**Step 5**

**Name: Vaishnavi Pravin Apsingkar**

**NN: 142**

**#Part A: Simple Views**

**View Syntax:**

CREATE [ OR ALTER ] VIEW [ schema\_name . ] view\_name [ (column [ ,...n ] ) ]

[ WITH <view\_attribute> [ ,...n ] ]

AS select\_statement

[ WITH CHECK OPTION ]

[ ; ]

<view\_attribute> ::=

{

[ ENCRYPTION ]

[ SCHEMABINDING ]

[ VIEW\_METADATA ]

}

**View Query:**

CREATE VIEW vTruckMaintenance142

AS SELECT t.TruckID, t.Description AS TruckDesc, t.DatePurchased, ma.RepairType, ma.RepairDate , ma.OrderNumber

FROM Truck

AS t LEFT OUTER JOIN Maintenance AS ma

ON ma.TruckID = t.TruckID;

**Results:**

Commands completed successfully.

**View tests:**

**1. Test 1:**

**Query: (For all trucks)**

SELECT \* FROM vTruckMaintenance142;

**Result:**

TruckID TruckDesc DatePurchased RepairType RepairDate OrderNumber

------- ---------- ------------- --------------- ---------- -----------

B-001 Chev Box 2021-07-17 Oil change 2022-03-22 4

B-017 Ford Box 2022-01-05 Muffler 2022-08-02 5

B-018 Ford Box 2022-01-05 NULL NULL NULL

B-019 Ford Box 2022-01-05 NULL NULL NULL

S-001 Volvo Semi 2020-02-02 New tires 2021-02-02 1

S-001 Volvo Semi 2020-02-02 Oil change 2021-02-02 2

S-002 Peterbuilt 2021-06-16 NULL NULL NULL

S-017 Kenworth 2020-02-02 NULL NULL NULL

(8 rows affected)

**2.Test 2**

**Query:**

SELECT \* FROM vTruckMaintenance142

WHERE TruckID = 'S-001';

**Result:**

TruckID TruckDesc DatePurchased RepairType RepairDate OrderNumber

------- ---------- ------------- --------------- ---------- -----------

S-001 Volvo Semi 2020-02-02 New tires 2021-02-02 1

S-001 Volvo Semi 2020-02-02 Oil change 2021-02-02 2

(2 rows affected)

**#Part B: Views and Constraints**

**Query:**

CREATE VIEW vMileage142 AS

SELECT tr.TruckID, tr.DriverID, dr.Name AS DriverName, tr.TripID, tr.Date AS TripDate,

tr.OutGoingMiles, tr.IncomingMiles, (tr.IncomingMiles - tr.OutGoingMiles) AS MileageForTrip

FROM Trip AS tr, Driver AS dr

WHERE tr.DriverID = dr.DriverID

**Result:**

Commands completed successfully.

**Tests:**

**1.Test 1:**

**Query:**

SELECT \* FROM vMileage142

ORDER BY TruckID;

**Result:**

TruckID DriverID DriverName TripID TripDate OutGoingMiles IncomingMiles MileageForTrip

------- -------- -------------------- ------ ---------- ------------- ------------- --------------

B-001 D280 Gail Brown T007 2022-06-04 3000 3400 400

B-001 D301 Mark White T008 2022-06-05 3400 3502 102

B-001 D301 Mark White T009 2022-06-06 3502 3700 198

B-017 D301 Mark White T010 2022-06-03 12433 12503 70

B-017 D101 Bill Green T001 2022-06-02 12300 12385 85

B-017 D101 Bill Green T002 2022-06-02 12385 12433 48

B-018 D107 Dave White T004 2022-06-02 22901 23104 203

B-018 D302 Bob Jones T011 2022-06-04 23104 23200 96

B-019 D142 Vaishnavi Apsingkar T012 2024-02-15 27100 27200 100

S-001 D102 Bob Jones T003 2022-06-02 103205 104000 795

S-002 D110 Ann Black T005 2022-06-03 152206 153001 795

S-017 D225 John Dough T006 2022-06-03 123700 123985 285

(12 rows affected)