

CSDS 341 HW 1

1

| <i>CK</i> | <i>SK</i> | <i>K</i> | \rightarrow |
|-----------|-----------|----------|---------------|
| | | A | A |
| | | B | A,B |
| ✓ | ✓ | C | A,B,C,D,E |
| | | D | D |
| | | E | D,E |
| | | AB | A,B |
| | ✓ | AC | A,B,C,D,E |
| | | AD | A,D |
| | ✓ | AE | A,B,C,D,E |
| | ✓ | BD | A,B,C,D,E |
| | ✓ | BE | A,B,C,D,E |
| | | DE | D,E |
| | ✓ | ABD | A,B,C,D,E |
| | ✓ | ABE | A,B,C,D,E |
| | ✓ | BDE | A,B,C,D,E |

r

A table may only have one Primary Key, which will be a selection from (sometimes) multiple Candidate Keys.

2

a

i

MOVIE(id, title, ageRating, genreId, actors)

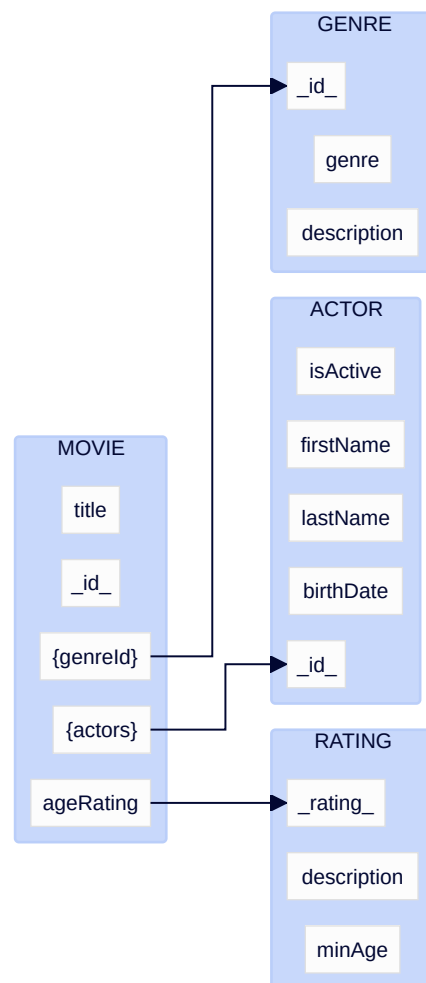
RATING(rating, description, minAge)

GENRE(id, genre, description)

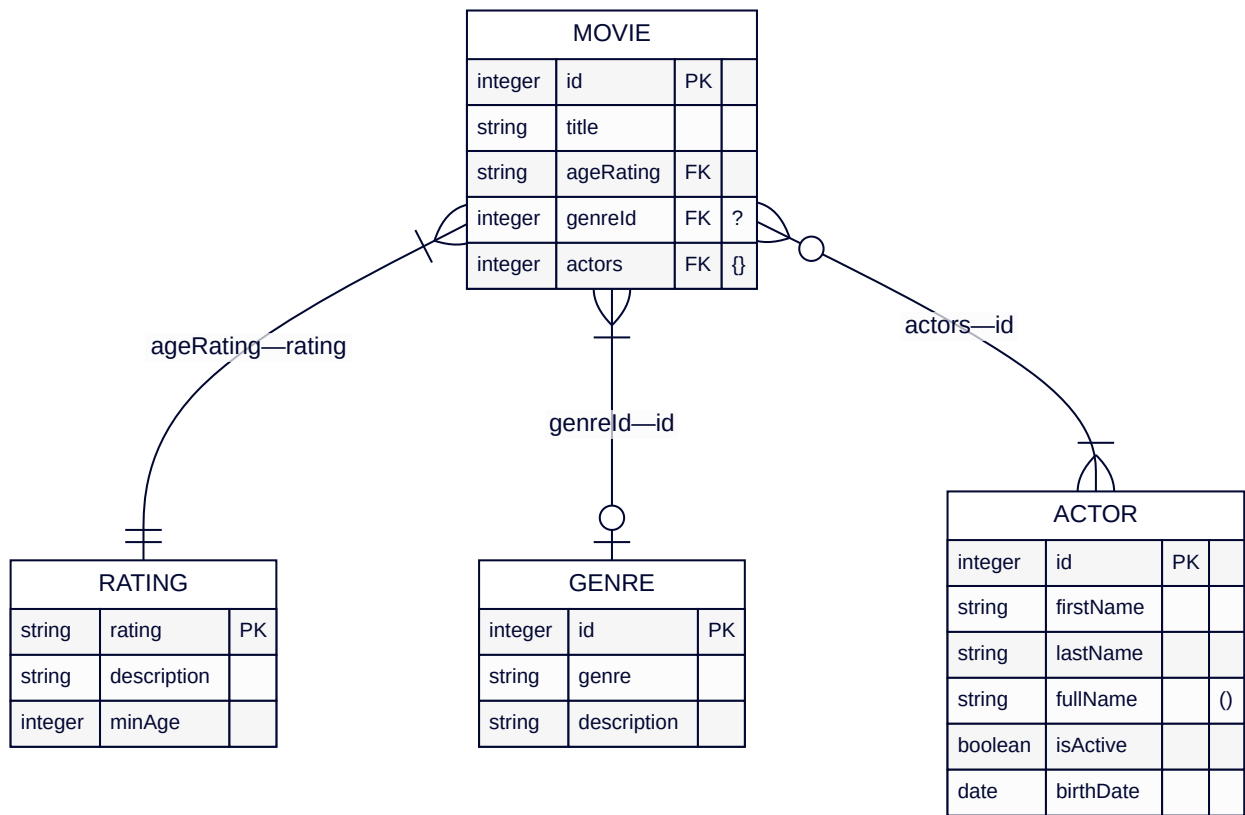
ACTOR(id, firstName, lastName, isActive, birthDate)

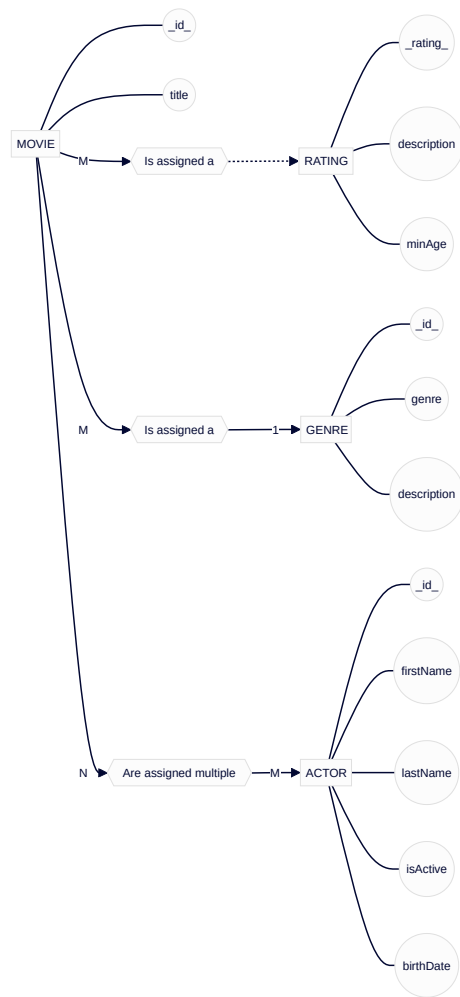
1. I've renamed a few of the attributes, especially the id's in order to have a more consistent and clear description of the model
2. I changed the type of status from string to boolean as there is only two possible values and no point of storing a string
3. I split the name attribute into first and last name as it would be useful for generating the checks for payment, with a derived field for fullName
4. I added an actors attribute to the movie table in order to connect actors to movies. This attribute does not need to exist on the actor table as that would be redundant

ii



iii





V

| MOVIES | | | | |
|--------|-------|-----------|---------|---------|
| id | title | ageRating | genreId | actors |
| 1 | Lost | G | 1 | [1,2,3] |
| 2 | Found | R | 2 | [2,4,5] |

| RATING | | |
|--------|-------------|--------|
| rating | description | minAge |
| G | General | 0 |
| R | Restricted | 18 |

| GENRE | | |
|-------|--------|-----------------|
| id | genre | description |
| 1 | rom | Romance |
| 2 | sci-fi | Science Fiction |

| ACTOR | | | | |
|-------|-----------|----------|----------|------------|
| id | firstName | lastName | isActive | birthDate |
| 1 | John | Doe | true | 1950-01-01 |

| ACTOR | | | | |
|-------|--------|------|-------|------------|
| 2 | Johnny | Dohe | true | 1953-03-01 |
| 3 | Jon | Do | true | 1959-02-01 |
| 4 | Jhon | Dhoe | false | 1955-08-01 |
| 5 | Joe | Dohn | true | 1952-04-01 |
| 6 | Joey | Doey | true | 1957-01-01 |

b

i

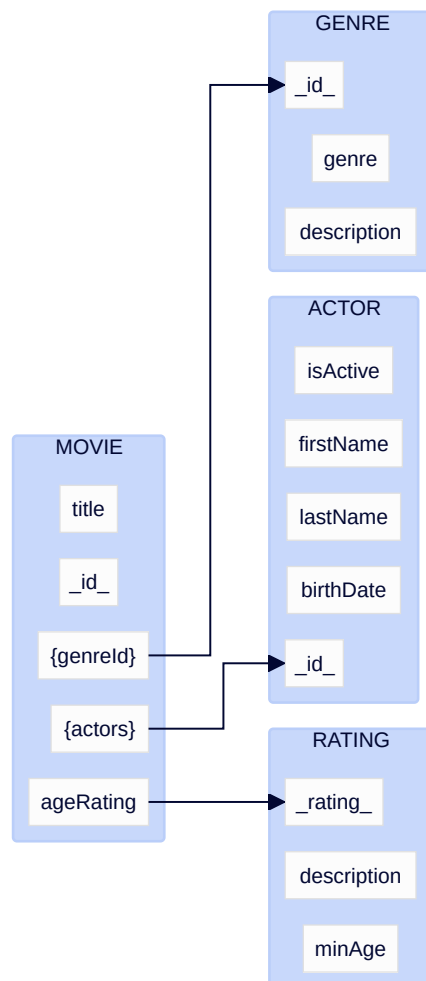
MOVIE(id, title, ageRating, genreId, actors)

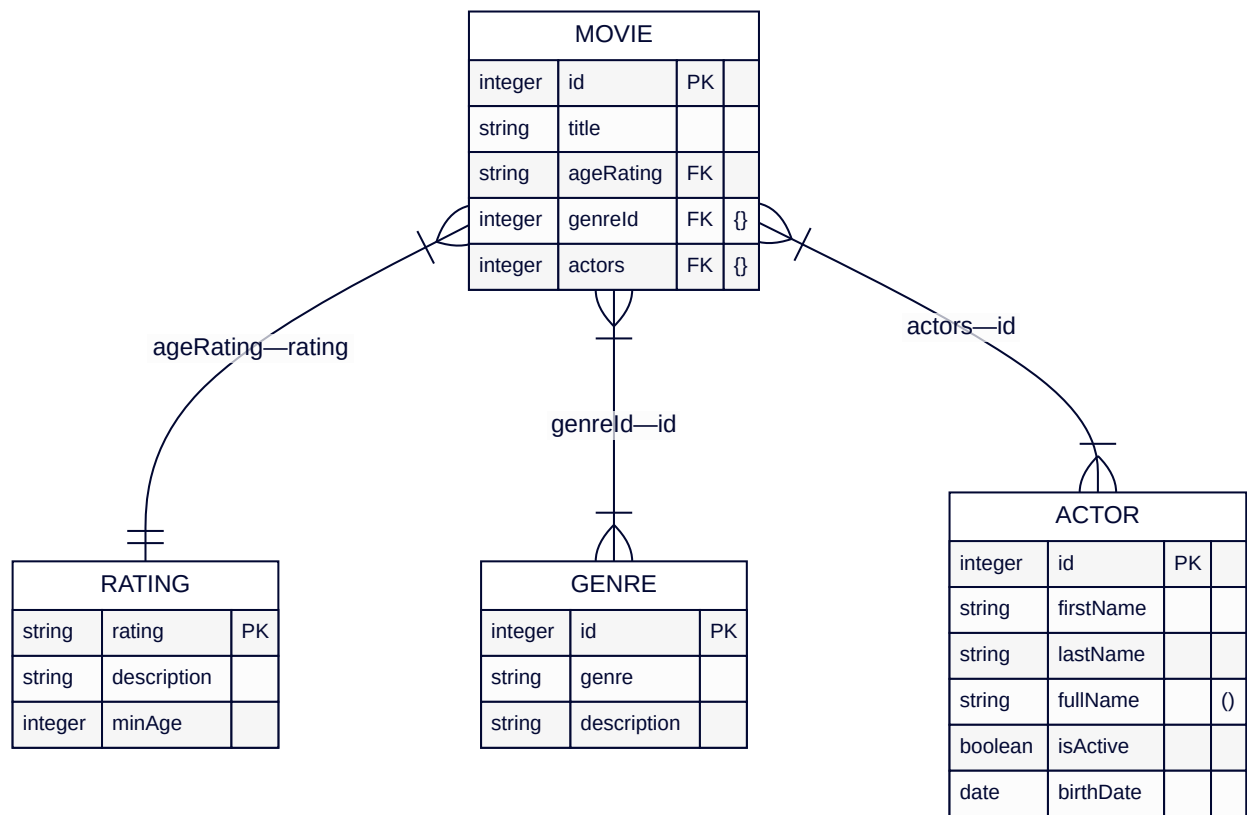
RATING(rating, description, minAge)

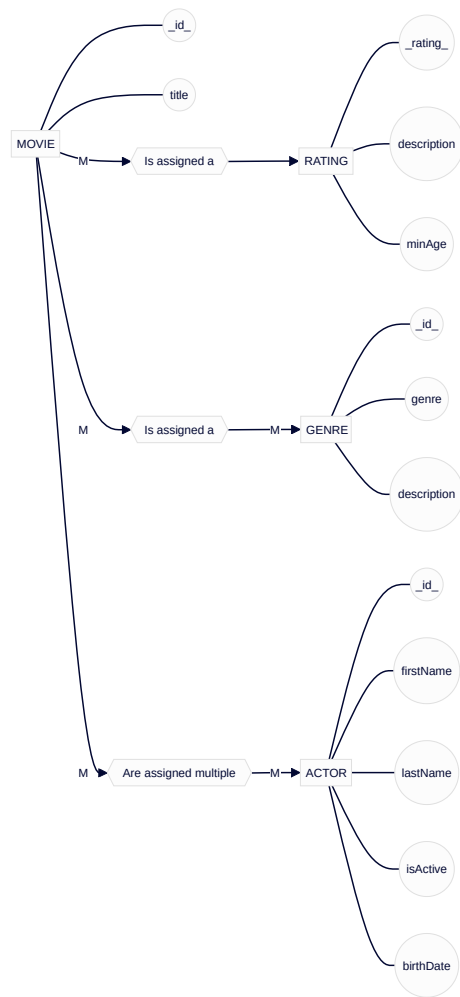
GENRE(id, genre, description)

ACTOR(id, firstName, lastName, isActive, birthDate)

ii







V

| MOVIES | | | | |
|--------|-------|-----------|---------|---------|
| id | title | ageRating | genreId | actors |
| 1 | Lost | G | [1,2] | [1,2,3] |
| 2 | Found | R | [2] | [2,4,5] |

| RATING | | |
|--------|-------------|--------|
| rating | description | minAge |
| G | General | 0 |
| R | Restricted | 18 |

| GENRE | | |
|-------|--------|-----------------|
| id | genre | description |
| 1 | rom | Romance |
| 2 | sci-fi | Science Fiction |

| ACTOR | | | | |
|-------|-----------|----------|----------|------------|
| id | firstName | lastName | isActive | birthDate |
| 1 | John | Doe | true | 1950-01-01 |

