,TO_DATE('25-SEP-2022 10:01:00','dd-MON-yyyy hh24:mi:ss'),'Brake not working. Serious issue',
122,'G163-271-237',24);

INSERT INTO FAULTREPORT
VALUES(10,TO_DATE('10-SEP-2022 10:11:00','dd-MON-yyyy hh24:mi:ss'),'Battery down.',
126,'G210-090-103',11);

INSERT INTO FAULTREPORT
VALUES(11,TO_DATE('16-OCT-2022 13:15:00','dd-MON-yyyy hh24:mi:ss'),'Reverse camera not functioning as expected.',
106,'G210-090-103',11);

INSERT INTO FAULTREPORT
VALUES(12,TO_DATE('17-NOV-2022 17:24:00','dd-MON-yyyy hh24:mi:ss'),'Air bags to be replaced',
117,'G180-094-173',19);

INSERT INTO FAULTREPORT
VALUES(13,TO_DATE('26-NOV-2022 18:15:00','dd-MON-yyyy hh24:mi:ss'),'Reverse camera not functioning as expected.',
109,'G180-094-173',18);

INSERT INTO FAULTREPORT
VALUES(14,TO_DATE('02-OCT-2022 18:15:00','dd-MON-yyyy hh24:mi:ss'),'Reverse camera not functioning as expected.',
119,'G192-294-136',28);

INSERT INTO FAULTREPORT
VALUES(15,TO_DATE('08-NOV-2022 18:15:00','dd-MON-yyyy hh24:mi:ss'),'Reverse camera not functioning as expected.',
119,'G192-294-136',27);

INSERT INTO FAULTREPORT
```

```
           VALUES(16,TO_DATE('25-NOV-2022 20:15:00','dd-MON-yyyy hh24:mi:ss'),'A/C not working',
           118,'G192-294-136',21);

           INSERT INTO FAULTREPORT
           VALUES(17,TO_DATE('15-JUN-2022 20:15:00','dd-MON-yyyy hh24:mi:ss'),'A/C not working',
           103,'G301-333-699',1);

           INSERT INTO FAULTREPORT
           VALUES(18,TO_DATE('30-NOV-2022 17:15:00','dd-MON-yyyy hh24:mi:ss'),'Heater not working',
           132,'G301-333-699',35);

           INSERT INTO FAULTREPORT
           VALUES(19,TO_DATE('30-MAY-2022 17:15:00','dd-MON-yyyy hh24:mi:ss'),'Battery needs to be changed.',
           128,'G301-133-699',36);

           INSERT INTO FAULTREPORT
           VALUES(20,TO_DATE('14-APR-2022 17:15:00','dd-MON-yyyy hh24:mi:ss'),'Engine needs to be checked.',
           128,'G301-133-699',37);

           INSERT INTO FAULTREPORT
           VALUES(21,TO_DATE('14-MAR-2022 17:15:00','dd-MON-yyyy hh24:mi:ss'),'Window needs to be checked.',
           121,'G163-271-237',38);

           INSERT INTO FAULTREPORT
           VALUES(22,TO_DATE('14-OCT-2022 17:15:00','dd-MON-yyyy hh24:mi:ss'),'Heater needs to be checked.',
           110,'G163-271-237',39);
```

PART II A - 3. CONTENT

```
set linesize 900;
set pagesize 100;
alter session set nls_date_format = 'DD-MON-YYYY HH24:MI:SS';

Session altered.

column EMPNO format 999;
column FNAME format a12;
column LNAME format a12;
column POSITION format a25;
column SALARY format $99,999,999;
column PHONE format a15;
```

```
column SUPER_NO format 999;
column OUTNO format 99;
column DOB format a11;
column HIREDATE format a11;

SELECT EMPNO,FNAME,LNAME,POSITION,PHONE,EMAIL,TO_CHAR(DOB,'DD-MON-YYYY') AS "DOB",GENDER,SALARY,TO_CHAR(HIREDATE,'DD-MON-YYYY') AS
"HIREDATE",OUTNO,SUPER_NO from EMPLOYEE;
```

EMPNO	FNAME	LNAME	POSITION	PHONE	EMAIL	DOB	G	SALARY	HIREDATE	OUTNO	SUPER_NO
110	Ramesh	Sowjanya	Senior Outlet Manager	512-423-9967	sowjanyar@rental.com	16-DEC-1980	F	$50,000	29-MAY-2014	3	
114	Trevor	David	Sales Rep	316-993-0499	davidt@rental.com	08-APR-1990	M	$35,000	15-JUL-2012	3	110
120	Noah	Lister	Sales Rep	217-000-9289	noahl@rental.com	27-MAY-1992	F	$260,000	05-SEP-2021	3	110
121	Lucy	Bravo	Sales Rep	677-673-7001	lucyb@rental.com	13-JUL-1984	F	$190,000	31-OCT-2020	3	110
122	William	Henry	Mechanic	512-600-0281	williamh@rental.com	11-DEC-1994	M	$100,000	04-MAR-2021	3	110
123	Theodore	Harper	Administrative Assisstant	510-600-0281	theodoreh@rental.com	10-NOV-1995	M	$120,000	04-JUN-2022	3	110
111	Sankar	Priya	Sales Rep	709-108-1779	priyas@rental.com	27-FEB-1987	F	$30,000	20-NOV-2019	4	110
112	Babloo	Prithviraj	Mechanic	919-245-5800	prithvib@rental.com	18-APR-1975	M	$25,000	20-NOV-2021	4	122
113	Rai	Sheetal	Mechanic	819-230-1000	sheetalr@rental.com	09-APR-2001	F	$5,000	20-NOV-2022	4	110
124	Benjamin	Isabella	Administrative Assistant	910-120-1779	benjamini@rental.com	25-FEB-1996	F	$30,000	20-NOV-2019	4	110
109	Dashawn	Harding	Outlet Manager	314-192-1823	dharding@rental.com	29-JUN-1969	M	$900,000	26-SEP-2010	5	
100	John	Spears	Sales Rep	217-673-9281	jspears@rental.com	07-MAR-1978	M	$260,000	09-JAN-2015	5	109
116	Verissa	Begum	Sales Rep	217-673-9289	verissab@rental.com	17-APR-1998	F	$160,000	29-FEB-2020	5	109
117	Mark	Joy	Sales Rep	677-673-9281	markj@rental.com	08-JUN-1990	M	$160,000	29-AUG-2022	5	109
118	Oliver	Liam	Sales Rep	512-600-0281	oliverl@rental.com	11-DEC-1994	M	$100,000	04-MAR-2021	5	117
119	Emma	Noah	Sales Rep	510-600-0281	emman@rental.com	10-NOV-1995	F	$120,000	04-JUN-2022	5	117
105	Ruben	Vargas	Outlet Manager	912-087-2736	rvargas@rental.com	09-MAY-1971	M	$600,000	14-MAY-2005	6	
101	Jagger	Yu	Sales Rep	312-028-8573	jyu@rental.com	27-JAN-1977	M	$300,000	18-OCT-2013	6	105
107	Dulce	Franco	Sales Rep	217-817-2847	dfranco@rental.com	21-MAR-2000	M	$10,000	01-JUN-2018	6	105
102	Byron	Bryant	Mechanic	412-127-7382	bbryant@rental.com	24-JAN-1999	M	$20,000	21-OCT-2022	6	105
125	Ava	James	Administrative Assistant	317-127-7382	avaj@rental.com	24-NOV-2000	F	$22,000	21-DEC-2021	6	105
106	Angelique	Church	Outlet Manager	912-376-4722	achurch@rental.com	10-APR-1969	F	$650,000	09-JAN-2004	7	
108	Ashley	Velez	Sales Rep	312-983-0129	avelez@rental.com	18-MAY-2000	M	$10,000	01-JUL-2017	7	106
126	Mary	James	Mechanic	600-983-0129	maryj@rental.com	28-MAY-1996	F	$10,000	01-OCT-2018	7	106
127	David	Ebber	Sales Rep	919-983-0129	davide@rental.com	18-MAY-1990	M	$10,000	11-APR-2016	7	106
128	Thomas	Ryan	Mechanic	414-983-0129	thomasr@rental.com	18-MAY-1989	M	$10,000	01-MAR-2007	7	126
129	Betty	Mathew	Administrative Assisstant	237-983-0129	bettym@rental.com	23-JUN-1999	F	$10,000	16-AUG-2022	7	106
103	Danica	Potter	Sales Rep	912-827-4756	dpotter@rental.com	28-FEB-1971	F	$50,000	20-DEC-2007	8	110
115	Ryan	Trump	Sales Rep	658-287-4726	ryant@rental.com	13-NOV-1998	M	$100,000	17-JAN-2022	8	110
130	Karen	Charles	Administrative Assistant	818-287-4726	karenc@rental.com	13-NOV-1987	F	$400,000	17-JAN-2017	8	110
131	Christopher	Bowman	Mechanic	908-287-4726	chrisb@rental.com	13-NOV-1970	M	$400,000	10-OCT-2013	8	110
132	Antonio	Daniel	Mechanic	900-287-4726	antoniod@rental.com	13-NOV-1970	M	$400,000	07-FEB-2018	8	122

```
32 rows selected.

SQL>
```

```
SQL> column COMMENTS format a60;
SQL> SELECT * FROM FAULTREPORT;


REPORTNUM DATECHECKED          COMMENTS                                                     EMPNO LICENSENO              RENTALNO
---------- -------------------- ------------------------------------------------------------ ----- -------------------- ----------
         3 09-JUL-2022 09:00:00 Horn not working                                               128 G301-133-699                 10
         4 27-SEP-2022 10:00:00 Head light working inconsistently. Needs repair                128 G301-133-699                 22
         5 30-SEP-2022 10:00:00 Head light working inconsistently. Needs repair                128 G301-133-699                 23
         6 31-OCT-2022 16:15:00 Gas tank leak. High priority.                                  102 G100-029-736                 16
         7 27-SEP-2022 15:10:00 Bumper needs replacement                                       112 A902-019-746                 26
         9 25-SEP-2022 10:01:00 Brake not working. Serious issue                               122 G163-271-237                 24
        10 10-SEP-2022 10:11:00 Battery down.                                                  126 G210-090-103                 11
        11 16-OCT-2022 13:15:00 Reverse camera not functioning as expected.                    106 G210-090-103                 11
        12 17-NOV-2022 17:24:00 Air bags to be replaced                                        117 G180-094-173                 19
        13 26-NOV-2022 18:15:00 Reverse camera not functioning as expected.                    109 G180-094-173                 18
        14 02-OCT-2022 18:15:00 Reverse camera not functioning as expected.                    119 G192-294-136                 28
        15 08-NOV-2022 18:15:00 Reverse camera not functioning as expected.                    119 G192-294-136                 27
        16 25-NOV-2022 20:15:00 A/C not working                                                118 G192-294-136                 21
        17 15-JUN-2022 20:15:00 A/C not working                                                103 G301-333-699                  1
        18 30-NOV-2022 17:15:00 Heater not working                                             132 G301-333-699                 35
        21 14-MAR-2022 17:15:00 Window needs to be checked.                                    121 G163-271-237                 38
        22 14-OCT-2022 17:15:00 Heater needs to be checked.                                    110 G163-271-237                 39
         1 17-SEP-2022 09:30:00 Rear view mirror broken                                        128 G301-133-699                  6
         2 12-JUL-2022 19:30:00 Wind shield issue                                              128 G301-133-699                  7
         8 30-SEP-2022 19:50:00 Door jammed.                                                   122 G192-029-173                 25
        19 30-MAY-2022 17:15:00 Battery needs to be changed.                                   128 G301-133-699                 36
        20 14-APR-2022 17:15:00 Engine needs to be checked.                                    128 G301-133-699                 37

22 rows selected.

SQL>
SQL> SELECT * FROM OUTLET;

OUTNO STREET               CITY                 ST ZIPCODE PHONE           MANAGERNO
----- -------------------- -------------------- -- ------- --------------- ----------
    3 452 E. Nut Swamp Dr. San Diego            CA 92-115 180-002-2928           110
    4 9374 Ohio Street     New York             NY 91351  182-382-1928           110
    7 44 Morris Ave        Pittsburgh           PA 95127  765-754-7163           106
    8 9605 Blue Spring Ave San Antonio          TX 95111  172-813-1923           110
```

```
     5 7445 Poplar St        Vienna              VA 92627   810-029-1938            109
     6 293 Vernon Dr         Portland            OR 92647   980-094-4353            105

6 rows selected.


SQL> column INSPECTIONDATE format a11;
SQL> SELECT LICENSENO,MAKE,MODEL,COLOR,YEAR,NODOORS,CAPACITY,
  2  DAILYRATE,TO_CHAR(INSPECTIONDATE,'DD-MON-YYYY') AS "INSPECTION DATE",OUTNO FROM VEHICLE;

LICENSENO            MAKE                 MODEL                COLOR                YEAR NODO   CAPACITY  DAILYRATE INSPECTION DATE     OUTNO
-------------------- -------------------- -------------------- -------------------- ----- ---- ---------- ---------- -------------------- -----
G192-029-173         Toyota               RAV4                 White                2016 4             5        150 03-OCT-2022             3
G163-271-237         Acura                CL                   Black                2018 4             4        120 19-AUG-2022             3
A902-019-746         Audi                 Q7                   Blue                 2013 4             5        200 02-OCT-2022             4
N100-545-00          Audi                 Q7                   White                2017 4             5        250 12-OCT-2022             4
G192-294-136         BMW                  x5                   White                2013 4             5        200 12-DEC-2021             5
G192-024-176         Lexus                ES250 Sedan          White                2020 4             5        300 04-JUL-2022             5
G180-094-173         Mazda                CX-9                 White                2016 4             6        125 03-NOV-2022             5
G100-029-736         Subaru               BRZ Coupe            Blue                 2018 2             4        100 03-NOV-2022             6
G100-090-103         Innova               Crysta               Red                  2022 4             8        140 12-JUN-2022             6
G201-133-699         Tesla                3                    Yellow               2020 4             7        200 13-APR-2022             6
G120-029-736         Tesla                3                    Blue                 2021 4             4        200 15-NOV-2022             7
G210-090-103         Nisan                Sunny                Red                  2022 4             8         80 12-JUN-2022             7
G301-133-699         Ford                 Mustang              Black                2013 4             5        180 13-OCT-2022             7
G220-029-736         Volkswagen           Beatle               Sky Blue             2021 2             2        250 25-OCT-2022             8
G210-192-103         Nisan                Sunny                Yellow               2022 4             4         80 14-SEP-2022             8
G301-333-699         BMW                  Mini Cooper          Grey                 2004 4             4        260 23-AUG-2022             8

16 rows selected.

SQL> column CLIENTNO format 9999;
SQL> column FNAME format a12;
SQL> column LNAME format a12;
SQL> column PHONE format a15;
SQL> column ZIPCODE format 99999;
SQL> column WEBADDRESS format a30;
SQL> column EMAIL format a20;
SQL> column CITY format a20;
SQL> column STREET format a20;
```

```
SQL> SELECT * FROM CLIENT;


CLIENTNO FNAME        LNAME         PHONE          EMAIL                WEBADDRESS                      STREET                CITY                  ST ZIPCODE
-------- ------------ ------------ --------------- -------------------- ------------------------------- --------------------- --------------------- -- -------
1000 Siva            Ram          808-444-1099    sivar@gmail.com      http://www.cts.com              Darlington Rd         Pittsburgh            PA 15200
1002 KK              S            200-658-2079    kks@gmail.com        http://www.peekay.com           Shady Ave             Texas                 TX 13140
1003 Arthi           Krishna      456-444-1099    arthik@gmail.com     http://www.threesixty.org       Crooked St            San Fransisco         CA 09200
1004 Andrew          Watson       777-444-1099    andyw@gmail.com      http://www.dostate.gov          Beeler St             Pittsburgh            PA 15210
1005 Vanessa         Hudgens      810-444-1099    vanessah@gmail.com   http://www.savearth.org         Bakers Hall           Los Angeles           CA 13400
1006 Nathan          Daniel       720-444-1099    nathand@gmail.com    http://www.homemakers.org       Park Blvd             Oregon                OR 18200
1008 Lauradel        Holmes       201-658-2079    lauradelh@gmail.com  http://www.knitwithme.org       Jim Thorpe St         Eugene                OR 19140
1009 Younus          Mohammed     378-444-1099    mmhammed@gmail.com   http://www.tcs.com              Times Square          New York              NY 06200
1010 Mathew          Hall         650-444-1099    mathewh@gmail.com    http://www.usl.gov              Central Park          New York              NY 05210
1011 Parveen         Singh        778-044-1099    parveens@gmail.com                                   Margaret Morrison St  Pittsburgh            PA 15400
1012 Mike            Ross         317-044-1099    miker@gmail.com      http://www.pearsonspectre.us    Wall St               New York City         NY 23400
1001 Prabhu          Kumar        810-400-1089    prabhuk@gmail.com    http://www.maxim.com            Tyson Oaks Cr         Virginia              VA 12201
1007 Doug            Hintz        840-400-1089    dough@gmail.com      http://www.bikersclub.org       Strip District        Santa Cruz            CA 87201

13 rows selected.

SQL> SELECT * FROM RAGREEMENT;


RENTALNO STARTDATE            RETURNDATE           MILEAGEBEFORE MILEAGEAFTER INSURANCETYPE                         CLIENTNO LICENSENO
---------- -------------------- -------------------- ------------- ------------ ------------------------------------ -------- --------------------
         1 01-JUN-2022 08:30:00 15-JUN-2022 14:00:00           115          500 COMPREHENSIVE                            1005 G301-333-699
         2 10-JUL-2022 18:30:00 26-JUL-2022 12:00:00            25           27 LIABILITY COVERAGE                       1000 G210-192-103
         3 11-JUL-2022 15:30:00 16-JUL-2022 13:00:00            20          145 COLLISION INSURANCE                      1000 G220-029-736
         5 27-JUL-2022 17:30:00 17-SEP-2022 09:15:00            27          574 COLLISION INSURANCE                      1002 G210-192-103
        10 17-JUL-2022 17:30:00 17-SEP-2022 09:15:00           750         1300 GAP INSURANCE                            1002 G301-133-699
         8 11-OCT-2022 15:30:00 16-OCT-2022 13:00:00          1345         1400 COLLISION INSURANCE                      1002 G210-090-103
         9 17-JUL-2022 07:30:00 08-AUG-2022 07:00:00           574         1090 LIABILITY COVERAGE                       1002 G210-090-103
        11 29-AUG-2022 10:30:00 10-SEP-2022 07:00:00          1090         1345 LIABILITY COVERAGE                       1003 G210-090-103
        12 01-JUL-2022 14:30:00 13-AUG-2022 07:00:00            74          990 COLLISION COVERAGE                       1002 G120-029-736
        13 29-AUG-2022 10:30:00 10-SEP-2022 07:00:00          1345         1600 LIABILITY COVERAGE                       1004 G201-133-699
        14 01-JUL-2022 14:30:00 13-AUG-2022 07:00:00          1090         1345 MEDICAL PAYMENTS COVERAGE                1005 G201-133-699
        15 01-JUL-2022 14:30:00 13-AUG-2022 07:00:00          1090         1345 GAP COVERAGE                             1006 G100-090-103
        16 13-AUG-2022 14:30:00 31-OCT-2022 16:13:00          1345         3500 PERSONAL INJURY PROTECTION COVERAGE      1008 G100-029-736
        18 23-NOV-2022 14:30:00 26-NOV-2022 16:13:00           365          500 PERSONAL INJURY PROTECTION COVERAGE      1009 G180-094-173
        19 23-OCT-2022 04:30:00 17-NOV-2022 16:13:00           385          890 COLLISION COVERAGE                       1010 G180-094-173
        20 10-NOV-2022 10:30:00 25-NOV-2022 16:13:00           250          578 MEDICAL PAYMENTS COVERAGE                1010 G192-024-176
        21 10-NOV-2022 10:30:00 25-NOV-2022 16:13:00           250          578 MEDICAL PAYMENTS COVERAGE                1010 G192-294-136
        22 24-SEP-2022 17:30:00 27-SEP-2022 09:15:00          1300         1500 GAP INSURANCE                            1009 G301-133-699
        23 27-SEP-2022 23:30:00 30-SEP-2022 09:31:00          1500         1700 GAP INSURANCE                            1011 G301-133-699
```

```
24 19-SEP-2022 23:30:00 25-SEP-2022 09:31:00        1500        1700 COMPREHENSIVE                          1006 G163-271-237
26 01-JUL-2022 23:30:00 27-SEP-2022 14:59:00        1200        1763 PERSONAL INJURY PROTECTION COVERAGE    1008 A902-019-746
27 10-OCT-2022 10:30:00 08-NOV-2022 16:13:00          50         250 MEDICAL PAYMENTS COVERAGE              1010 G192-294-136
28 10-SEP-2022 10:30:00 02-OCT-2022 16:13:00           0          50 MEDICAL PAYMENTS COVERAGE              1009 G192-294-136
29 30-SEP-2022 23:30:00 11-NOV-2022 14:59:00        1763      2006.7 GAP COVERAGE                           1008 A902-019-746
30 30-NOV-2022 07:30:00 30-NOV-2022 14:59:00      2006.7        2090 GAP COVERAGE                           1008 A902-019-746
31 30-AUG-2022 07:30:00 31-AUG-2022 14:59:00          20         100 GAP COVERAGE                           1012 N100-545-00
33 10-NOV-2022 07:30:00 30-NOV-2022 14:59:00        3500        3600 GAP COVERAGE                           1003 G100-029-736
34 11-NOV-2022 17:30:00 30-NOV-2022 14:59:00        1400        3600 GAP COVERAGE                           1005 G210-090-103
35 09-NOV-2022 17:30:00 30-NOV-2022 14:59:00         500        1765 GAP COVERAGE                           1012 G301-333-699
38 09-FEB-2022 17:30:00 14-MAR-2022 14:59:00        1000        1500 GAP COVERAGE                           1008 G163-271-237
39 09-OCT-2022 17:30:00 14-OCT-2022 14:59:00        1700        1850 GAP COVERAGE                           1008 G163-271-237
 4 17-JUL-2022 07:30:00 08-AUG-2022 07:00:00         145         220 COLLISION INSURANCE                    1001 G220-029-736
 6 01-JUN-2022 18:30:00 09-JUL-2022 04:09:00         565         700 MEDICAL PAYMENTS COVERAGE              1001 G301-133-699
 7 10-JUL-2022 23:47:00 12-JUL-2022 19:00:00         700         750 PERSONAL INJURY PROTECTION             1001 G301-133-699
17 13-AUG-2022 14:30:00 31-OCT-2022 07:00:00        1345        1890 COMPREHENSIVE                          1007 G100-090-103
25 14-AUG-2022 23:30:00 30-SEP-2022 19:45:00         100         509 GAP COVERAGE                           1007 G192-029-173
32 20-NOV-2022 07:30:00 30-NOV-2022 14:59:00         509         700 GAP COVERAGE                           1001 G192-029-173
36 19-APR-2022 17:30:00 30-MAY-2022 14:59:00          50         565 GAP COVERAGE                           1007 G301-133-699
37 09-APR-2022 17:30:00 14-APR-2022 14:59:00          10          50 GAP COVERAGE                           1007 G301-133-699
```

39 rows selected.

PART II B - QUERIES
SQL> set linesize 900;
SQL> set pagesize 100;
SQL> alter session set nls_date_format = 'DD-MON-YYYY HH24:MI:SS';

Session altered.

SQL>
SQL> --question 1
SQL> column YEAR format 9999;
SQL> SELECT R.RENTALNO,R.STARTDATE,
  2 R.RETURNDATE,R.LICENSENO,V.OUTNO,
  3 V.MAKE,V.MODEL,V.YEAR,NVL2(FR.DATECHECKED,TO_CHAR(FR.DATECHECKED),'NO REPORT AVAILABLE') as "Report Date"
  4 FROM RAGREEMENT R JOIN VEHICLE V ON R.LICENSENO = V.LICENSENO
  5 LEFT JOIN FAULTREPORT FR ON FR.RENTALNO = R.RENTALNO
  6 WHERE EXTRACT(MONTH FROM R.STARTDATE) =
  7 (SELECT DISTINCT EXTRACT(MONTH FROM SYSDATE)-1 FROM DUAL);

```
    RENTALNO STARTDATE            RETURNDATE            LICENSENO          OUTNO MAKE                 MODEL               YEAR Report Date
---------- -------------------- -------------------- ------------------- ----- -------------------- ------------------- ----- ----------------------------
        18 23-NOV-2022 14:30:00 26-NOV-2022 16:13:00 G180-094-173           5 Mazda                CX-9                2016 26-NOV-2022 18:15:00
        21 10-NOV-2022 10:30:00 25-NOV-2022 16:13:00 G192-294-136           5 BMW                  x5                  2013 25-NOV-2022 20:15:00
        35 09-NOV-2022 17:30:00 30-NOV-2022 14:59:00 G301-333-699           8 BMW                  Mini Cooper         2004 30-NOV-2022 17:15:00
        34 11-NOV-2022 17:30:00 30-NOV-2022 14:59:00 G210-090-103           7 Nisan                Sunny               2022 NO REPORT AVAILABLE
        30 30-NOV-2022 07:30:00 30-NOV-2022 14:59:00 A902-019-746           4 Audi                 Q7                  2013 NO REPORT AVAILABLE
        33 10-NOV-2022 07:30:00 30-NOV-2022 14:59:00 G100-029-736           6 Subaru               BRZ Coupe           2018 NO REPORT AVAILABLE
        20 10-NOV-2022 10:30:00 25-NOV-2022 16:13:00 G192-024-176           5 Lexus                ES250 Sedan         2020 NO REPORT AVAILABLE
        32 20-NOV-2022 07:30:00 30-NOV-2022 14:59:00 G192-029-173           3 Toyota               RAV4                2016 NO REPORT AVAILABLE

8 rows selected.

SQL>
SQL> --question 2
SQL> SELECT OUTNO,
  2         NVL(JULY,0) AS "JULY",
  3         NVL(AUGUST,0) AS "AUGUST",
  4         NVL(SEPTEMBER,0) AS "SEPTEMBER",
  5         NVL(TOTAL,0) AS "TOTAL"
  6    FROM (
  7         SELECT NVL(TO_CHAR(O.OUTNO),'TOTAL') OUTNO,
  8               NVL(TO_CHAR(EXTRACT(MONTH FROM STARTDATE)),'TOTAL') MONTH,
  9               NVL2(COUNT(R.LICENSENO),COUNT(R.LICENSENO),0) AS "RENTALS"
 10         FROM OUTLET O JOIN VEHICLE V ON V.OUTNO = O.OUTNO
 11                  JOIN RAGREEMENT R ON R.LICENSENO = V.LICENSENO
 12         WHERE STARTDATE IN
 13         (SELECT STARTDATE FROM RAGREEMENT WHERE TO_CHAR(STARTDATE,'Q') = 3 AND
 14                                  EXTRACT(YEAR FROM STARTDATE) = 2022)
 15         GROUP BY CUBE(O.OUTNO,TO_CHAR(EXTRACT(MONTH FROM STARTDATE)))
 16         ORDER BY OUTNO,MONTH
 17  )
```

```
 18  PIVOT (SUM(RENTALS)
 19        FOR MONTH IN (7 AS "JULY", 8 AS "AUGUST", 9 AS "SEPTEMBER", 'TOTAL' AS TOTAL))
 20  ORDER BY 1;


OUTNO                                        JULY     AUGUST  SEPTEMBER      TOTAL
-------------------------------------- ---------- ---------- ---------- ----------
3                                               0          1          1          2
4                                               1          1          1          3
5                                               0          0          1          1
6                                               2          3          0          5
7                                               4          1          2          7
8                                               4          0          0          4
TOTAL                                          11          6          5         22

7 rows selected.

SQL>
SQL>
SQL> --question 3
SQL> SELECT V.LICENSENO,V.MAKE,V.MODEL,
  2  TRUNC(EXTRACT(YEAR FROM SYSDATE) - V.YEAR) AS "AGE",
  3  MILES.TOTAL_MILES, MILES.CUR_READING,
  4  NVL(FAULT.NUM,0) AS "NUM OF FAULT REPORTS" FROM VEHICLE V
  5  JOIN (SELECT LICENSENO,SUM(MILEAGEAFTER-MILEAGEBEFORE) AS TOTAL_MILES,MAX(MILEAGEAFTER) AS CUR_READING
  6        FROM RAGREEMENT
  7        GROUP BY LICENSENO) MILES ON  MILES.LICENSENO = V.LICENSENO
  8  LEFT JOIN (SELECT LICENSENO,COUNT(LICENSENO) AS NUM
  9        FROM FAULTREPORT
 10        GROUP BY LICENSENO) FAULT ON FAULT.LICENSENO = MILES.LICENSENO
 11  WHERE TRUNC(EXTRACT(YEAR FROM SYSDATE) - V.YEAR) >= 5;


LICENSENO            MAKE                 MODEL                       AGE TOTAL_MILES CUR_READING NUM OF FAULT REPORTS
-------------------- -------------------- -------------------- ---------- ----------- ----------- --------------------
G301-133-699         Ford                 Mustang                       9        1690        1700                    7
A902-019-746         Audi                 Q7                            9         890        2090                    1
G180-094-173         Mazda                CX-9                          6         640         890                    2
```

```
G192-294-136        BMW                 x5                            9        578        578                   3
G301-333-699        BMW                 Mini Cooper                  18       1650       1765                  2
G192-029-173        Toyota              RAV4                          6        600        700                   1
N100-545-00         Audi                Q7                            5         80        100                   0


7 rows selected.
SQL> --question 4
SQL> column "QUARTER" format a7
SQL> SELECT QUARTER,MAKE,"#RENTALS",LIKELIHOOD,
  2  RANK() OVER (PARTITION BY QUARTER ORDER BY LIKELIHOOD DESC) RANK
  3  FROM(
  4  SELECT FAULT.QUARTER,FAULT.MAKE,FAULTREPORTS,
  5  ROUND((RATIO_TO_REPORT(FAULTREPORTS) OVER ()) * 100,2) "LIKELIHOOD", "#RENTALS"
  6  FROM (SELECT TO_CHAR(STARTDATE,'Q') AS QUARTER, MAKE, COUNT(LICENSENO) AS "#RENTALS"
  7                  FROM VEHICLE JOIN RAGREEMENT USING(LICENSENO)
  8                  GROUP BY TO_CHAR(STARTDATE,'Q'),MAKE
  9                  ) R
 10  JOIN (SELECT TO_CHAR(DATECHECKED,'Q') AS QUARTER,MAKE, COUNT(LICENSENO) AS "FAULTREPORTS"
 11      FROM VEHICLE JOIN FAULTREPORT USING(LICENSENO)
 12      GROUP BY TO_CHAR(DATECHECKED,'Q'),MAKE) FAULT ON FAULT.MAKE = R.MAKE AND FAULT.QUARTER = R.QUARTER;

QUARTER MAKE                 #RENTALS LIKELIHOOD       RANK
------- -------------------- ---------- ---------- ----------
1       Acura                        1       4.55          1
2       Ford                         3       9.09          1
2       BMW                          1       4.55          2
3       Ford                         4      22.73          1
3       Nisan                        4       4.55          2
3       Acura                        1       4.55          2
3       Audi                         3       4.55          2
3       Toyota                       1       4.55          2
4       BMW                          3      18.18          1
4       Mazda                        2       9.09          2
4       Subaru                       1       4.55          3
4       Nisan                        2       4.55          3
```

```
4        Acura                              1       4.55            3

13 rows selected.


SQL> --question 5
SQL> SELECT RANK() OVER (ORDER BY "% REVENUE IN THIRD QUARTER" DESC) AS RANK,
  2  MODEL,REVENUE,TOTAL_VEHICLES, "% REVENUE IN THIRD QUARTER" FROM (
  3  SELECT DISTINCT V.MODEL, TO_CHAR(TOTAL_REV,'$9999999') AS "REVENUE", TOTAL_VEHICLES,
  4  ROUND((RATIO_TO_REPORT(TOTAL_REV) OVER ()) * 100,2) "% REVENUE IN THIRD QUARTER"
  5  FROM VEHICLE V JOIN (
  6            SELECT MODEL, SUM(DAILYRATE *(RETURNDATE-STARTDATE)) AS TOTAL_REV
  7                FROM VEHICLE JOIN RAGREEMENT USING(LICENSENO)
  8                WHERE TO_CHAR(STARTDATE,'Q') = 3
  9                GROUP BY MODEL) MOD ON MOD.MODEL = V.MODEL
 10  JOIN (SELECT MODEL, COUNT(LICENSENO) AS TOTAL_VEHICLES
 11      FROM VEHICLE
 12      GROUP BY MODEL) VEH ON VEH.MODEL = V.MODEL);

      RANK MODEL               REVENUE   TOTAL_VEHICLES % REVENUE IN THIRD QUARTER
---------- -------------------- --------- -------------- --------------------------
         1 Q7                     $26186               2                      16.01
         2 3                      $19446               2                      11.89
         3 Crysta                 $16993               1                      10.39
         4 Mustang                $12336               1                       7.54
         5 Sunny                   $8098               2                       4.95
         6 BRZ Coupe               $7907               1                       4.84
         7 RAV4                    $7027               1                        4.3
         8 Beatle                  $6719               1                       4.11
         9 x5                      $4448               1                       2.72
        10 CL                       $650               1                         .4

10 rows selected.
```

```
SQL> --question 6
SQL> column "NAME" format a35
SQL> column "ADDRESS" format a50
SQL> column POSITION format a21
SQL> SELECT NAME,POSITION,ADDRESS,REPORTS FROM (
  2   SELECT LEVEL,O.OUTNO,LPAD(' ',3*(LEVEL-1)) || E.EMPNO || ' ' || E.FNAME|| ' ' || E.LNAME AS
"NAME",E.POSITION,O.STREET || ',' || O.CITY || ',' || O.STATE || '-' || O.ZIPCODE AS "ADDRESS" ,REPORTS
  3   FROM EMPLOYEE E JOIN (SELECT EMPNO,COUNT(EMPNO) AS REPORTS
  4       FROM FAULTREPORT
  5       WHERE (TRUNC(SYSDATE-DATECHECKED)<=90)
  6       GROUP BY EMPNO) R ON R.EMPNO = E.EMPNO
  7   JOIN OUTLET O ON O.OUTNO = E.OUTNO
  8   START WITH E.EMPNO IN (Select EMPNO From EMPLOYEE Where SUPER_NO IS NULL)
  9   CONNECT BY PRIOR E.EMPNO = E.SUPER_NO);
```

NAME	POSITION	ADDRESS	REPORTS
106 Angelique Church	Outlet Manager	44 Morris Ave,Pittsburgh,PA-95127	1
126 Mary James	Mechanic	44 Morris Ave,Pittsburgh,PA-95127	1
128 Thomas Ryan	Mechanic	44 Morris Ave,Pittsburgh,PA-95127	3
109 Dashawn Harding	Outlet Manager	7445 Poplar St,Vienna,VA-92627	1
117 Mark Joy	Sales Rep	7445 Poplar St,Vienna,VA-92627	1
118 Oliver Liam	Sales Rep	7445 Poplar St,Vienna,VA-92627	1
119 Emma Noah	Sales Rep	7445 Poplar St,Vienna,VA-92627	2
110 Ramesh Sowjanya	Senior Outlet Manager	452 E. Nut Swamp Dr.,San Diego,CA-92-115	1
122 William Henry	Mechanic	452 E. Nut Swamp Dr.,San Diego,CA-92-115	2
112 Babloo Prithviraj	Mechanic	9374 Ohio Street,New York,NY-91351	1
132 Antonio Daniel	Mechanic	9605 Blue Spring Ave,San Antonio,TX-95111	1

```
11 rows selected.

SQL>
SQL>
SQL> --question 7
SQL> SELECT O.OUTNO, "VEHICLES PER OUTLET", NVL2(RENTALS,RENTALS,0) AS "RENTALS PER OUTLET",
```

```
  2  NVL2(ROUND((TOTAL_DISTANCE/RENTALS),2),ROUND((TOTAL_DISTANCE/RENTALS),2),0) AS "AVG DISTANCE PER RENTAL",
  3  EMPLOYEES AS "NUM OF EMPLOYEES", NVL2(ROUND((RENTALS/EMPLOYEES),2),ROUND((RENTALS/EMPLOYEES),2),0) AS "RENTALS
PER EMPLOYEE"
  4  FROM OUTLET O LEFT JOIN (SELECT OUTNO, COUNT(RENTALNO) AS RENTALS, SUM(MILEAGEAFTER-MILEAGEBEFORE) AS
"TOTAL_DISTANCE"
  5              FROM OUTLET JOIN VEHICLE USING(OUTNO)
  6                    JOIN RAGREEMENT USING(LICENSENO)
  7            WHERE (TRUNC(SYSDATE-STARTDATE)<=60)
  8            GROUP BY OUTNO) DIST ON DIST.OUTNO = O.OUTNO
  9          JOIN (SELECT OUTNO, COUNT(LICENSENO) AS "VEHICLES PER OUTLET"
 10              FROM OUTLET JOIN VEHICLE USING(OUTNO)
 11              GROUP BY OUTNO) CV ON CV.OUTNO = O.OUTNO
 12          JOIN (SELECT OUTNO, COUNT(EMPNO) AS EMPLOYEES
 13              FROM OUTLET JOIN EMPLOYEE USING(OUTNO)
 14              GROUP BY OUTNO) EMP ON EMP.OUTNO = O.OUTNO;


OUTNO VEHICLES PER OUTLET RENTALS PER OUTLET AVG DISTANCE PER RENTAL NUM OF EMPLOYEES RENTALS PER EMPLOYEE
----- ------------------- ------------------ ----------------------- ---------------- -------------------
    3                   2                  2                   170.5                6                 .33
    4                   2                  1                    83.3                4                 .25
    5                   3                  5                   299.2                6                 .83
    6                   3                  1                     100                5                  .2
    7                   3                  2                  1127.5                6                 .33
    8                   3                  1                    1265                5                  .2

6 rows selected.

SQL>
SQL> --question 8
SQL> SELECT C.FNAME || ' ' || C.LNAME AS "NAME", TO_CHAR(RC.REVENUE,'$9,999,999') AS "REVENUE" FROM
  2  CLIENT C JOIN (SELECT CLIENTNO,TRUNC(SUM(DAILYRATE * (RETURNDATE-STARTDATE))) AS "REVENUE"
  3          FROM VEHICLE JOIN RAGREEMENT USING(LICENSENO) JOIN CLIENT USING(CLIENTNO)
  4          WHERE EXTRACT(YEAR FROM STARTDATE) = 2022
  5          GROUP BY CLIENTNO) RC
```

```
     6          ON C.CLIENTNO = RC.CLIENTNO
     7  ORDER BY REVENUE DESC;


NAME                                REVENUE
----------------------------------- -----------
Lauradel Holmes                      $38,362
Doug Hintz                           $26,285
KK S                                 $25,918
Mathew Hall                          $16,652
Prabhu Kumar                         $14,098
Vanessa Hudgens                      $13,748
Nathan Daniel                         $6,626
Mike Ross                             $5,760
Younus Mohammed                       $5,309
Arthi Krishna                         $2,979
Siva Ram                              $2,482
Andrew Watson                         $2,370
Parveen Singh                           $435

13 rows selected.

SQL>
SQL> --question 9
SQL> SELECT O.OUTNO,O.STATE, NVL2(INSTATE_CUSTOMERS,INSTATE_CUSTOMERS,0) AS "#INSTATE CUST",
   2  NVL2(INSTATE_RENTALS,INSTATE_RENTALS,0) AS "#INSTATE RENTALS",
   3  NVL2((INSTATE_CUSTOMERS/TOT_CUSTOMERS),ROUND((INSTATE_CUSTOMERS/TOT_CUSTOMERS),2),0) AS
"INSTATE_CUSTOMER_PROPORTION",
   4  NVL2((INSTATE_RENTALS/TOT_RENTALS),ROUND((INSTATE_RENTALS/TOT_RENTALS),2),0) AS "INSTATE_RENTAL_PROPORTION"
   5  FROM OUTLET O LEFT JOIN (SELECT OUTNO,OUTLET.STATE, COUNT(DISTINCT CLIENTNO) AS INSTATE_CUSTOMERS
   6      FROM OUTLET JOIN VEHICLE USING(OUTNO)
```

```
   7        JOIN RAGREEMENT USING(LICENSENO)
   8  JOIN CLIENT USING(CLIENTNO)
   9      WHERE TRIM(OUTLET.STATE) = TRIM(CLIENT.STATE)
  10      GROUP BY OUTNO,OUTLET.STATE) CUST ON CUST.OUTNO = O.OUTNO
  11  LEFT JOIN (SELECT OUTNO, COUNT(RENTALNO) AS INSTATE_RENTALS
  12       FROM OUTLET JOIN VEHICLE USING(OUTNO)
  13         JOIN RAGREEMENT USING(LICENSENO)
  14    JOIN CLIENT USING(CLIENTNO)
  15       WHERE TRIM(OUTLET.STATE) = TRIM(CLIENT.STATE)
  16       GROUP BY OUTNO) RENTAL ON RENTAL.OUTNO = O.OUTNO
  17  LEFT JOIN (SELECT OUTNO,OUTLET.STATE, COUNT(DISTINCT CLIENTNO) AS TOT_CUSTOMERS
  18      FROM OUTLET JOIN VEHICLE USING(OUTNO)
  19        JOIN RAGREEMENT USING(LICENSENO)
  20  JOIN CLIENT USING(CLIENTNO)
  21      GROUP BY OUTNO,OUTLET.STATE) TOT_CUST ON TOT_CUST.OUTNO = O.OUTNO
  22  LEFT JOIN(SELECT OUTNO, COUNT(RENTALNO) AS TOT_RENTALS
  23       FROM OUTLET JOIN VEHICLE USING(OUTNO)
  24         JOIN RAGREEMENT USING(LICENSENO)
  25    JOIN CLIENT USING(CLIENTNO)
  26       GROUP BY OUTNO) TOT_RENTAL ON TOT_RENTAL.OUTNO = O.OUTNO
  27  ORDER BY O.OUTNO;
```

```
    OUTNO STATE                    #INSTATE CUST #INSTATE RENTALS INSTATE_CUSTOMER_PROPORTION INSTATE_RENTAL_PROPORTION
---------- ------------------------ ------------- ---------------- --------------------------- -------------------------
         3 CA                                   1                1                         .25                        .2
         4 NY                                   1                1                          .5                       .25
         5 VA                                   0                0                           0                         0
         6 OR                                   2                2                         .33                       .33
         7 PA                                   1                1                         .14                       .08
         8 TX                                   1                1                          .2                       .17
```

6 rows selected.

```
SQL> --question 10
SQL> SELECT CLI.Type,COUNT(CLI.CLIENTNO) AS "#CATEGORY", SUM(R.RENTALS) AS "#RENTALS"
  2    FROM CLIENT C
  3    JOIN (
  4    SELECT CLIENTNO,
  5    CASE
  6    WHEN REGEXP_INSTR(WebAddress,'.gov')!=0 THEN 'Govt'
  7    WHEN REGEXP_INSTR(WebAddress,'.edu')!=0 THEN 'Education'
  8    WHEN REGEXP_INSTR(WebAddress,'.org')!=0 THEN 'Non Profit'
  9    WHEN REGEXP_INSTR(WebAddress,'.com')!=0 THEN 'Profit'
 10    WHEN WebAddress IS NULL THEN 'Not Available'
 11    ELSE 'Other'
 12    END AS Type
 13    FROM CLIENT) CLI ON CLI.CLIENTNO = C.CLIENTNO
 14    JOIN (
 15    SELECT CLIENTNO, COUNT(CLIENTNO) AS RENTALS
 16    FROM CLIENT JOIN RAGREEMENT USING(CLIENTNO)
 17   WHERE TO_CHAR(STARTDATE,'Q') = TO_CHAR(ADD_MONTHS(SYSDATE,-3),'Q')
 18    GROUP BY CLIENTNO
 19    ) R on R.CLIENTNO = C.CLIENTNO
 20    GROUP BY CLI.Type;

TYPE           #CATEGORY   #RENTALS
------------- ----------- -----------
Profit               4          10
Non Profit           5           9
Govt                 1           1
Not Available        1           1
Other                1           1
```