Data Mgt & Database Design
INFO 6210 Autumn Full 2019
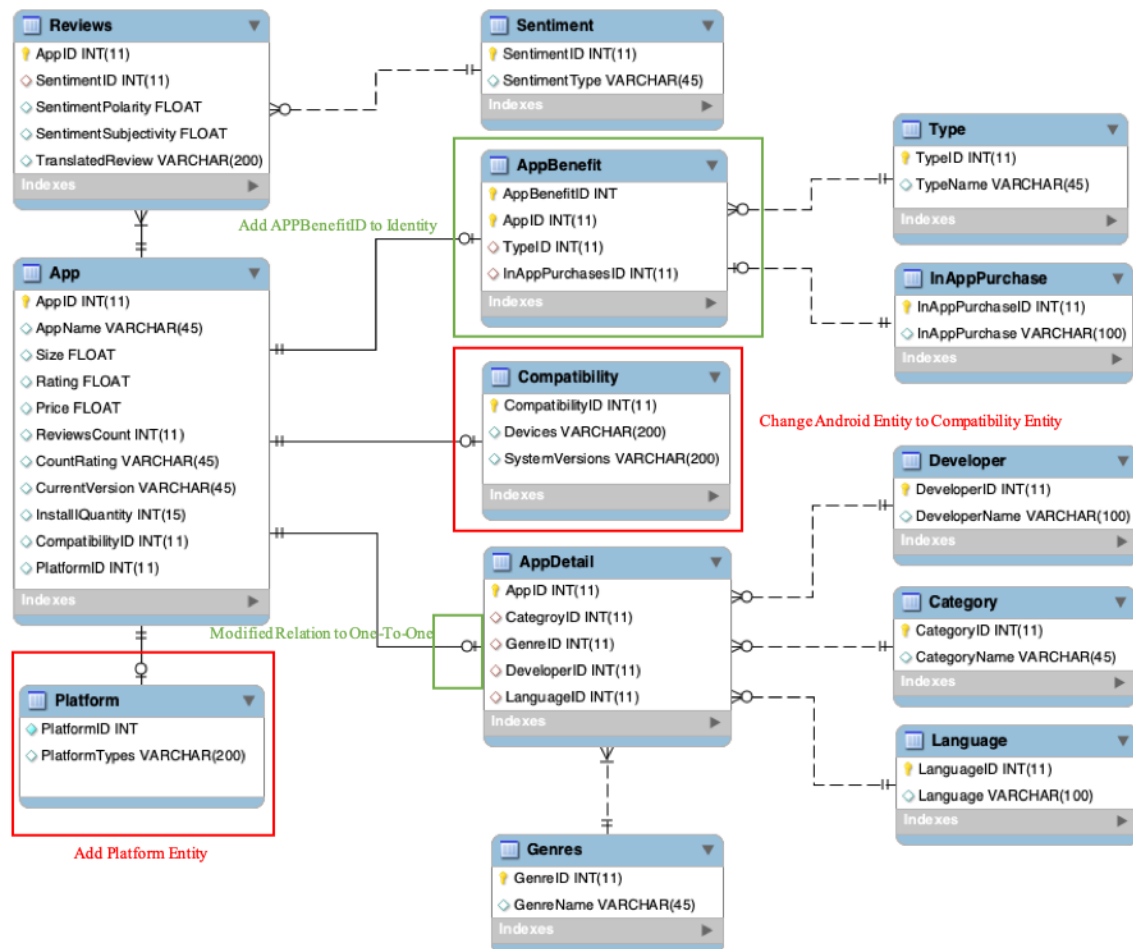## Final ERD

1. ERD Improvement

1) Firstly, we combined the **InstallQuantity** Entity with our **App** Entity. As the install quantity value is an attribute of the **App** Entity, which indicates who many times did this app downloaded by users.

2) Secondly, we created a new attribute named BenefitID in **AppBenefit** Entity, which have one-to-one relationship to **App** Entity. Each **App** Entity had one BenefitID, we used both BenefitID and AppID as PK to identify the benefit state.

3) Thirdly, we selected wrong connection in our initial ERD between the **AppDetail** and **App** Entity. We changed it right away as the connection between them must be one-to-one relation instead of one-to-many relation.

4) Fourthly, we wanted to highlight that the **UserReviews** Entity was not defined as users, which only indicated the review times for each App. So, we changed the **UserReviews** Entity into the **Reviews** Entity.

5) On the other hand, we created a new Entity named **Platform**, which indicated whether an App can be used via different platform such as mobile phone, pad or PC. The **Platform** Entity had one-to-one relationship with **App** Entity, as for each App, it would have its proper combination of the platform.

6) Finally, we also created a one-to-one relationship Entity named **Compatibility** with **App** Entity, which contained Devices and System Version parameters to show whether an App is suitable for different version type.

2. Changes to initial ERD

3. Final ERD

Reviews
- AppID INT(11)
- SentimentID INT(11)
- SentimentPolarity FLOAT
- SentimentSubjectivity FLOAT
- TranslatedReview VARCHAR(200)
- Indexes

Sentiment
- SentimentID INT(11)
- SentimentType VARCHAR(45)
- Indexes

Type
- TypeID INT(11)
- TypeName VARCHAR(45)
- Indexes

App
- AppID INT(11)
- AppName VARCHAR(45)
- Size FLOAT
- Rating FLOAT
- Price FLOAT
- ReviewsCount INT(11)
- CountRating VARCHAR(45)
- CurrentVersion VARCHAR(45)
- InstallQuantity INT(15)
- CompatibilityID INT(11)
- PlatformID INT(11)
- Indexes

AppBenefit
- AppBenefitID INT
- AppID INT(11)
- TypeID INT(11)
- InAppPurchasesID INT(11)
- Indexes

InAppPurchase
- InAppPurchaseID INT(11)
- InAppPurchase VARCHAR(100)
- Indexes

Compatibility
- CompatibilityID INT(11)
- Devices VARCHAR(200)
- SystemVersions VARCHAR(200)
- Indexes

Developer
- DeveloperID INT(11)
- DeveloperName VARCHAR(100)
- Indexes

AppDetail
- AppID INT(11)
- CategroyID INT(11)
- GenreID INT(11)
- DeveloperID INT(11)
- LanguageID INT(11)
- Indexes

Category
- CategoryID INT(11)
- CategoryName VARCHAR(45)
- Indexes

Platform
- PlatformID INT
- PlatformTypes VARCHAR(200)

Language
- LanguageID INT(11)
- Language VARCHAR(100)
- Indexes

Genres
- GenreID INT(11)
- GenreName VARCHAR(45)
- Indexes