**Универсальное отношение**:

Ru(actor\_surname, actor\_name, actor\_birth\_year, actor\_country, actor\_role director\_surname, director\_name, director\_birth\_year, director\_country, producer\_surname, producer\_name, producer\_birth\_year, producer\_country, screenwriter\_surname, screenwriter\_name, screenwriter\_birth\_year, screenwriter\_country, film\_name, release\_year, rating, film\_country, genre\_name, genre\_description, Oscar\_rewarding\_year, Oscar\_nomination, review\_name, review\_author, review\_autor\_mark, review\_text)

**Первичный ключ**: пусть нам нужна наиболее полная информация, тогда первичный ключ: { actor\_surname, actor\_name, film\_name, release\_year, Oscar\_rewarding\_year, Oscar\_nomination, review\_author }

**Введём идентификаторы** actor\_id, director\_id, producer\_id, screenwriter\_id, genre\_id, film\_id, review\_id для большей точности и удобства, в этом случае **первичный ключ**: { actor\_id, film\_id, review\_id, Oscar\_rewarding\_year, Oscar\_nomination }

Распишем **зависимости**:

* actor\_id => actor\_name, actor\_surname, actor\_birth\_year, actor\_country
* director\_id => director\_surname, director\_name, director\_birth\_year, director\_country
* producer\_id => producer\_surname, producer\_name, producer\_birth\_year, producer\_country
* screenwriter\_id => screenwriter\_surname, screenwriter\_name, screenwriter\_birth\_year, screenwriter\_country
* genre\_id => genre\_name, genre\_discription
* film\_id => film\_name, release\_year, rating, film\_country, director\_id, producer\_id, screenwriter\_id, genre\_id
* Oscar\_rewarding\_year, Oscar\_nomination => film\_id, actor\_id
* film\_id, actor\_id => actor\_role
* review\_id => review\_author, review\_name, review\_author\_mark, review\_text

Тогда можно составить **отношения**:

R1(actor\_id, actor\_name, actor\_surname, actor\_birth\_year, actor\_country)

R2(director\_id, director\_surname, director\_name, director\_birth\_year, director\_country)

R3(producer\_id, producer\_surname, producer\_name, producer\_birth\_year, producer\_country)

R4(screenwriter\_id, screenwriter\_surname, screenwriter\_name, screenwriter\_birth\_year, screenwriter\_country)

R5(genre\_id, genre\_name, genre\_discription)

R6(film\_id, film\_name, release\_year, rating, film\_country, director\_id, producer\_id, screenwriter\_id, genre\_id)

R7(Oscar\_rewarding\_year, Oscar\_nomination, film\_id, actor\_id)

R8(film\_id, actor\_id, actor\_role)

R9(review\_id, review\_author, review\_name, review\_author\_mark, review\_text)

За счёт введения идентификаторов (и выбора первичного ключа для универсального отношения), наши отношения сразу оказались в третьей нормальной форме.

Однако, почти в каждом отношении есть атрибут, указывающий на страну, но набор возможных стран постоянный и общий для всех этих отношений, страну можно вынести в отдельное отношение (так экономится память и появляется возможность добавить какую-то информацию, касающуюся только стран), тогда **конечный набор отношений** имеет вид:

R10(country\_id, country\_name)

R1(actor\_id, actor\_name, actor\_surname, actor\_birth\_year, country\_id)

R2(director\_id, director\_surname, director\_name, director\_birth\_year, country\_id)

R3(producer\_id, producer\_surname, producer\_name, producer\_birth\_year, country\_id)

R4(screenwriter\_id, screenwriter\_surname, screenwriter\_name, screenwriter\_birth\_year, country\_id)

R5(genre\_id, genre\_name, genre\_discription)

R6(film\_id, film\_name, release\_year, rating, country\_id, director\_id, producer\_id, screenwriter\_id, genre\_id)

R7(Oscar\_rewarding\_year, Oscar\_nomination, film\_id, actor\_id)

R8(film\_id, actor\_id, actor\_role)

R9(review\_id, review\_author, review\_name, review\_author\_mark, review\_text)