CREATE AND POPULATING THE TABLES-

CREATE TABLE Person

(PersonID INT NOT NULL Primary Key,

LastName VARCHAR (30) NOT NULL,

FirstName VARCHAR (30) NOT NULL,

PhoneNumber CHAR (15) NOT NULL,

PersonType VARCHAR (1) NOT NULL);

SELECT \* FROM Person

CREATE TABLE Model

(ModelNumber CHAR (6) NOT NULL Primary Key,

ModelName VARCHAR (30) NOT NULL,

ModelDescription VARCHAR (100) NOT NULL,

StandardPrice Money NOT NULL);

SELECT \* FROM Model

CREATE TABLE AllProblem

(TestID INT NULL,

TestDate DateTime NULL,

TestDescription VARCHAR (200) NULL,

TestResults VARCHAR (300) NULL,

TestComplete VARCHAR (1) NULL,

TesterID INT NULL,

ReportID INT NULL,

RelatedTestID INT NULL,

ProblemReportReportID INT NULL,

ReportDate DateTime NULL,

CompleteDate Datetime NULL,

ProblemDescription VARCHAR (100) NULL,

InjuryYN VARCHAR (3) NULL,

InjuryDescription VARCHAR (80) NULL,

ProblemReportSerialNumber CHAR (10) NULL,

ProblemReportProblemTypeID INT NULL,

ReporterID INT NULL,

ProblemTypeID INT NULL,

TypeDescription VARCHAR (100) NULL,

SerialNumber CHAR (10),

ToyModelNumber CHAR (6) NULL,

OwnerID INT NULL,

PricePaid Money NULL);

SELECT \* FROM AllProblem

CREATE TABLE Toy

(SerialNumber CHAR (10) Primary Key NOT NULL,

ModelNumber Char (6) Foreign Key References Model (ModelNumber) NOT NULL,

OwnerID INT Foreign Key References Person (PersonID));

INSERT INTO Toy (SerialNumber, ModelNumber, OwnerID)

SELECT DISTINCT SerialNumber, ToyModelNumber, OwnerID

FROM AllProblem

WHERE SerialNumber IS NOT NULL;

SELECT \* FROM Toy

CREATE TABLE ProblemReportType

(ProblemReportTypeID INT Primary Key NOT NULL,

TypeDescription VARCHAR (100) NOT NULL);

INSERT INTO ProblemReportType (ProblemReportTypeID, TypeDescription)

SELECT DISTINCT ProblemTypeID, TypeDescription

FROM AllProblem

WHERE ProblemTypeID IS NOT NULL;

SELECT \* FROM ProblemReportType

CREATE TABLE ProblemReport

(ProblemReportID INT NOT NULL Primary Key,

ReportDate DateTime NOT NULL,

CompleteDate DateTime,

ProblemDescription VARCHAR (100) NOT NULL,

InjuryYN VARCHAR (3) NOT NULL,

InjuryDescription VARCHAR (80),

SerialNumber CHAR (10) Foreign Key References Toy (SerialNumber) NOT NULL,

ProblemReportTypeID INT Foreign Key References ProblemReportType (ProblemReportTypeID) NOT NULL,

ReporterID INT Foreign Key References Person (PersonID) NOT NULL,

PricePaid DECIMAL (8,2) NOT NULL);

INSERT INTO ProblemReport

(ProblemReportID, ReportDate, CompleteDate, ProblemDescription, InjuryYN, InjuryDescription, SerialNumber,

ProblemReportTypeID, ReporterID, PricePaid)

SELECT DISTINCT ProblemReportReportID, ReportDate, CompleteDate,

ProblemDescription, InjuryYN, InjuryDescription, ProblemReportSerialNumber, ProblemReportProblemTypeID,

ReporterID, PricePaid

FROM AllProblem

WHERE ProblemReportReportID IS NOT NULL

ORDER BY ProblemReportReportID;

SELECT \* FROM ProblemReport

CREATE TABLE Test

(TestID INT Primary Key NOT NULL,

TestDate DateTime NOT NULL,

TestDescription VARCHAR (300) NOT NULL,

TestResults VARCHAR (200),

TestComplete VARCHAR (1) NOT NULL,

TesterID INT Foreign Key References Person (PersonID),

ReportID INT Foreign Key References ProblemReport (ProblemReportID),

RelatedTestID INT Foreign Key References Test (TestID));

INSERT INTO Test

(TestID, TestDate, TestDescription, TestResults, testComplete, testerID, ReportID, RelatedTestID)

SELECT DISTINCT

TestID, TestDate, TestDescription, TestResults, testComplete, testerID, ReportID, RelatedTestID

FROM AllProblem

WHERE TestID IS NOT NULL;

SELECT \* FROM Test

Query 1.

SELECT \* FROM Person;

SELECT \* FROM Model;

SELECT \* FROM Toy;

SELECT \* FROM ProblemReportType;

SELECT \* FROM ProblemReport;

SELECT \* FROM Test;

Table

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Table

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Query 2

SELECT PR.ProblemReportID as ReportID, PR.ReportDate, PR.CompleteDate, PR.ProblemDescription,

p.LastName as ReporterLastName, p.FirstName as ReporterFirstName, t.ModelNumber, M.ModelName, PR.PricePaid

FROM ProblemReport PR

INNER JOIN Person P

ON PersonID = ReporterID

INNER JOIN Toy t

ON PR.SerialNumber = t.SerialNumber

INNER JOIN Model M

ON t.ModelNumber = m.ModelNumber

ORDER BY PR.ProblemReportID;

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Query 3

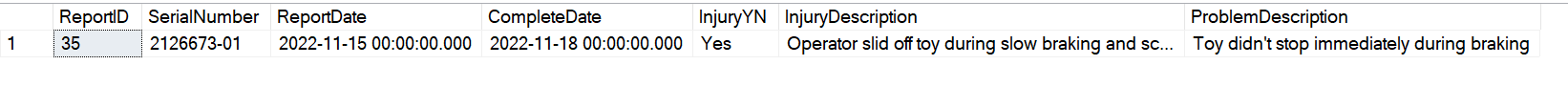
SELECT pr.ProblemReportID as ReportID, SerialNumber, ReportDate, CompleteDate, InjuryYN, InjuryDescription,

ProblemDescription

FROM ProblemReport pr

WHERE InjuryYN = 'Yes' and ProblemReportID NOT IN (SELECT ReportID FROM Test) and

CompleteDate IS NOT NULL;



Query 4

SELECT pr.ProblemReportID as ReportID, pr.SerialNumber, ReportDate, CompleteDate,

p.LastName as ReporterLastName, m.ModelName,

InjuryYN, InjuryDescription,

ProblemDescription

FROM ProblemReport pr

INNER JOIN Toy t

ON t.SerialNumber = pr.SerialNumber

INNER JOIN Model m

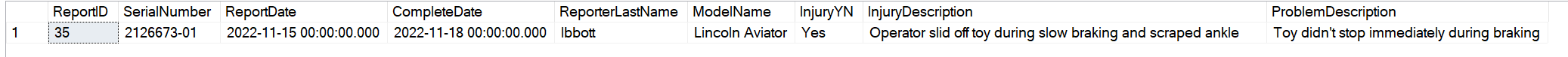
ON M.ModelNumber = t.ModelNumber

INNER JOIN Person p

ON P.personID = pr.ReporterID

WHERE InjuryYN = 'Yes' and ProblemReportID NOT IN (SELECT ReportID FROM Test) and

CompleteDate IS NOT NULL;



Query 5

SELECT prt.ProblemReportTypeID as ProblemTypeID, prt.TypeDescription, COUNT(ProblemReportID) as CountOfReports,

isnull(ic.CountofInjuryReports,0) as CountOfInjuryReports

FROM ProblemReportType prt

LEFT OUTER JOIN ProblemReport pr

ON prt.ProblemReportTypeID = pr.ProblemReportTypeID

LEFT OUTER JOIN InjuryCounts ic

ON ic.ProblemReportTypeID = pr.ProblemReportTypeID

GROUP BY prt.ProblemReportTypeID, prt.TypeDescription, ic.CountofInjuryReports

ORDER BY prt.ProblemReportTypeID;

CREATE VIEW InjuryCounts as

(SELECT COUNT(InjuryYN) as CountOfInjuryReports, ProblemReportTypeID

FROM ProblemReport

WHERE InjuryYN = 'yes'

GROUP BY ProblemReportTypeID);

Graphical user interface, text, application

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Query 6

SELECT CONVERT(VARCHAR,pr.ReportDate,107) as ReportDateOutput,

pr.ProblemReportID as ReportID, pr.SerialNumber as Serial#,

(p.LastName + ', ' + UPPER(LEFT(p.FirstName, 1))) as OwnerName,

isnull(CONVERT(VARCHAR, pr.CompleteDate, 107), 'Not Complete') as CompleteDate,

DATEDIFF(day,ReportDate, isnull(CompleteDate,GETDATE())) as DaysInSystem,

m.ModelNumber as Model#, m.ModelDescription,

(pt.LastName + ', ' + UPPER(LEFT(pt.FirstName, 1))) as TesterName,

CONVERT(VARCHAR, tt.TestDate, 107) as TestDate, tt.TestDescription, tt.TestComplete

FROM ProblemReport pr

INNER JOIN Toy t

ON t.SerialNumber = pr.SerialNumber

INNER JOIN Model m

ON m.ModelNumber = t.ModelNumber

LEFT OUTER JOIN Test tt

ON tt.ReportID = pr.ProblemReportID

INNER JOIN Person p

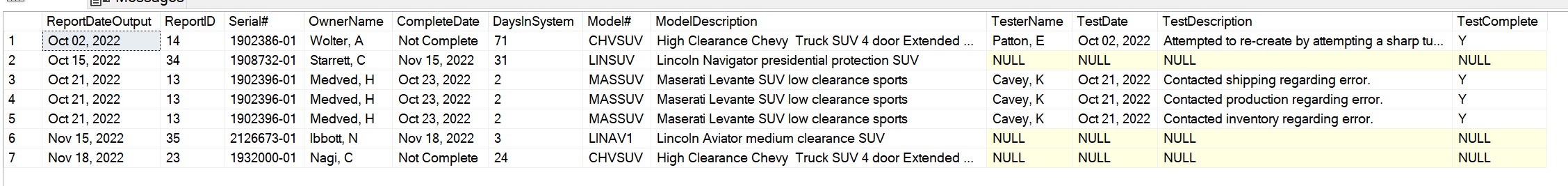
ON p.personID = t.OwnerID

LEFT OUTER JOIN Person pt

ON pt.PersonID = tt.testerID

WHERE ModelDescription LIKE '%SUV%'

ORDER BY ReportDate;



Query 7

SELECT m.ModelNumber, COUNT(ProblemReportID) as CountOfProblemReports

FROM ProblemReport pr

INNER JOIN Toy t

ON t.SerialNumber = pr.SerialNumber

INNER JOIN Model m

ON m.ModelNumber = t.ModelNumber

GROUP BY m.ModelNumber;

Table

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Query 8

CREATE VIEW MaximumProblem as

(SELECT m.ModelNumber, COUNT(ProblemReportID) as CountOfProblemReports

FROM ProblemReport pr

INNER JOIN Toy t

ON t.SerialNumber = pr.SerialNumber

INNER JOIN Model m

ON m.ModelNumber = t.ModelNumber

GROUP BY m.ModelNumber);

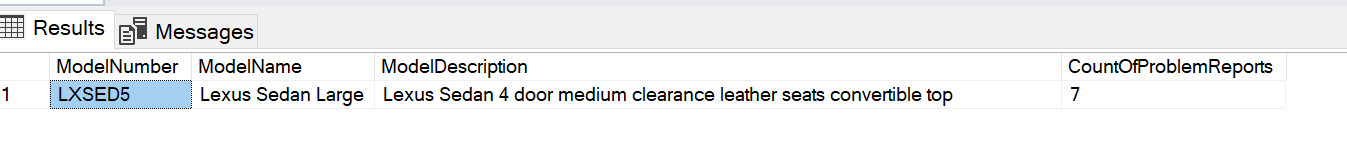
SELECT m.ModelNumber, ModelName, ModelDescription, CountOfProblemReports

FROM Model m

INNER JOIN MaximumProblem mp

ON mp.ModelNumber = m.ModelNumber

WHERE CountOfProblemReports = (SELECT MAX(CountOfProblemReports) FROM MaximumProblem);



Query 9

CREATE VIEW InjuryCountsbyModel as

(SELECT COUNT(InjuryYN) as CountOfInjuryReports, m.ModelNumber

FROM ProblemReport pr

INNER JOIN Toy t

ON t.SerialNumber = pr.SerialNumber

INNER JOIN Model m

ON m.ModelNumber = t.ModelNumber

WHERE InjuryYN = 'yes'

GROUP BY m.ModelNumber)

SELECT m.ModelNumber, m.ModelDescription, isnull(cp.CountOfReports,0) as CountOfReports,

isnull(icm.CountOfInjuryReports, 0) as CountOfInjuryReports,

isnull(CONVERT(VARCHAR, MAX(ReportDate), 107), 'n/a') as MostRecentReportDate,

isnull(CONVERT(VARCHAR, MIN(ReportDate), 107), 'n/a') as EarliestReportDate,

COUNT(tt.TestID) as CountOfTests,

isnull(CONVERT(VARCHAR, MAX(TestDate), 107), 'n/a') as MostRecentTestDate,

isnull(CONVERT(VARCHAR, MIN(TestDate), 107), 'n/a') as EarliestTestDate

FROM ProblemReport pr

LEFT OUTER JOIN Toy t

ON t.SerialNumber = pr.SerialnUmber

RIGHT OUTER JOIN Model m

ON m.ModelNumber = t.ModelNumber

LEFT OUTER JOIN InjuryCountsbyModel icm

ON icm.ModelNumber = t.ModelNumber

LEFT OUTER JOIN Test tt

ON tt.ReportID = pr.ProblemReportID

LEFT OUTER JOIN CountsofReports cp

ON cp.ModelNumber = m.ModelNumber

GROUP BY m.ModelNumber, m.ModelDescription, icm.CountOfInjuryReports, cp.CountOfReports

ORDER BY m.ModelNumber;

CREATE VIEW CountsofReports as

(SELECT COUNT(Pr.ProblemReportID) as CountOfReports, m.ModelNumber

FROM ProblemReport pr

INNER JOIN Toy tt

ON tt.SerialNumber = pr.SerialNumber

INNER JOIN Model m

ON m.ModelNumber = tt.ModelNumber

Group by m.ModelNumber);

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