

# SQL - EXIBINDO DADOS DE VÁRIAS TABELAS

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**SIMONE DOMINICO - AULA 4**

# EXIBINDO DADOS DE VÁRIAS TABELAS

r regionkey	r name	r comment
0	AFRICA	lar deposits, blithely final packages cajole, regular waters are final requests, regular accounts are according to
1	AMERICA	hs use ironic, even requests, s
2	ASIA	ges, thinly even pinto beans ca
3	EUROPE	ly final courts cajole furiously final excuse
4	MIDDLE EAST	uickly special accounts cajole carefully blithely close requests, carefully final asymptotes haggle furiousl

n nationkey	n name	n regionkey	n comment
0	ALGERIA	0	haggle, carefully final deposits detect slyly agai
1	ARGENTINA	1	al foxes promise slyly according to the regular accounts, bold requests alon
2	BRAZIL	1	y alongside of the pending deposits, carefully special packages are about the ironic forges, slyly special
3	CANADA	1	eas hang ironic, silent packages, slyly regular packages are furiously over the tithes, fluffily bold
4	EGYPT	4	y above the carefully unusual theodolites, final dugouts are quickly across the furiously regular d
5	ETHIOPIA	0	ven packages wake quickly, requ
6	FRANCE	3	refully final requests, regular, ironi
7	GERMANY	3	l platelets, regular accounts x-ray: unusual, regular acco
8	INDIA	2	ss excuses cajole slyly across the packages, deposits print aroun
9	INDONESIA	2	slyly express asymptotes, regular deposits haggle slyly, carefully ironic hockey players sleep blithely, carefull
10	IRAN	4	efully alongside of the slyly final dependencies,
11	IRAQ	4	nic deposits boost atop the quickly final requests? quickly regula
12	JAPAN	2	ously, final, express gifts cajole a
13	JORDAN	4	ic deposits are blithely about the carefully regular pa
14	KENYA	0	pending excuses haggle furiously deposits, pending, express pinto beans wake fluffily past t
15	MOROCCO	0	rms, blithely bold courts among the closely regular packages use furiously bold platelets?
16	MOZAMBIQUE	0	s, ironic, unusual asymptotes wake blithely r
17	PERU	1	platelets, blithely pending dependencies use fluffily across the even pinto beans, carefully silent accoun
18	CHINA	2	c dependencies, furiously express notornis sleep slyly regular accounts, ideas sleep, depos
19	ROMANIA	3	ular asymptotes are about the furious multipliers, express dependencies naq above the ironically ironic account
20	SAUDI ARABIA	4	ts, silent requests haggle, closely express packages sleep across the blithely
21	VIETNAM	2	hely enticingly express accounts, even, final
22	RUSSIA	3	requests against the platelets use never according to the quickly regular pint
23	UNITED KINGDOM	3	eans boost carefully special requests, accounts are, carefull
24	UNITED STATES	1	y final packages, slow foxes cajole quickly, quickly silent platelets breach ironic accounts, unusual pinto be

# EXIBINDO DADOS DE VÁRIAS TABELAS

<u>r_regionkey</u>	<u>r_name</u>	<u>r_comment</u>
0	AFRICA	lar deposits. blithely final packages cajole. regular waters are final requests. regular accounts are according to
1	AMERICA	hs use ironic, even requests. s
2	ASIA	ges. thinly even pinto beans ca
3	EUROPE	ly final courts cajole furiously final excuse
4	MIDDLE EAST	uickly special accounts cajole carefully blithely close requests. carefully final asymptotes haggle furious!

**SELECIONAR TODOS OS PAÍSES DA AFRICA**



<u>n_nationkey</u>	<u>n_name</u>	<u>n_regionkey</u>	<u>n_comment</u>
0	ALGERIA	0	haggle. carefully final deposits detect slyly agai
5	ETHIOPIA	0	ven packages wake quickly. regu
14	KENYA	0	pending excuses haggle furiously deposits. pending, express pinto beans wake fluffily past t
15	MOROCCO	0	rms. blithely bold courts among the closely regular packages use furiously bold platelets?
16	MOZAMBIQUE	0	s. ironic, unusual asymptotes wake blithely r

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# O QUE É UMA JUNÇÃO?

- ▶ Usar uma junção para consultar dados de uma ou mais tabelas.

**SELECT** tabela1.coluna, tabela2.coluna

**FROM** tabela1, tabela2

**WHERE** tabela1.coluna1=tabela2.coluna 2;

---

# USANDO JUNÇÃO

- ▶ Criar uma condição de junção na cláusula where.

**SELECT** tabela1.coluna, tabela2.coluna

**FROM** tabela1, tabela2

**WHERE** tabela1.coluna1=tabela2.coluna2;

---

# USANDO JUNÇÃO

```
psql -U ci218 -h bd.c3sl.ufpr.br -d tpch
```

```
sdominico@macalan:~$ psql -U ci218 -h bd.c3sl.ufpr.br -d tpch
```

---

# USANDO A JUNÇÃO

```
tpch=> SELECT region.r_name, nation.n_name  
FROM region,nation  
WHERE region.r_regionkey=nation.n_regionkey  
and region.r_name='AFRICA';
```



Utilizar prefixo da tabela para indicar de qual tabela é a coluna



# USANDO A JUNÇÃO

```
tpch=> SELECT region.r_name, nation.n_name  
FROM region,nation  
WHERE region.r_regionkey=nation.n_regionkey  
and region.r_name='AFRICA';
```



r_name	n_name
AFRICA	ALGERIA
AFRICA	ETHIOPIA
AFRICA	KENYA
AFRICA	MOROCCO
AFRICA	MOZAMBIQUE

(5 rows)



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# USANDO A JUNÇÃO

Selecionar todos os clientes da ETHIOPIA

```
tpch=> SELECT customer.c_name  
FROM customer, nation  
WHERE customer.c_nationkey=nation.n_nationkey  
AND nation.n_name='ETHIOPIA';
```

5952 rows

---

# PRODUTO CARTESIANO

- ▶ Quando uma condição de Junção estiver omitida.
- ▶ Quando uma condição de Junção estiver inválida.
- ▶ Todas as linhas da primeira tabela estão unidas a todas as linhas da segunda tabela
- ▶ Inserir condição válida cláusula WHERE

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# PRODUTO CARTESIANO

```
tpch=> SELECT region.r_name, nation.n_name  
FROM region,nation;
```

r_name	n_name
AFRICA	ALGERIA
AFRICA	ARGENTINA
AFRICA	BRAZIL

---

# PRODUTO CARTESIANO

```
tpch=> SELECT region.r_name, nation.n_name  
FROM region,nation;
```

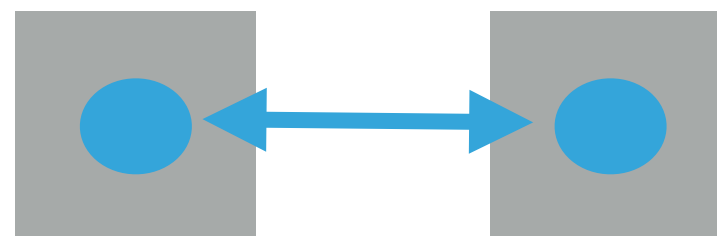
r_name	n_name
AFRICA	ALGERIA
AFRICA	ARGENTINA
AFRICA	BRAZIL
	⋮
MIDDLE EAST	UNITED KINGDOM
MIDDLE EAST	UNITED STATES

(125 rows)

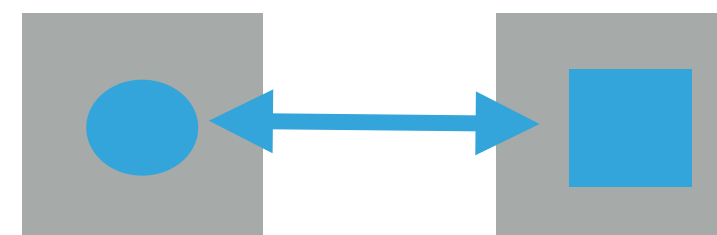
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# TIPOS DE JUNÇÃO

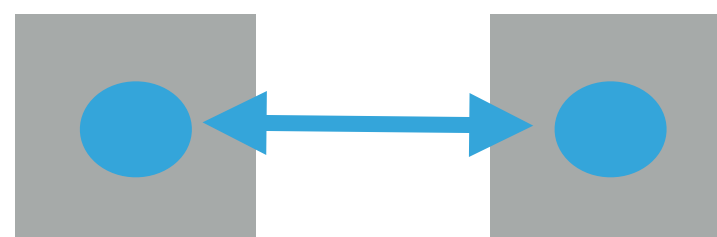
JUNÇÃO IDÊNTICA



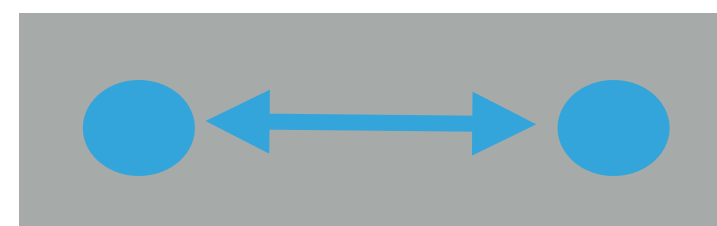
JUNÇÃO NÃO-IDÊNTICA



JUNÇÃO EXTERNAS



AUTOJUNÇÃO



# JUNÇÃO IDÊNTICA

Chave  
primária

Chave estrangeira

r_regionkey
0
1
2
3
4

(5 rows)

n_regionkey	n_name
0	ALGERIA
1	ARGENTINA
1	BRAZIL
1	CANADA
4	EGYPT
0	ETHIOPIA
3	FRANCE
3	GERMANY

---

# JUNÇÃO IDÊNTICA

```
tpch=> SELECT region.r_name, nation.n_name  
FROM region, nation  
WHERE region.r_regionkey=nation.n_regionkey;
```



# JUNÇÃO IDÊNTICA

```
tpch=> SELECT region.r_name, nation.n_name  
FROM region, nation  
WHERE region.r_regionkey=nation.n_regionkey;
```

r_name	n_name
AFRICA	MOZAMBIQUE
AFRICA	MOROCCO
AFRICA	KENYA
AFRICA	ETHIOPIA
AFRICA	ALGERIA
AMERICA	UNITED STATES

---

# UNINDO MAIS DE DUAS TABELAS

```
tpch=> SELECT r.r_name,n.n_name,c.c_name
FROM region r,nation n,customer c
WHERE r.r_regionkey=n.n_regionkey
AND c.c_nationkey=n.n_nationkey
AND r.r_name='AFRICA';
```

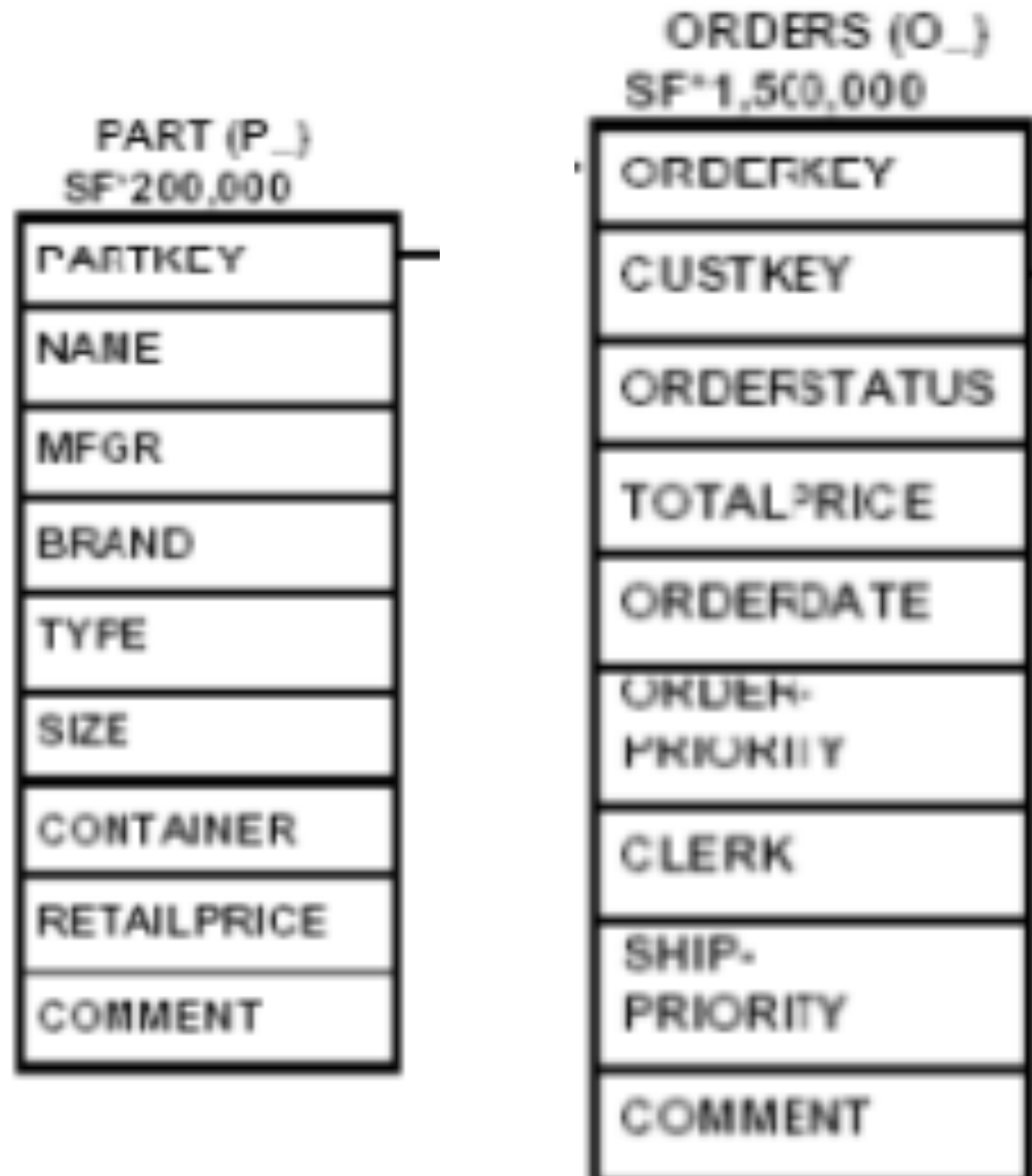
# UNINDO MAIS DE DUAS TABELAS

```
tpch=> SELECT r.r_name,n.n_name,c.c_name
FROM region r,nation n,customer c
WHERE r.r_regionkey=n.n_regionkey
AND c.c_nationkey=n.n_nationkey
AND r.r_name='AFRICA';
```

r_name	n_name	c_name
AFRICA 001	MOROCCO	Customer#000000
AFRICA 010	ETHIOPIA	Customer#000000

(29764 rows)

# JUNÇÃO NÃO-IDENTICA



Nenhuma coluna da tabela **PART** corresponde diretamente com a tabela **ORDERS**

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# JUNÇÃO NÃO-IDENTICA

```
tpch=> SELECT p.p_brand, o.o_orderstatus  
FROM part p, orders o  
WHERE p.p_retailprice > o.o_totalprice  
LIMIT 10;
```

Nenhuma coluna da tabela **PART**  
corresponde diretamente com a tabela  
**ORDERS**

# JUNÇÃO NÃO-IDENTICA

```
tpch=> SELECT p.p_brand, o.o_orderstatus  
FROM part p, orders o  
WHERE p.p_retailprice > o.o_totalprice  
LIMIT 10;
```

p_brand	o_orderstatus
Brand#14	0
Brand#14	F
Brand#14	0
Brand#14	F
Brand#14	0
Brand#14	0
Brand#14	0
Brand#14	F
Brand#14	F
Brand#14	F

(10 rows)

---

# JUNÇÃO EXTERNA

Neste tipo de junção são selecionados também os registos que não tem equivalente numa das tabelas.

```
tpch=> SELECT r.r_name, n.n_name  
FROM region r, nation n  
WHERE r.r_regionkey=n.n_regionkey;
```



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# AUTOJUNÇÕES

Unindo a tabela a ela mesma.

Selecionar a identificação das encomendas com data de confirmação igual a data de envio.

---

# AUTOJUNÇÕES

Unindo a tabela a ela mesma.

Selecionar a identificação das encomendas com data de confirmação igual a data de envio.

```
tpch=> SELECT l_orderkey, l_shipdate, l_commitdate  
FROM lineitem  
WHERE l_shipdate=l_commitdate  
LIMIT 10;
```

# EXERCÍCIOS

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# EXERCÍCIOS

1. Crie uma consulta para exibir o nome (p\_name) e o preço de varejo (p\_retailprice) e o custo de fornecimento (ps\_supplycost) dos itens de compra (part) em que o preço de varejo seja maior que R\$ 2097.10. **12 rows**

# EXERCÍCIOS

1.

p_name	p_retailprice	ps_supplycost
forest azure almond antique violet	2097.99	676.70
forest azure almond antique violet	2097.99	855.38
forest azure almond antique violet	2097.99	915.71
forest azure almond antique violet	2097.99	831.10
pink wheat powder burlywood snow	2097.99	630.28
pink wheat powder burlywood snow	2097.99	937.37
pink wheat powder burlywood snow	2097.99	193.43
pink wheat powder burlywood snow	2097.99	520.48
goldenrod drab brown salmon mint	2098.99	606.64
goldenrod drab brown salmon mint	2098.99	231.95
goldenrod drab brown salmon mint	2098.99	457.93
goldenrod drab brown salmon mint	2098.99	259.56

(12 rows)

# EXERCÍCIOS

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2. Exibir o status do pedido (o\_orderstatus) e o desconto (l\_discount) com data de envio entre 11 de novembro de 1998 e 31 de dezembro de 1998.

**4730 rows**

o_orderstatus	l_discount
0	0.05
0	0.07
0	0.10
0	0.04
0	0.00
0	0.08

# EXERCÍCIOS

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3. Crie uma consulta para exibir a a prioridade do pedido (o\_orderpriority) o nome (c\_name) e o endereço (c\_address ) do cliente (customer) do país UNITED STATES e com conta (c\_acctbal) maior que R\$ 9990.

**122 rows**



# EXERCÍCIOS

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o_orderpriority	c_name	c_address
4-NOT SPECIFIED	Customer#000119509	JBDnrAGcDrXR6qp6P1meXjQ1HYB7
1-URGENT	Customer#000121762	um60DkwV8nz6ZWL KFMSrrOfmyIEaFei QfNk56
1-URGENT	Customer#000119437	rosqLbSejLw9VzaT4jWrP0yeMpU26vrd FyHz5FV
5-LOW	Customer#000119437	rosqLbSejLw9VzaT4jWrP0yeMpU26vrd FyHz5FV

# EXERCÍCIOS

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4. Crie uma consulta para exibir o nome (c\_name) do cliente (customer) do país "UNITED STATES" e com conta (c\_acctbal) maior que R\$ 9990 e que a coluna c\_mktsegment tenha o texto 'AUTO'.

```
      c_name
-----
Customer#000015607
Customer#000119509
Customer#000148533
(3 rows)
```

# EXERCÍCIOS

5. Crie uma consulta para exibir o nome (c\_name) dos clientes e o preço total (o\_totalprice) dos clientes do BRAZIL.

(60137 rows)

c_name	o_totalprice
Customer#000148765	181479.51
Customer#000041020	79094.41
Customer#000101464	309446.18
Customer#000074294	291956.23
Customer#000021803	77266.02
Customer#000103649	291456.68