# ДЕКОМПОЗИЦИЯ ДАННЫХ В БАЗЕ

## ТАБЛИЦА СУПЕРГЕРОЕВ

id	name	align	eye	hair	gender	appearances	year	universe
1	Spider-Man (Peter Parker)	Good Characters	Hazel Eyes	Brown Hair	Male Characters	4043	1962	marvel
2	Captain America (Steven Rogers)	Good Characters	Blue Eyes	White Hair	Male Characters	3360	1941	marvel
4854	Batman (Bruce Wayne)	Good Characters	Blue Eyes	Black Hair	Male Characters	3093	1939	dc
3	Wolverine (James \"Logan\" Howlett)	Neutral Characters	Blue Eyes	Black Hair	Male Characters	3061	1974	marvel
4	Iron Man (Anthony \"Tony\" Stark)	Good Characters	Blue Eyes	Black Hair	Male Characters	2961	1963	marvel
4855	Superman (Clark Kent)	Good Characters	Blue Eyes	Black Hair	Male Characters	2496	1986	dc
5	Thor (Thor Odinson)	Good Characters	Blue Eyes	Blond Hair	Male Characters	2258	1950	marvel
6	Benjamin Grimm (Earth-616)	Good Characters	Blue Eyes	No Hair	Male Characters	2255	1961	marvel
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### ТАБЛИЦА С ФИЛЬМАМИ О СУПЕРГЕРОЯХ

id	title	year
1	Spider-Man	2002
2	The Amazing Spider-Man	2012
3	Captain America: The First Avenger	2011
4	Captain America: The Winter Soldier	2014
5	Batman	1989
6	Batman Returns	1992
7	The Dark Knight Rises	2012
8	Logan	2017
	•••	

## СВЯЗИ МЕЖДУ ТАБЛИЦАМИ

#### superheroes

id	name	•••
1	Spider-Man (Peter Parker)	•••
2	Captain America (Steven Rogers)	•••
4854	Batman (Bruce Wayne)	•••
3	Wolverine (James \"Logan\" Howlett)	•••
4	Iron Man (Anthony \"Tony\" Stark)	•••
4855	Superman (Clark Kent)	•••
5	Thor (Thor Odinson)	•••
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		•••

#### movies

id	title	year
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2	The Amazing Spider-Man	2012
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#### movies

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2	The Amazing Spider-Man	2012	
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		•••
<b>1</b>		

#### movies

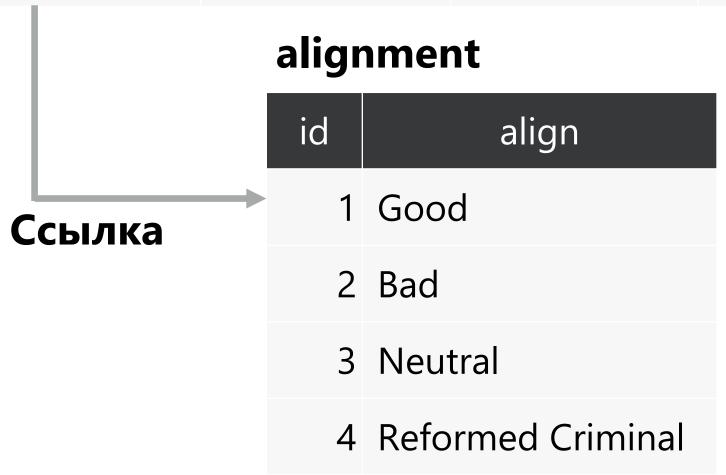
id	title	year	superhero_id	
1	Spider-Man	2002	1	
2	The Amazing Spider-Man	2012	1	
3	Captain America: The First Avenger	2011	2	
4	Captain America: The Winter Soldier	2014	2	
5	Batman	1989	4854	
6	Batman Returns	1992	4854	
7	The Dark Knight Rises	2012	4854	
8	Logan	2017	3	
	•••			

# ДЕКОМПОЗИЦИЯ ДАННЫХ В ОДНОЙ ТАБЛИЦЕ

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### ТИП СУПЕРГЕРОЯ

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1	Spider-Man (Peter Parker)	1	Hazel Eyes	Brown Hair	Male Characters	4043	1962	marvel
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4	Iron Man (Anthony \"Tony\" Stark)	1	Blue Eyes	Black Hair	Male Characters	2961	1963	marvel
			•••					



### ИТОГИ

(>) Несколько таблиц в базе данных

Разные сущности

Декомпозиция одной таблицы на несколько

(>) Связи между таблицами

Ссылки из одной таблицы на другую

Внешний ключ (FOREIGN KEY)

(>) Проектирование баз данных

Нормализация: нормальные формы

Типы связей: один к одному, один ко многим, многие ко многим