HW02 Physical Data Model and Social Media

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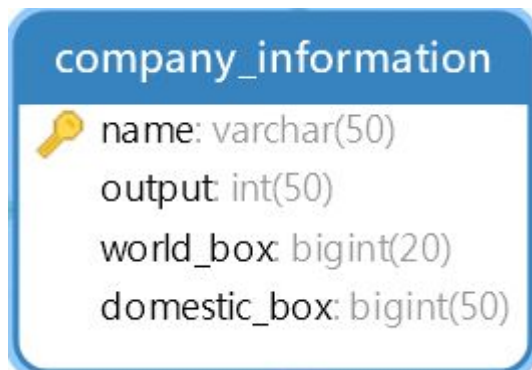
Part 1

Conceptual Model:

Company_twitter:

Company_information:

Company_youtube:

actor_youtube_information:

actor_youtube_information

🔑 AYID: int(11)
◇ actorname_in_youtube: varchar(500)
   video_title: varchar(500)
   video_desription: varchar(500)
   posttime: datetime(0)

actor_twitter_information:

actor_twitter_information

🔑 ATID: int(11)
◇ actorname: varchar(50)
   movie_acted: varchar(50)
   followers: bigint(20)
   post: varchar(500)
   posttime: datetime(0)
   retweets: bigint(20)

actor:

actor

🔑 name: varchar(50)
   birthdate: date
   nationality: varchar(50)
◇ movie_name: varchar(50)

film :

film

- 🔑 name: varchar(50)
- release_year: int(11)
- rating: decimal(2, 1)
- certificate: varchar(50)
- director: varchar(50)
- genre: varchar(100)
- star: varchar(100)
- ◇ release_company: varchar(50)

consumers :

consumers

- 🔑 postID: int(11)
- consumer: varchar(500)
- ◇ movie_name: varchar(500)
- user_id: bigint(20)
- followers: bigint(20)
- post: varchar(500)
- post_time: datetime(0)
- Hashtag: varchar(500)
- favourites: int(11)

ER-diagrams :
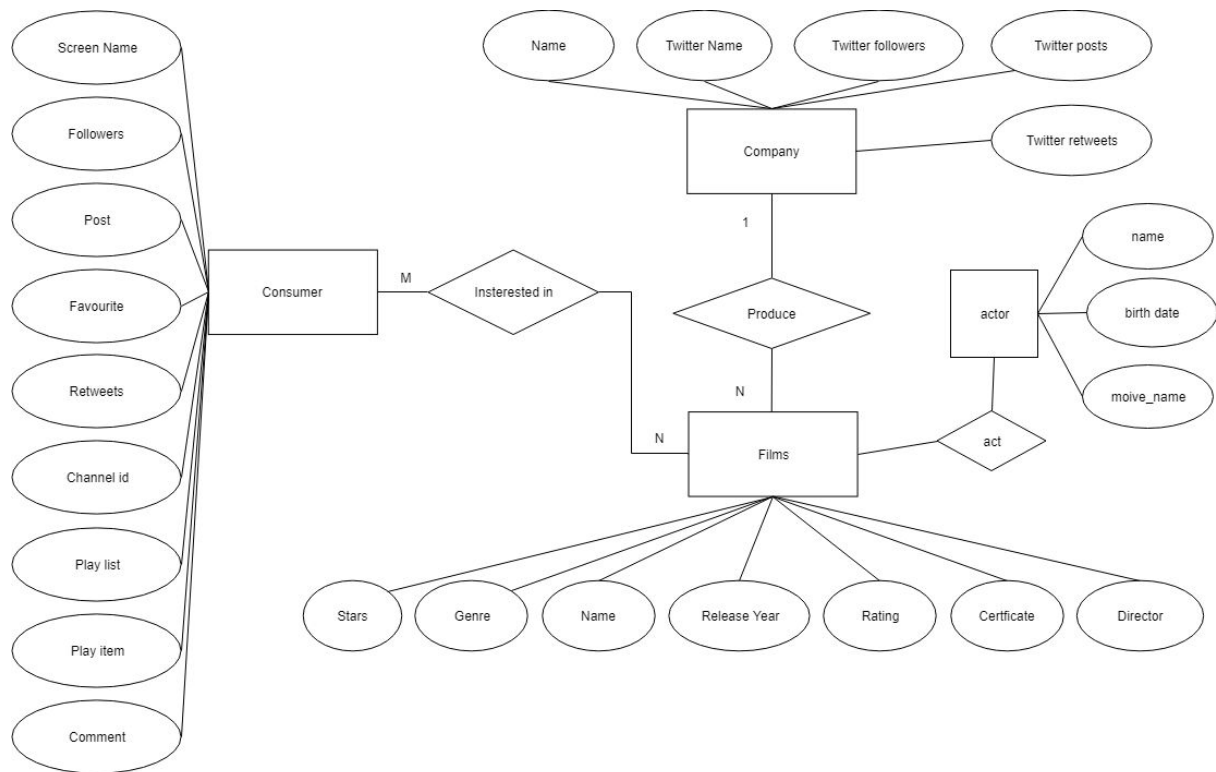
Questions:

1.What are the ranges, data types and format of all of the attributes in your entities?
Entites actor:

actor

	Field	Type	Extra
P	name	varchar(50)	
	birthdate	date	
	nationality	varchar(50)	
	movie_name	varchar(50)	

Index	Fields	Extra
movie_name	movie_name	

Entities actor_twiter_information:

actor_twitter_information

	Field	Type	Extra
P	ATID	int(11)	Auto Increment
	actorname	varchar(50)	
	movie_acted	varchar(50)	
	followers	bigint(20)	
	post	varchar(500)	
	posttime	datetime	
	retweets	bigint(20)	

Index	Fields	Extra
actorname	actorname	

Entities actor_youtube_information :

actor_youtube_information

	Field	Type	Extra
P	AYID	int(11)	Auto Increment
	actorname_in_youtube	varchar(500)	
	video_title	varchar(500)	
	video_desription	varchar(500)	
	posttime	datetime	

Index	Fields	Extra
actorname	actorname_in_youtube	

Entities company_information:

company_information

	Field	Type	Extra
P	name	varchar(50)	
	output	int(50)	
	world_box	bigint(20)	
	domestic_box	bigint(50)	

Entities company_twitter:

company_twitter

	Field	Type	Extra
P	CTID	int(11)	Auto Increment
	company_name	varchar(50)	
	screen_name	varchar(50)	
	post	varchar(500)	
	followers	int(11)	
	post_time	datetime	
	favortie	int(11)	
	retweets	int(11)	

Entity company_youtube:

	Field	Type	Extra
company_youtube			
	Field	Type	Extra
P	CYID	int(11)	Auto Increment
	channel_id	varchar(500)	
	company_name	varchar(255)	Allow Null
	chanenl_title	varchar(50)	
	playist_title	varchar(100)	
	post_time	datetime	

Entity consumers:

	Field	Type	Extra
consumers			
	Field	Type	Extra
P	postID	int(11)	Auto Increment
	consumer	varchar(500)	
	movie_name	varchar(500)	
	user_id	bigint(20)	
	followers	bigint(20)	
	post	varchar(500)	
	post_time	datetime	
	Hashtag	varchar(500)	Allow Null
	favourites	int(11)	

Entity film:

	Field	Type	Extra
film			
	Field	Type	Extra
P	name	varchar(50)	
	release_year	int(11)	
	rating	decimal(2,1)	
	certificate	varchar(50)	
	director	varchar(50)	
	genre	varchar(100)	
	star	varchar(100)	
	release_company	varchar(50)	

2.Due to the information of actor has too many parts, we cannot use actor as a attribute.We choose to use actor as an entities. The same as film.

3.In our domain, entities and relationship are independent. Null of the entities can be used as relationship.

4.We choose film name and actor name as our key. Both of them are unique. In different entities, they are different key, some are foreign key, others are primary key.

5. We use 'ISA' design element among actor and their information on youtube and twitter,because the entity actor and actor twitter information enjoy one common attribute and the entity actor and actor youtube information also enjoy one same attribute 'actor_name'. On the other hand, we also use 'ISA' design element among company and their information on youtube and twitter, they all enjoy one same attribute ' company name'.

6.They are alternatives. In some situations, we can change the actor name from attributes to entities. Eg. The entity actor name can have attributes such as twitter screen name, youtube screen name.
7. We use two social account api such as twitter api and youtube api to populate my model. On the other hand, we use IMDB website to scrape movie data and other website to collect information about the actors and companies.

Part 2

1.Updated ER-diagram:
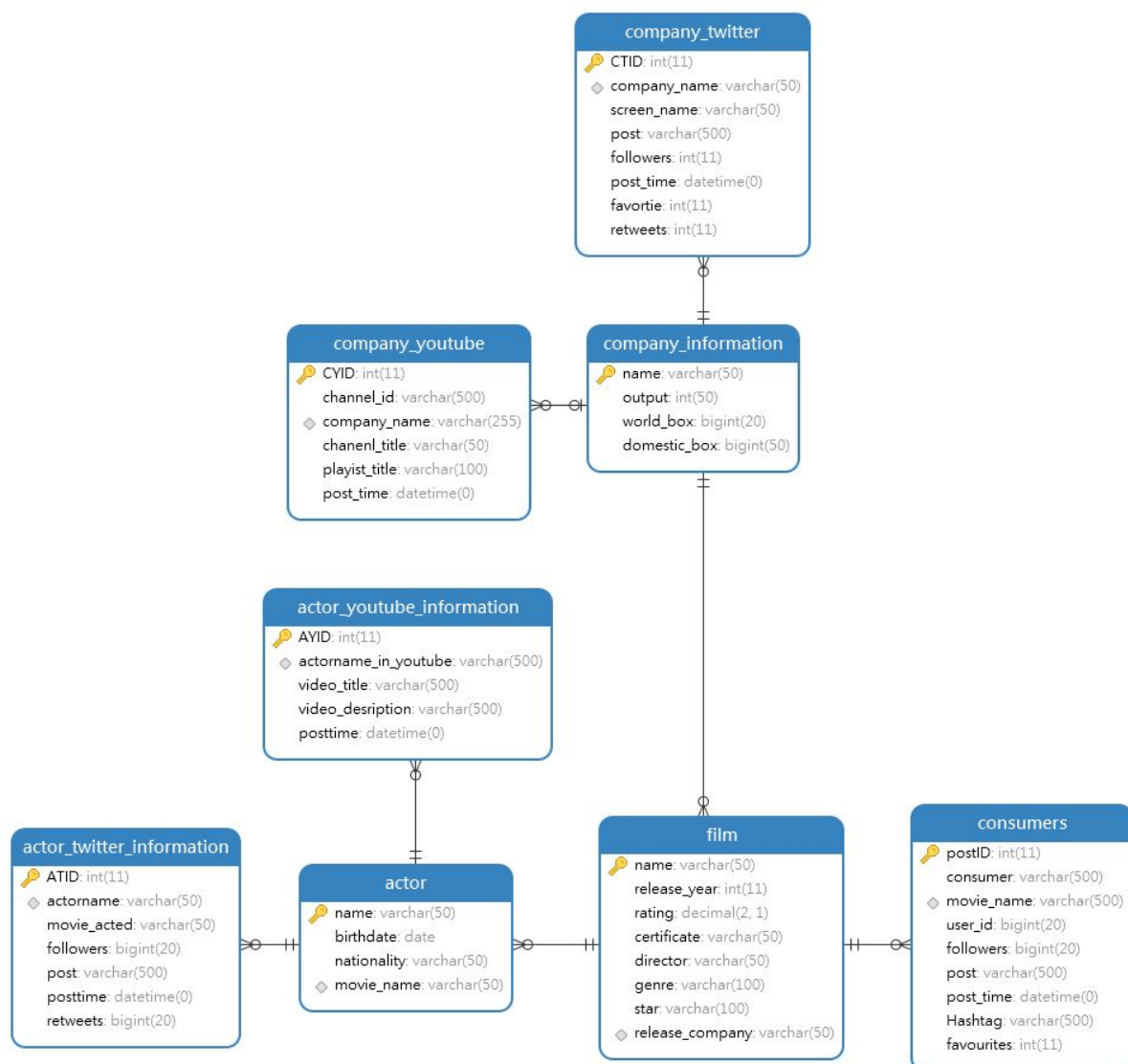
2. Other tasks of part 2 are all represented in the SQL file.