



# Особенности INNER JOIN



# Количество записей в запросах с JOIN: продажи за март

dt	manager_id	product_id	cnt
2020-03-01	1	1	5
2020-03-01	2	2	20
2020-03-02	3	3	6
2020-03-02	4	1	20
2020-03-05	5	2	4
2020-03-05	1	3	3
2020-03-07	2	1	20
2020-03-11	3	2	20
2020-03-12	4	3	9
2020-03-25	1	4	20
...			
10 rows of 17			

dt	first_name	last_name	product_name	cnt
2020-03-25	Ellis	Forbes	disk utils	20
2020-03-25	Ellis	Forbes	Motherboard	20
2020-03-05	Ellis	Forbes	HDD	3
2020-03-01	Ellis	Forbes	disk utils	5
2020-03-28	Piter	Robinson	OS	50
2020-03-27	Piter	Robinson	Motherboard	20
2020-03-25	Piter	Robinson	OS	7
2020-03-07	Piter	Robinson	disk utils	20
2020-03-01	Piter	Robinson	OS	20
2020-03-11	Piter	Graham	OS	20
...				
10 rows of 17				

select \* from skill\_sales\_march

```
select t1.dt,t2.first_name,t2.last_name,
       t3.product_name,t1.cnt
from skill_sales_march t1
join skill_managers t2 on
t1.manager_id=t2.manager_id
join skill_product t3 on
t1.product_id=t3.product_id
```

# Количество записей в запросах с JOIN: продажи за сентябрь

dt	manager_id	product_id	cnt
2020-09-01	1	5	5
2020-09-02	11	5	3
2020-09-04	3	1	4
2020-09-05	3	6	7
2020-09-05	12	6	4
2020-09-07	1	2	4
2020-09-02	3	7	8
2020-09-08	14	7	5
2020-09-12	5	2	9
2020-09-14	7	4	3
...			
10 rows of 27			

dt	first_name	last_name	product_name	cnt
2020-09-01	Ellis	Forbes	Cooler	5
2020-09-04	Piter	Graham	disk utils	4
2020-09-07	Ellis	Forbes	OS	4
2020-09-12	Ellis	Cisneros	OS	9
2020-09-14	Kaiden	Wall	Motherboard	3
2020-09-16	Ellis	Chen	disk utils	8
2020-03-26	Darryl	Mathis	HDD	3
2020-03-27	Piter	Robinson	Motherboard	20
2020-03-27	Ellis	Chen	disk utils	30
2020-03-28	Piter	Robinson	OS	50
...				
10 rows of 16				

```
select * from skill_sales_september
```

```
select t1.dt,t2.first_name,t2.last_name,
       t3.product_name,t1.cnt
from skill_sales_september t1
join skill_managers t2 on
t1.manager_id=t2.manager_id
join skill_product t3 on
t1.product_id=t3.product_id
```

# Различия в наборах идентификаторов

skill\_sales\_september

dt	manager_id	product_id	cnt
2020-09-01	1	5	5
2020-09-02	11	5	3
2020-09-04	3	1	4
2020-09-05	3	6	7
2020-09-05	12	6	4
2020-09-07	1	2	4
2020-09-02	3	7	8
2020-09-08	14	7	5
2020-09-12	5	2	9
2020-09-14	7	4	3
2020-09-15	15	8	12
2020-09-15	9	8	16
2020-09-16	8	1	8
2020-09-20	16	9	3
2020-09-23	5	9	3
2020-09-25	20	10	5
2020-09-26	21	3	8
2020-03-26	6	3	3
2020-03-27	2	4	20
2020-03-27	8	1	30
2020-03-28	2	2	50
2020-03-29	9	3	76
2020-04-20	7	3	3
2020-04-22	6	4	33
2020-04-23	5	1	3
2020-04-25	4	1	22
2020-04-26	5	3	21

27 rows

product_id
6
7
8
9
10

manager_id
11
12
14
15
16
20
21

skill\_product

product_id	product_name	product_category_id	price_usd
1	disk utils	1	100
2	OS	1	999
3	HDD	2	500
4	Motherboard	2	650
5	Cooler	2	5

skill\_managers

manager_id	first_name	last_name	age	gender	age_group
1	Ellis	Forbes	27	F	(25:35)
2	Piter	Robinson	24	M	(18:25)
3	Piter	Graham	23	M	(18:25)
4	Abbie	Peters	25	M	(25:35)
5	Ellis	Cisneros	25	F	(25:35)
6	Darryl	Mathis	29	F	(25:35)
7	Kaiden	Wall	38	F	(35:45)
8	Ellis	Chen	25	F	(25:35)
9	Paul	Lucas	23	M	(18:25)
10	Max	Kaiser	21	F	(18:25)

# Выполнение условия присоединения в JOIN

skill\_sales\_september

dt	manager_id	product_id	cnt
2020-09-01	1	5	5
2020-09-02	11	5	3
2020-09-04	3	1	4
2020-09-05	3	6	7
2020-09-05	12	6	4
2020-09-07	1	2	4
2020-09-02	3	7	8
2020-09-08	14	7	5
2020-09-12	5	2	9
2020-09-14	7	4	3
2020-09-15	15	8	12
2020-09-15	9	8	16
2020-09-16	8	1	8
2020-09-20	16	9	3
2020-09-23	5	9	3
2020-09-25	20	10	5
2020-09-26	21	3	8
2020-03-26	6	3	3
2020-03-27	2	4	20
2020-03-27	8	1	30
2020-03-28	2	2	50
2020-03-29	9	3	76
2020-04-20	7	3	3
2020-04-22	6	4	33
2020-04-23	5	1	3
2020-04-25	4	1	22
2020-04-26	5	3	21

27 rows

product_id
6
7
8
9
10

manager_id
11
12
14
15
16
20
21

skill\_product

... join skill\_product t3 on  
t1.product\_id = t3.product\_id

skill\_managers

... join skill\_managers t2 on  
t1.manager\_id = t2.manager\_id

# Выполнение условия присоединения в JOIN

skill\_sales\_september

dt	manager_id	product_id	cnt
2020-09-01	1	5	5
<del>2020-09-02</del>	<del>11</del>	<del>5</del>	<del>3</del>
2020-09-04	3	1	4
<del>2020-09-05</del>	<del>3</del>	<del>6</del>	<del>7</del>
<del>2020-09-05</del>	<del>12</del>	<del>6</del>	<del>4</del>
2020-09-07	1	2	4
<del>2020-09-02</del>	<del>3</del>	<del>7</del>	<del>8</del>
<del>2020-09-08</del>	<del>14</del>	<del>7</del>	<del>5</del>
2020-09-12	5	2	9
2020-09-14	7	4	3
<del>2020-09-15</del>	<del>15</del>	<del>8</del>	<del>12</del>
<del>2020-09-15</del>	<del>9</del>	<del>8</del>	<del>16</del>
2020-09-16	8	1	8
<del>2020-09-20</del>	<del>16</del>	<del>9</del>	<del>3</del>
2020-09-23	5	9	3
<del>2020-09-25</del>	<del>20</del>	<del>10</del>	<del>5</del>
<del>2020-09-26</del>	<del>21</del>	<del>3</del>	<del>8</del>
<del>2020-03-26</del>	<del>6</del>	<del>3</del>	<del>3</del>
2020-03-27	2	4	20
2020-03-27	8	1	30
2020-03-28	2	2	50
2020-03-29	9	3	76
2020-04-20	7	3	3
2020-04-22	6	4	33
2020-04-23	5	1	3
2020-04-25	4	1	22
2020-04-26	5	3	21

27 rows

product_id
6
7
8
9
10

manager_id
11
12
14
15
16
20
21

skill\_product

... join skill\_product t3 on  
t1.product\_id = t3.product\_id

skill\_managers

... join skill\_managers t2 on  
t1.manager\_id = t2.manager\_id

# INNER JOIN

skill\_sales\_march – t1

dt	manager_id	product_id	cnt
2020-03-01	1	1	5
2020-03-01	2	2	20
2020-03-02	3	3	6
2020-03-02	4	1	20
2020-03-05	5	2	4
2020-03-05	1	3	3
2020-03-07	2	1	20
2020-03-11	3	2	20
2020-03-12	4	3	9
2020-03-25	1	4	20
2020-03-25	1	1	20
2020-03-25	2	2	7
2020-03-26	6	3	3
2020-03-27	2	4	20
2020-03-27	8	1	30
2020-03-28	2	2	50
2020-03-29	9	3	76

skill\_managers – t2

manager_id	first_name	last_name	age	gender	age_group
1	Ellis	Forbes	27	F	(25:35)
2	Piter	Robinson	24	M	(18:25)
3	Piter	Graham	23	M	(18:25)
4	Abbie	Peters	25	M	(25:35)
5	Ellis	Cisneros	25	F	(25:35)
6	Darryl	Mathis	29	F	(25:35)
7	Kaiden	Wall	38	F	(35:45)
8	Ellis	Chen	25	F	(25:35)
9	Paul	Lucas	23	M	(18:25)
10	Max	Kaiser	21	F	(18:25)

skill\_product – t3

product_id	product_name	product_category_id	price_usd
1	disk utils	1	100
2	OS	1	999
3	HDD	2	500
4	Motherboard	2	650
5	Cooler	2	5

```
select * from skill_sales_march t1
join skill_managers t2 on t1.manager_id=t2.manager_id
join skill_product t3 on t1.product_id=t3.product_id
```

dt	manager_id	product_id	cnt	manager_id	first_name	last_name	age	gender	age_group	product_id	product_name	product_category_id	price_usd
2020-03-01	1	1	5	1	Ellis	Forbes	27	F	(25:35)	1	disk utils	1	100
2020-03-01	2	2	20	2	Piter	Robinson	24	M	(18:25)	2	OS	1	999
2020-03-02	3	3	6	3	Piter	Graham	23	M	(18:25)	3	HDD	2	500
2020-03-02	4	1	20	4	Abbie	Peters	25	M	(25:35)	1	disk utils	1	100
2020-03-05	5	2	4	5	Ellis	Cisneros	25	F	(25:35)	2	OS	1	999

# Практика к уроку

В таблице со сделками **skill\_deals** есть идентификаторы:

- **customer\_id** — идентификатор покупателя
- **supplier\_id** — идентификатор продавца

Свяжите с помощью **INNER JOIN** оба идентификатора с таблицей-справочником **skill\_customers\_suppliers**, которая является справочником продавцов и покупателей одновременно (поле-идентификатор **customers\_suppliers\_id**)

Вид результирующей таблицы:

dt	customer_name	supplier_name
2020-03-01	Sincere Forbes	Giovanny Robinson
2020-03-10	Sincere Forbes	Kaiden Wall
2020-03-09	Sincere Forbes	Paul Lucas
2020-03-03	Sincere Forbes	Zoe Kaiser
2020-03-15	Sincere Forbes	Jamiya Spears
2020-03-20	Sincere Forbes	Martha Kelly
2020-03-02	Giovanny Robinson	Giovanny Robinson
2020-03-03	Giovanny Robinson	Luna Ferguson
2020-03-02	Averie Graham	Darryl Mathis
2020-03-03	Averie Graham	Darryl Mathis
...		

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