

ГРУППИРОВКА И ФИЛЬТРАЦИЯ В SQL: HAVING

УЧЕБНЫЙ КУРС «ОСНОВЫ SQL»

ГРУППИРОВКА ДАННЫХ В SQL

```
SELECT hair, COUNT(*) FROM superheroes  
WHERE gender='Female Characters'  
GROUP BY hair
```

КОЛИЧЕСТВО СУПЕРГЕРОЕВ ПО ЦВЕТУ ВОЛОС

hair	count
Strawberry Blond Hair	25
Violet Hair	3
Bald	18
Green Hair	42
Silver Hair	6
Red Hair	272
White Hair	97
Purple Hair	28
...	

ФИЛЬТРАЦИЯ ГРУППОВЫХ РЕЗУЛЬТАТОВ В SQL

```
SELECT hair, COUNT(*) FROM superheroes
WHERE gender='Female Characters'
      AND COUNT(*) > 10
GROUP BY hair
```

ФИЛЬТРАЦИЯ ГРУППОВЫХ РЕЗУЛЬТАТОВ В SQL

```
SELECT hair, COUNT(*) FROM superheroes
WHERE gender='Female Characters'
      AND COUNT(*) > 10
GROUP BY hair
```

ERROR: aggregate functions are not allowed in WHERE

ГРУППИРОВКА ДАННЫХ В SQL

id	name	align	eye	hair	gender	appearances	year	universe
15	Matthew Murdock (Earth-616)	Good Characters	Blue Eyes	Red Hair	Male Characters	1338	1338	marvel
17	Mary Jane Watson (Earth-616)	Good Characters	Green Eyes	Red Hair	Female Characters	1304	1965	marvel
26	Janet van Dyne (Earth-616)	Good Characters	Blue Eyes	Auburn Hair	Female Characters	1120	1963	marvel
27	Jean Grey (Earth-616)	Good Characters	Green Eyes	Red Hair	Female Characters	1107	1963	marvel
28	Natalia Romanova (Earth-616)	Good Characters	Brown Eyes	Red Hair	Female Characters	1050	1964	marvel
46	Norman Osborn (Earth-616)	Bad Characters	Blue Eyes	Auburn Hair	Male Characters	692	1964	marvel
47	Eugene Thompson (Earth-616)	Good Characters	Blue Eyes	Strawberry Blond Hair	Male Characters	689	1962	marvel
58	Patricia Walker (Earth-616)	Good Characters	Blue Eyes	Red Hair	Female Characters	550	1944	marvel
			...					

ФИЛЬТРАЦИЯ ГРУППОВЫХ РЕЗУЛЬТАТОВ В SQL

```
SELECT hair, COUNT(*) FROM superheroes  
WHERE gender='Female Characters'  
GROUP BY hair  
HAVING COUNT(*) > 10
```

КОЛИЧЕСТВО СУПЕРГЕРОЕВ ПО ЦВЕТУ ВОЛОС

hair	count
Strawberry Blond Hair	25
Bald	18
Green Hair	42
Red Hair	272
White Hair	97
Purple Hair	28
Pink Hair	19
Grey Hair	39
...	

ФИЛЬТРАЦИЯ ГРУППОВЫХ РЕЗУЛЬТАТОВ В SQL

```
SELECT hair, COUNT(*) FROM superheroes  
WHERE gender='Female Characters'  
GROUP BY hair  
HAVING COUNT(*) BETWEEN 50 AND 300
```

КОЛИЧЕСТВО СУПЕРГЕРОЕВ ПО ЦВЕТУ ВОЛОС

hair	count
Red Hair	272
White Hair	97

ИТОГИ



Фильтрация данных

WHERE – фильтрация строк в таблице

HAVING – фильтрация результатов группировки



Порядок выполнения SELECT

Выбор таблицы: FROM

Фильтрация строк из таблицы: WHERE

Группировка: GROUP BY

Фильтрация результатов группировки: HAVING