Media Streaming Service 🎞️

Let's Define every part ---> 🎬

1. Requirements Analysis
2. EER Diagrams
3. UML Diagrams

Requirements Analysis 🎯

Main entities & Their attribute & DataType :

- **UserProfiles**
    - *UserID* (*Primary key*) *:UUID*
    - *UserName :String*
    - *Password :String*
- **SubscriptionDetails**
    - *SubscriptionID* (*Primary key*) *:UUID*
    - *UserID* (*Foreign key*) *:UUID*
    - *StartSubscriptionDate :Date*
    - *EndSubscriptionDate :Date*
    - *SubscriptionTier :String*
- **PaymentHistories**
    - *PaymentID* (*Primary key*) *:UUID*
    - *UserID* (*Foreign key*) *:UUID*
    - _SubscriptionID (*Foreign key*) *:UUID*
    - *TransactionDetails :String*
- **WatchLaterList**
    - *WatchLaterListID* (*Primary Key*) *:UUID*
    - *UserID* (*Foreign key*) *:UUID*
    - MediaAssets_ (*Foreign key*) *:UUID*
- **MediaAssets**
    - *MediaAssetsID*(*Primary Key*) *:UUID*
    - *ProductionCompanyID*(*Foreign Key*) *:UUID*
    - *StorageLocationID* (*Foreign key*) *:UUID*
    - *Genre :String*
    - *Title :String*
    - *ProductionYear :Integer*
    - *AverageRatingScore :Double*
    - *Director :String*

- *TypeMoviesORSeries :String*
- *ActorsList :Array*
- *ProducersList :Array*

- **Movies**
  - *MovieID*(*Primary Key*) *:UUID*

- **Series**
  - *SeriesID*(*Primary Key*) *:UUID*

- **ProductionCompany**
  - *ProductionCompanyID* (*Primary Key*)*:UUID*
  - *Name :String*
  - *YearOfEstablishment :Integer*
  - *ContactInformation :String*

- **Comment**
  - *CommentID* (*Primary Key*) *:UUID*
  - *UserID* (*Foreign key*) *:UUID*
  - *MediaAssetsID* (*Foreign key*) *:UUID*
  - *CommentInformation :String*

- **Rating**
  - *RatingID* (*Primary Key*) *:UUID*
  - *UserID* (*Foreign key*) *:UUID*
  - *MediaAssetsID* (*Foreign key*) *:UUID*
  - *RatingScore :Double*

- **SeriesEpisode**
  - *EpisodeID* (*Primary Key*) *:UUID*
  - *SeriesID* (*Foreign key*) *:UUID*
  - *MediaAssetsID* (*Foreign key*) *:UUID*
  - *EpisodeNO :String*

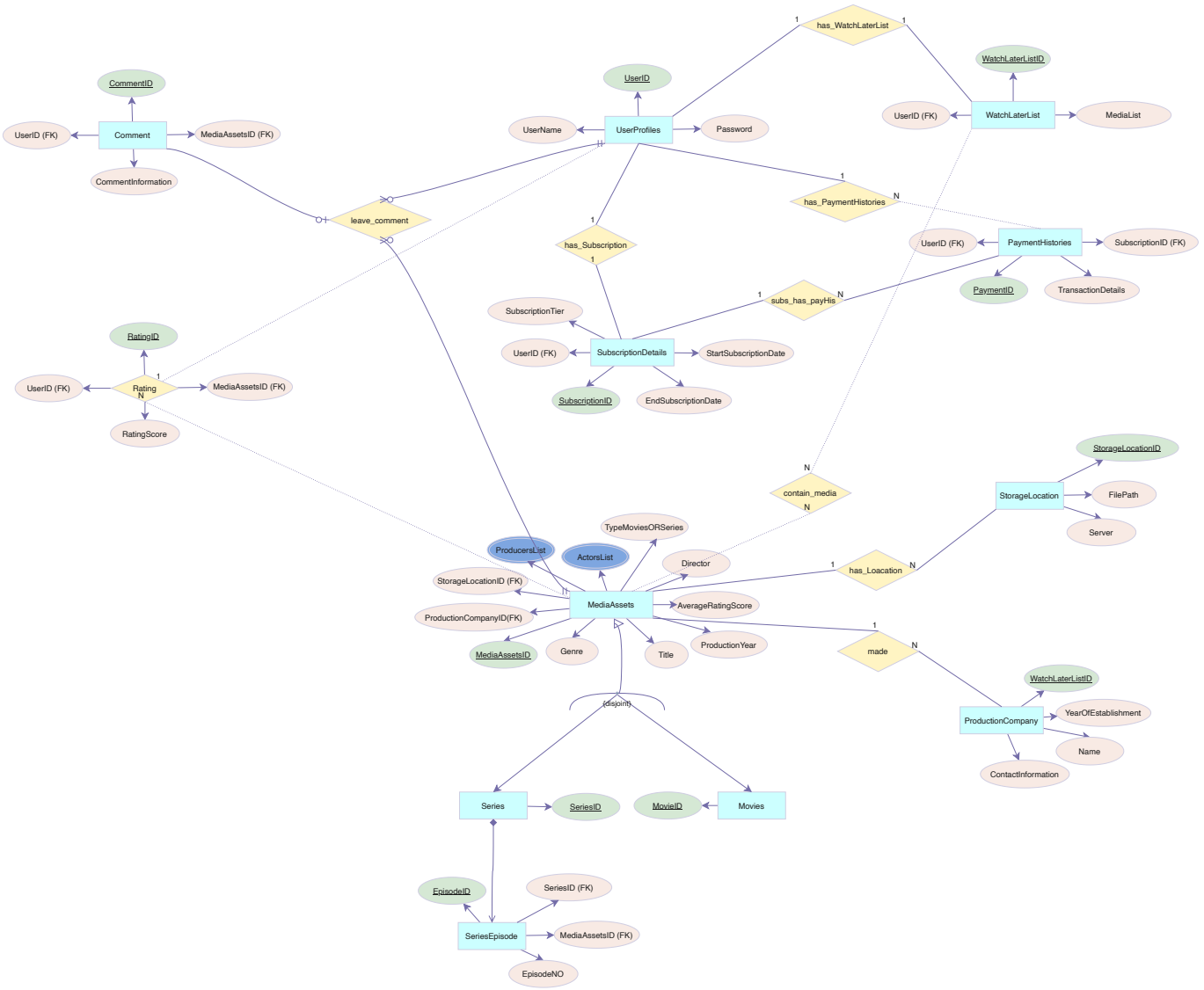
- **StorageLocation**
  - *StorageLocationID* (*Primary key*) *:UUID*
  - *Server :String*
  - *FilePath :String*

Description Of Their RelationsShip :

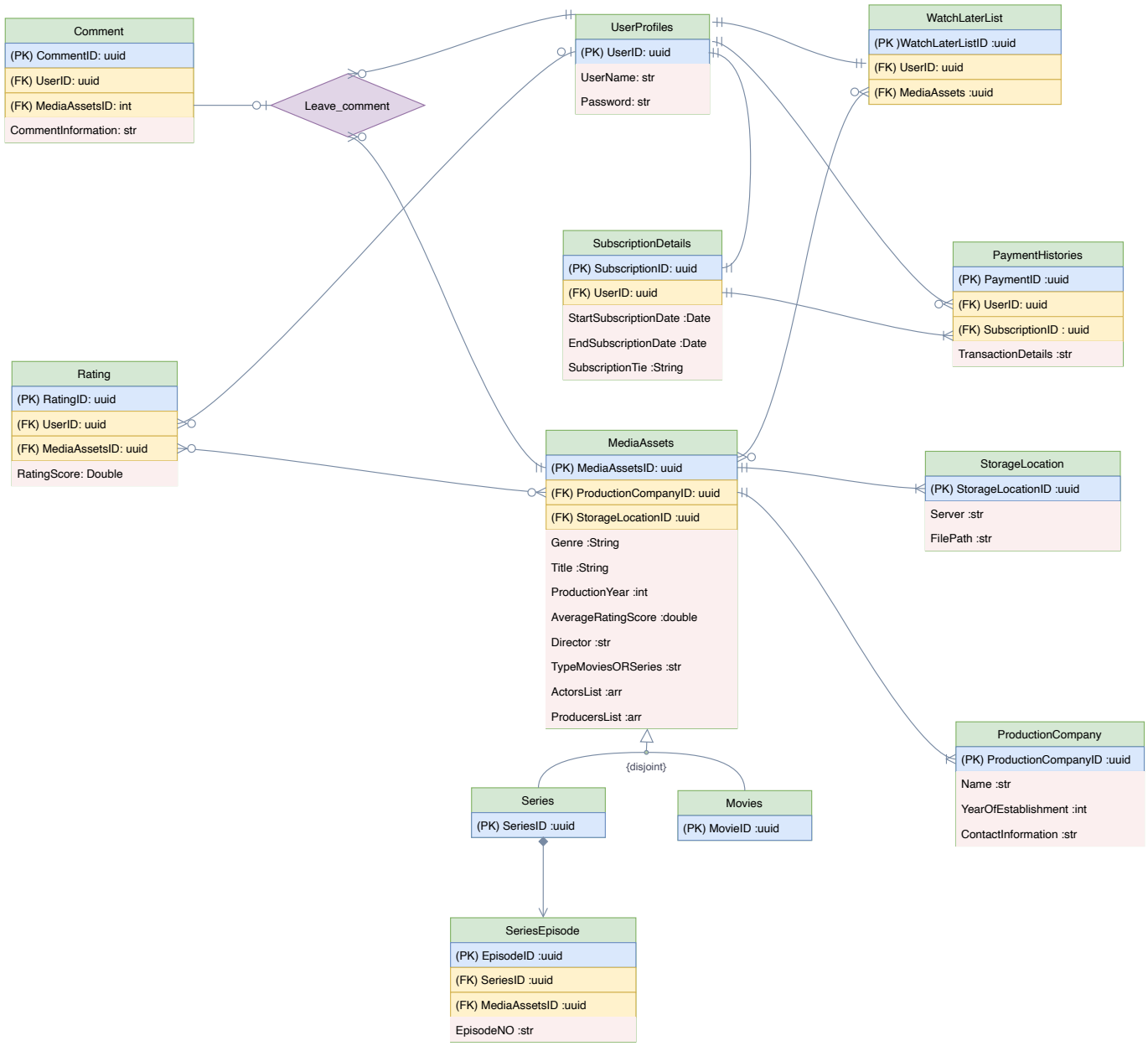
1. Each User has one Subscription Detail and Each Subscription Detail is available for one user (1..1:1..1)
2. Each User has Many Payment Histories and Payment History is available for one user (1..1:0..N)

3. Each Subscription Detail has Many Payment Histories and Each Payment History is have one Subscription Detail (1..1:1..N)
4. Each user has one WatchLaterList and Each WatchLater movies can selected by Each User(1..1:1..1)
5. Every Media in WatchLaterList contains many Media and Every Media can be in many WatchLaterList(0..N:0..M)
6. Each Media is made by one Production Company and Each Production Company can produce many Media(1..1:1..N)
7. Each Media has one Storage Location and one Storage Location can stored multiple Media items (1..1:1..N)
8. Movies and series are disjoint from MediaAssets ; Because MediaAssets should be one of them and can't be 2 of them simultaneously and also they are Generalization of MediaAssets too
9. I get ProducersList and ActorsList as compositions because they contain additional details like name and age, etc
10. This part is Ternary because Each User can leave many comments on MediaAssets (1..1:0..N) and Each Comment belongs to one MediaAsset and one User (1..1:0..N) and the end part as we said If users can leave multiple comments on the same MediaAsset the user-media relationship is many-to-many via comments (0..N:0..M)
11. Each User can rate many Medias and Each Media has only one Rating from Each User (0..1:0..N) And as in Chapter 4 (I mean "Entity versus Attribute") in this part I have treated Rating as an Attribute instead Entity
12. SeriesEpisode is Composition from series and Each Series have multiple episodes (1..1:1..N)

EER Diagrams 🎨



UML Diagrams 🎨


Comment
(PK) CommentID: uuid
(FK) UserID: uuid
(FK) MediaAssetsID: int
CommentInformation: str
Leave_comment
UserProfiles
(PK) UserID: uuid
UserName: str
Password: str
WatchLaterList
(PK)WatchLaterListID :uuid
(FK) UserID: uuid
(FK) MediaAssets :uuid
SubscriptionDetails
(PK) SubscriptionID: uuid
(FK) UserID: uuid
StartSubscriptionDate :Date
EndSubscriptionDate :Date
SubscriptionTie :String
PaymentHistories
(PK) PaymentID :uuid
(FK) UserID: uuid
(FK) SubscriptionID : uuid
TransactionDetails :str
Rating
(PK) RatingID: uuid
(FK) UserID: uuid
(FK) MediaAssetsID: uuid
RatingScore: Double
MediaAssets
(PK) MediaAssetsID: uuid
(FK) ProductionCompanyID: uuid
(FK) StorageLocationID :uuid
Genre :String
Title :String
ProductionYear :int
AverageRatingScore :double
Director :str
TypeMoviesORSeries :str
ActorsList :arr
ProducersList :arr
StorageLocation
(PK) StorageLocationID :uuid
Server :str
FilePath :str
{disjoint}
Series
(PK) SeriesID :uuid
Movies
(PK) MovieID :uuid
ProductionCompany
(PK) ProductionCompanyID :uuid
Name :str
YearOfEstablishment :int
ContactInformation :str
SeriesEpisode
(PK) EpisodeID :uuid
(FK) SeriesID :uuid
(FK) MediaAssetsID :uuid
EpisodeNO :str