1. COMPULSORY STUDENT DECLARATION DETAILS: ASSIGNMENT 1 INFO20003

Plagiarism

Plagiarism is the act of representing as one's own original work the creative works of another, without appropriate acknowledgment of the author or source.

Collusion

Collusion is the presentation by a student of an assignment as his or her own which is in fact the result in whole or in part of unauthorised collaboration with another person or persons. Collusion involves the cooperation of two or more students in plagiarism or other forms of academic misconduct.

Both collusion and plagiarism can occur in group work. For examples of plagiarism, collusion and academic misconduct in group work please see the University's policy on Academic Honesty and Plagiarism: https://academichonesty.unimelb.edu.au

Plagiarism and collusion constitute cheating. Disciplinary action will be taken against students who engage in plagiarism and collusion as outlined in University policy. Proven involvement in plagiarism or collusion may be recorded on my academic file in accordance with Statute 13.1.18.

STUDENT DECLARATION

Please tick to indicate that you understand the following statements:

I declare that:

- ☑ This assignment is my own original work, except where I have appropriately cited the original source (Appropriate citation of original work will vary from discipline to discipline).
- ☑ This assignment has not previously been submitted for assessment in this or any other subject.

For the purposes of assessment, I give the assessor of this assignment the permission to:

- ☑ Reproduce this assignment and provide a copy to another member of staff; and
- ☑ Take steps to authenticate the assignment, including communicating a copy of this assignment to a checking service (which may retain a copy of the assignment on its database for future plagiarism checking).

Student signature Siyi Guo

Date 11/9/2017

EmissionData
- idEmissionData
- THC/100km
- CO/100km
- NOX/100km
- NMHC/100km
- PM/100km
- TotalEmissiion/100km

Indexes

VehicleModel
- idModel
- Model
- idDesign

Indexes

ChildSafety
- idSafetyReport
- Manufacturer-fitted Child Restraint Anchor
- Three-point seat belts for rwo 3 seats
- Airbag Cutoff Switch
- idShapeReward

Indexes

PedestrainSafety
- idPedestrain
- Head Impact
- Pelvis Impact
- Legs Impact
- Infrared Collision Alert
- idShapeReward

Indexes

EmissionCertified
- idEmissionCertificate
- LightRewarded
- Emission Surcharge
- GovernmentRecommands
- THC level
- NOx level
- CO level
- idEmissionData
- CertifiedFrom
- CertifiedUntil
- ReasonForHaveThisReport
- ReportComment
- QRTestingDocument

Indexes

Design
- idDesign
- Make_ManufacturerID
- SeatingCapactiy
- FuelTankCapacity
- FuelEconomy 100/km
- MadeInCountry
- idEmissionCertificate
- idSafetyReport
- DesignStarDate
- DesignEndDate
- DesignReason

Indexes

SafetyReport
- idSafetyReport
- ChangeReason
- ExpireDate
- ExpireAddBufferDate
- ReportComment
- idShapeReward
- PedestrainSafety
- SafetyAssis
- AdultSafety
- ChildSafety

Indexes

ShapeReward
- idShapeReward
- Shape
- Color
- CorrespondingSafetyLevel
- Category

Indexes

SafetyAssist
- idAssist
- Seatbelt Warning Lignt(Timed/persistent)
- Grade 2 First Aid Kit
- Headligh and Taillight Laamp failure alert
- Wombat roll test results
- SafetyAssist/Anti Brake Skidding
- Speed Assist/Cruise Control
- Hill Assisit
- idShapeReward

Indexes

CertificateData (o) =

CertifiedFrom
- idEmissionReport
- From

Indexes

CertifiedUntil
- idEmissionReport
- Until

Indexes

Manufacturer
- idManufacturer
- Website

Indexes

AdultSafety
- idAdult
- idShapeReward
- LateralCrashProtection
- FrontalCrashProtection

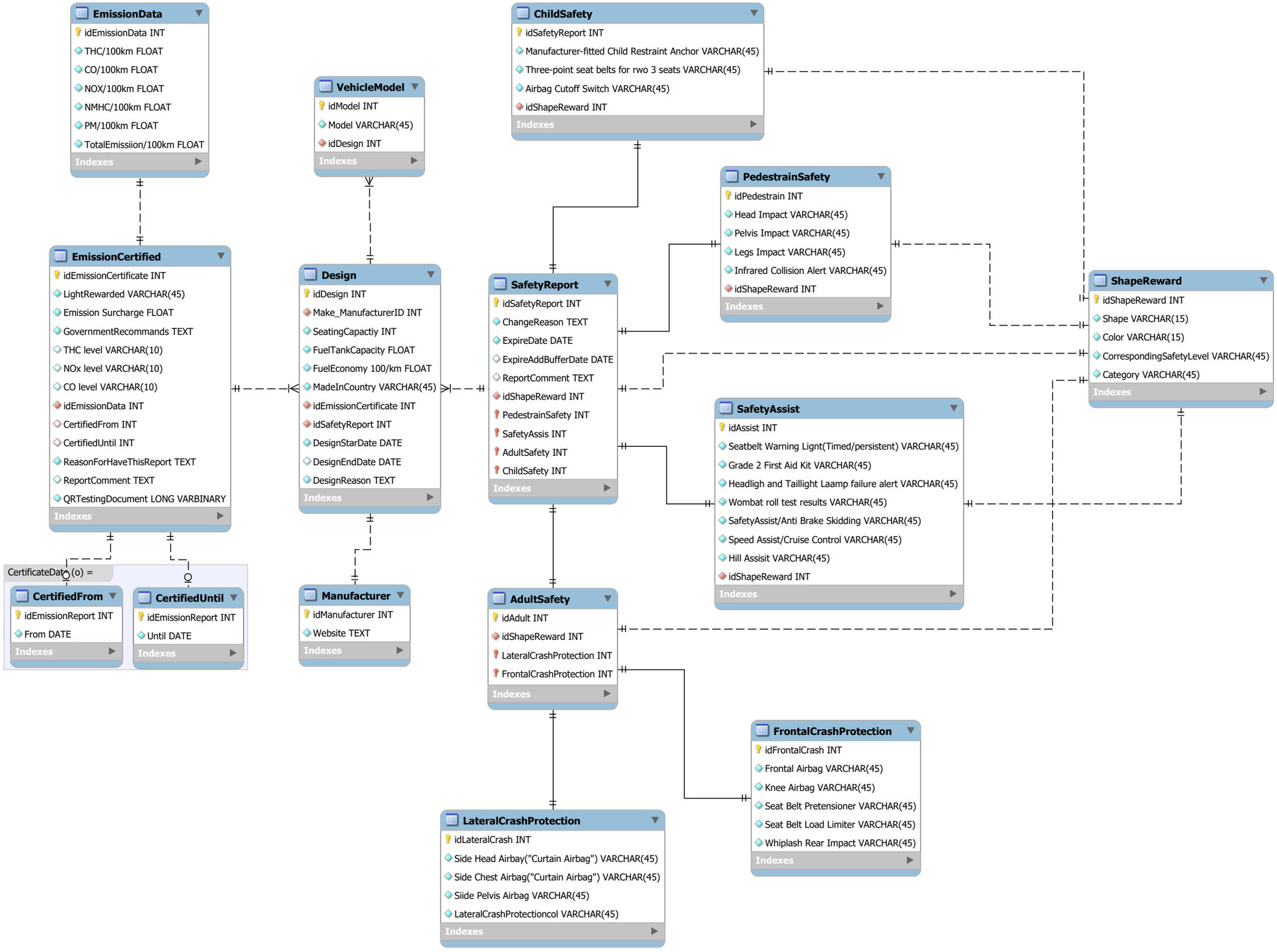
Indexes

FrontalCrashProtection
- idFrontalCrash
- Frontal Airbag
- Knee Airbag
- Seat Belt Pretensioner
- Seat Belt Load Limiter
- Whiplash Rear Impact

Indexes

LateralCrashProtection
- idLateralCrash
- Side Head Airbay("Curtain Airbag")
- Side Chest Airbag("Curtain Airbag")
- Siide Pelvis Airbag
- LateralCrashProtectioncol

Indexes


EmissionData
idEmissionData INT
THC/100km FLOAT
CO/100km FLOAT
NOX/100km FLOAT
NMHC/100km FLOAT
PM/100km FLOAT
TotalEmissiion/100km FLOAT
Indexes
VehicleModel
idModel INT
Model VARCHAR(45)
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ChildSafety
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Manufacturer-fitted Child Restraint Anchor VARCHAR(45)
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LightRewarded VARCHAR(45)
Emission Surcharge FLOAT
GovernmentRecommands TEXT
THC level VARCHAR(10)
NOx level VARCHAR(10)
CO level VARCHAR(10)
idEmissionData INT
CertifiedFrom INT
CertifiedUntil INT
ReasonForHaveThisReport TEXT
ReportComment TEXT
QRTestingDocument LONG VARBINARY
Indexes
Design
idDesign INT
Make_ManufacturerID INT
SeatingCapactiy INT
FuelTankCapacity FLOAT
FuelEconomy 100/km FLOAT
MadeInCountry VARCHAR(45)
idEmissionCertificate INT
idSafetyReport INT
DesignStarDate DATE
DesignEndDate DATE
DesignReason TEXT
Indexes
SafetyReport
idSafetyReport INT
ChangeReason TEXT
ExpireDate DATE
ExpireAddBufferDate DATE
ReportComment TEXT
idShapeReward INT
PedestrainSafety INT
SafetyAssis INT
AdultSafety INT
ChildSafety INT
Indexes
ShapeReward
idShapeReward INT
Shape VARCHAR(15)
Color VARCHAR(15)
CorrespondingSafetyLevel VARCHAR(45)
Category VARCHAR(45)
Indexes
SafetyAssist
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idShapeReward INT
Indexes
CertificateDat (o) =
CertifiedFrom
idEmissionReport INT
From DATE
Indexes
CertifiedUntil
idEmissionReport INT
Until DATE
Indexes
Manufacturer
idManufacturer INT
Website TEXT
Indexes
AdultSafety
idAdult INT
idShapeReward INT
LateralCrashProtection INT
FrontalCrashProtection INT
Indexes
FrontalCrashProtection
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Frontal Airbag VARCHAR(45)
Knee Airbag VARCHAR(45)
Seat Belt Pretensioner VARCHAR(45)
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LateralCrashProtection
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Siide Pelvis Airbag VARCHAR(45)
LateralCrashProtectioncol VARCHAR(45)
Indexes

Total Assumption

- Each car model can have many design, but they share a model name.
- Only finished design is stored in data base
- When a design for a model has changed, all emission and safety should be reassessed.
- But when a emission/safety report change, it may not change design.
- Advertising will be generated based on the data in this database, but not directly.
- We assume we know the emission standards from government. Therefor there is no need to store legislation detail in the database, so as safety standard.

Design Assumption

- Manufacturer is a strong entity because it can exist by itself. Even when a design's model can change, this manufacturer may still produce for other model.
- We assume when make in country change, this may also affect the design because of the possible change in production process.
- We must have reasons for changing design.

Emission Assumption

- A design for a car can have many emission report due to the possible change in emission standards, as well as change in manufacturer.
- Government recommends is cleared.
- If we know the data for 100km and tank capacity, we can calculate and generate the data for the whole fuel tank
- We must have reasons for do this emission test.
- A QR code is less than 256kb. So it can be stores in Long Varbinary

Safety Assumption

- Safety standards has a expire time
- All categories are weak entity as they must exist with the safety report
- A design may also have different safety Report due to the possible change in safety standards, or just expire
- Safety Standard's category is a strong entity because this standards and shape is regulated by the legislation, so it can exist by itself
- We must have reasons for generating the safety report.

- Since there is no rank, level for the individual item under each category, we store it as varchar(45) for maximum convenience