

SQL - LINGUAGEM DE CONSULTA ESTRUTURADA

SIMONE DOMINICO - AULA 1

INTRODUÇÃO – BANCO DE DADOS

- ▶ O modelo relacional é composto dos seguintes itens:
 - ▶ Conjunto de objetos e relações.
 - ▶ Conjunto de operadores para agir sobre as relações.
 - ▶ Integridade de dados para precisão e consistência.

INTRODUÇÃO – BANCO DE DADOS RELACIONAL

Um banco de dados relacional é um conjunto de relações, são tabelas relacionadas entre si gerenciadas por um SGBD utilizando, por padrão, a linguagem SQL.

INTRODUÇÃO - TERMINOLOGIA DE BANCO DE DADOS RELACIONAL

Empregado

<u>NumEmp</u>	<u>NomeEmp</u>	<u>Salario</u>	<u>NumDept</u>
32	J. Silva	380	3
34	M. Moraes	560	3
56	J. Santos	640	5
78	V. Soares	930	3
90	N. Lima	1024	1

Departamento

<u>NumDept</u>	<u>NomeDept</u>	Ramal
3	Pessoal	133
5	Financeiro	125
1	RH	142

RELACIONANDO TABELAS

Chave primária (PK): identifica uma linha de dados de uma tabela;

Chave estrangeira (FK): relaciona logicamente os dados de várias tabelas.

RELACIONANDO TABELAS

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PROPRIEDADES DE UM BANCO DE DADOS RELACIONAL

- ▶ **É acessado e modificado executando instruções SQL (Structured Query Language)**
- ▶ **Linguagem padrão ANSI (American National Standards Institute);**
- ▶ **A linguagem possui um grande conjunto de operadores para dividir e combinar relações.**

SQL – LINGUAGEM DE CONSULTA ESTRUTURADA

INSTRUÇÕES SQL – COMPONENTES

- ▶ DDL (Data Definition Language):
 - ▶ Criação, configuração, alteração e remoção de estrutura de dados;

CREATE

INSTRUÇÕES SQL – COMPONENTES

- ▶ DDL (Data Definition Language):
 - ▶ Criação, configuração, alteração e remoção de estrutura de dados;

CREATE

ALTER

INSTRUÇÕES SQL – COMPONENTES

- ▶ DDL (Data Definition Language):
 - ▶ Criação, configuração, alteração e remoção de estrutura de dados;

CREATE

ALTER

DROP

INSTRUÇÕES SQL – COMPONENTES

- ▶ DDL (Data Definition Language):
 - ▶ Criação, configuração, alteração e remoção de estrutura de dados;

CREATE

ALTER

DROP

RENAME

INSTRUÇÕES SQL – COMPONENTES

- ▶ DDL (Data Definition Language):
 - ▶ Criação, configuração, alteração e remoção de estrutura de dados;

CREATE

ALTER

DROP

RENAME

TRUNCATE

INSTRUÇÕES SQL – COMPONENTES

DML (Data Manipulation Language):

- ▶ Criação de novas linhas, alteração e remoção;

INSERT

INSTRUÇÕES SQL – COMPONENTES

- ▶ DML (Data Manipulation Language):
 - ▶ Criação de novas linhas, alteração e remoção;

INSERT

UPDATE

INSTRUÇÕES SQL – COMPONENTES

- ▶ DML (Data Manipulation Language):
 - ▶ Criação de novas linhas, alteração e remoção;

INSERT

UPDATE

INSTRUÇÕES SQL – COMPONENTES

- ▶ DQL (Data Query Language):
 - ▶ Recupera dados do banco de dados;

SELECT

INSTRUÇÕES SQL – COMPONENTES

- ▶ DCL (Data Control Language):
 - ▶ Fornece a segurança do banco de dados;

GRANT

INSTRUÇÕES SQL – COMPONENTES

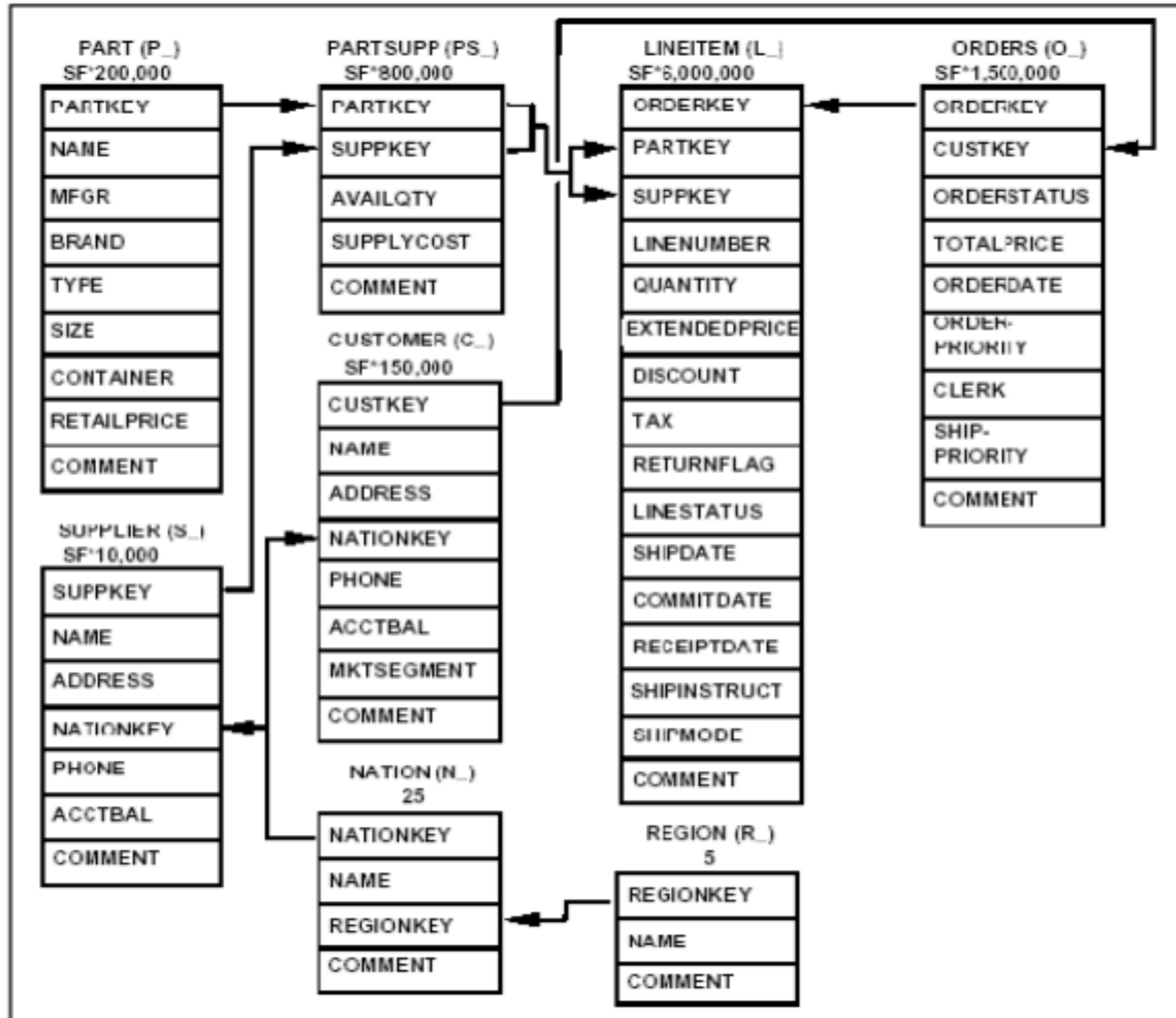
- ▶ DCL (Data Control Language):
 - ▶ Fornece a segurança do banco de dados;

GRANT

REVOKE

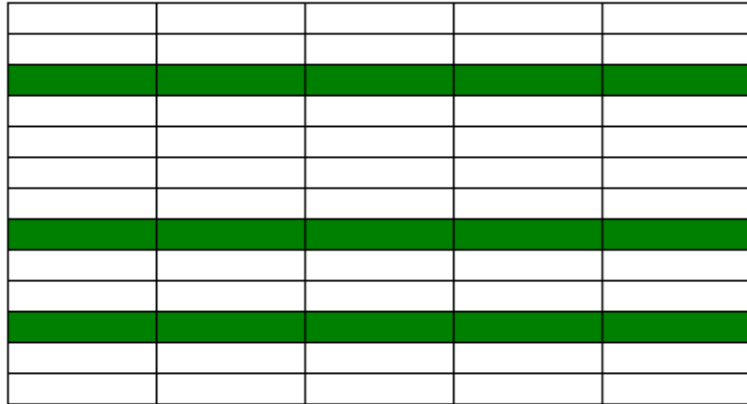
ESQUEMA DA BASE DE DADOS – BENCHMARK

TPC-H



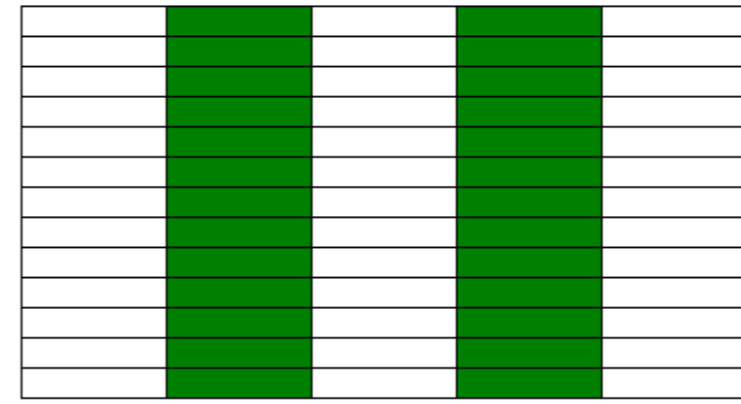
CRIANDO INSTRUÇÕES BÁSICAS DE

RECURSOS INSTRUÇÕES - SELECT SQL



A 5x10 grid representing a table. Three horizontal rows are highlighted in green, illustrating the selection of specific data rows.

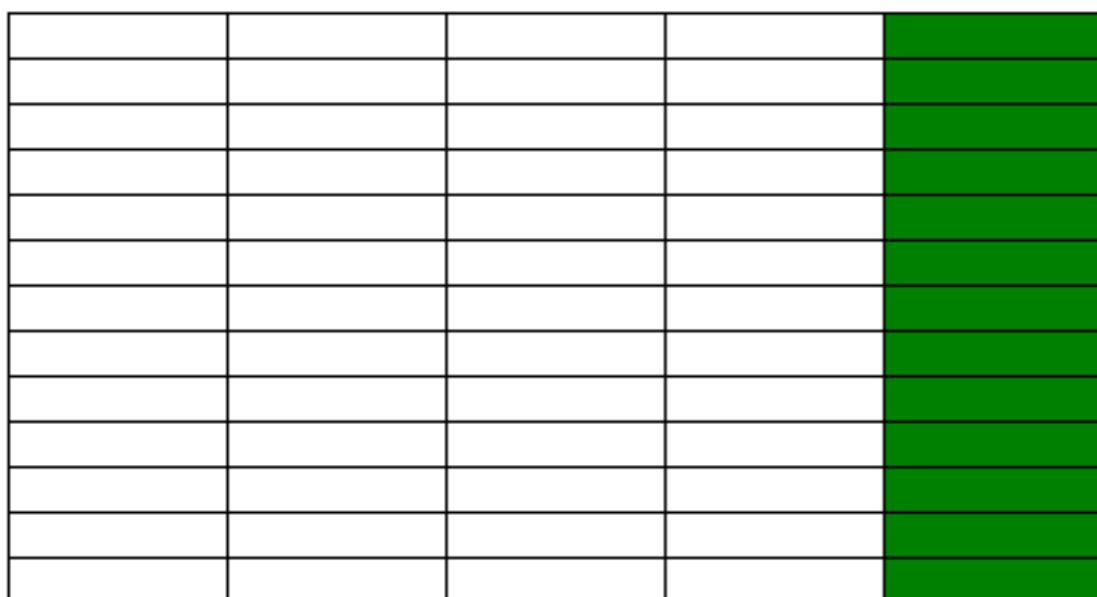
SELEÇÃO



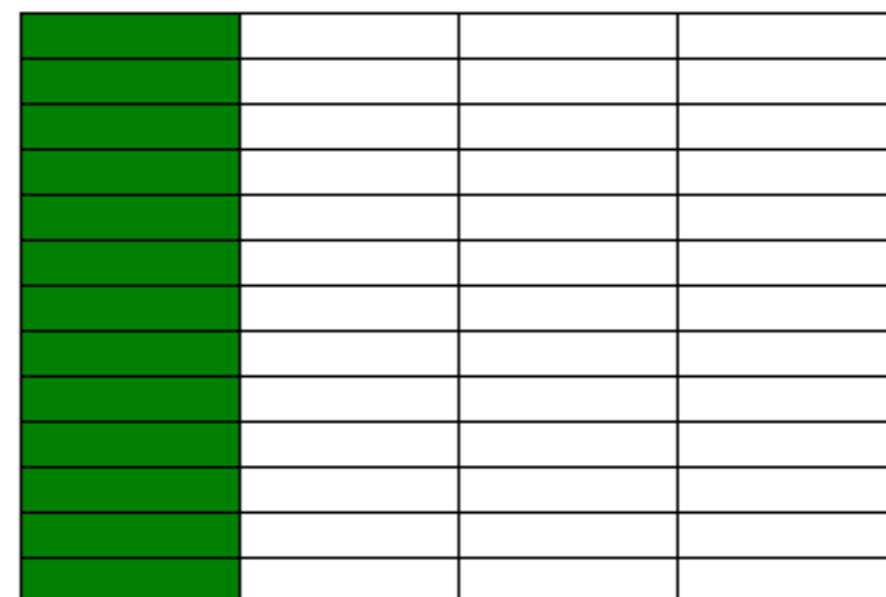
A 10x5 grid representing a table. Two vertical columns are highlighted in green, illustrating the selection of specific data columns.

PROJEÇÃO

JUNÇÃO



A 10x5 grid representing a table. The last column is highlighted in green, representing one of the tables involved in a join.



A 10x5 grid representing a table. The first column is highlighted in green, representing the other table involved in a join.

INSTRUÇÃO SELECT BÁSICA



SELECT coluna1, coluna2

FROM tabela;

SELECT: Identifica que colunas;

FROM: Identifica qual tabela;



INSTRUÇÃO SELECT BÁSICA

SELECT coluna1, coluna2

FROM tabela;

Palavra-chave

Cláusula

- ▶ **SELECT:** Identifica que colunas;
- ▶ **FROM:** Identifica qual tabela;

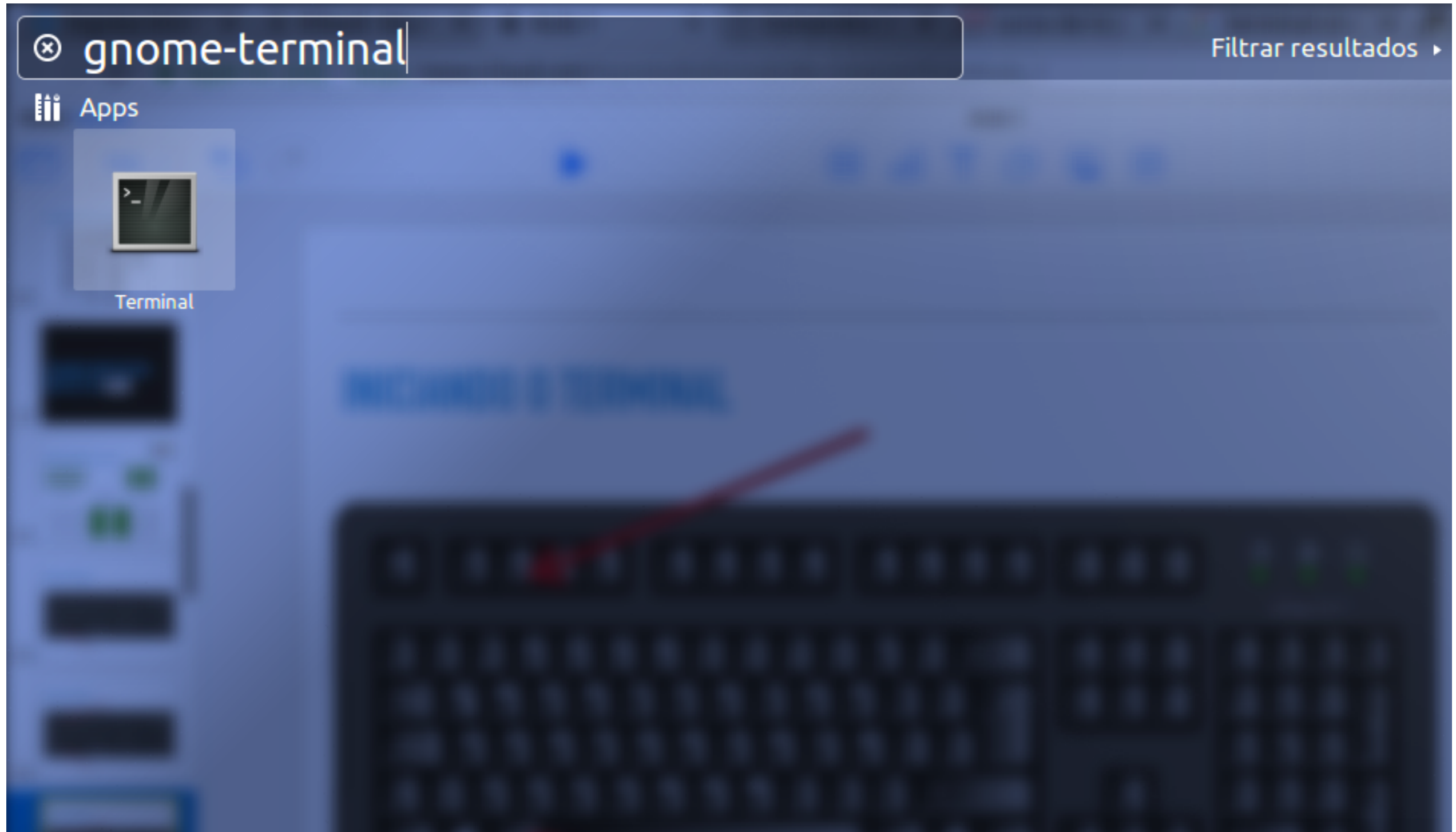
INICIANDO O TERMINAL



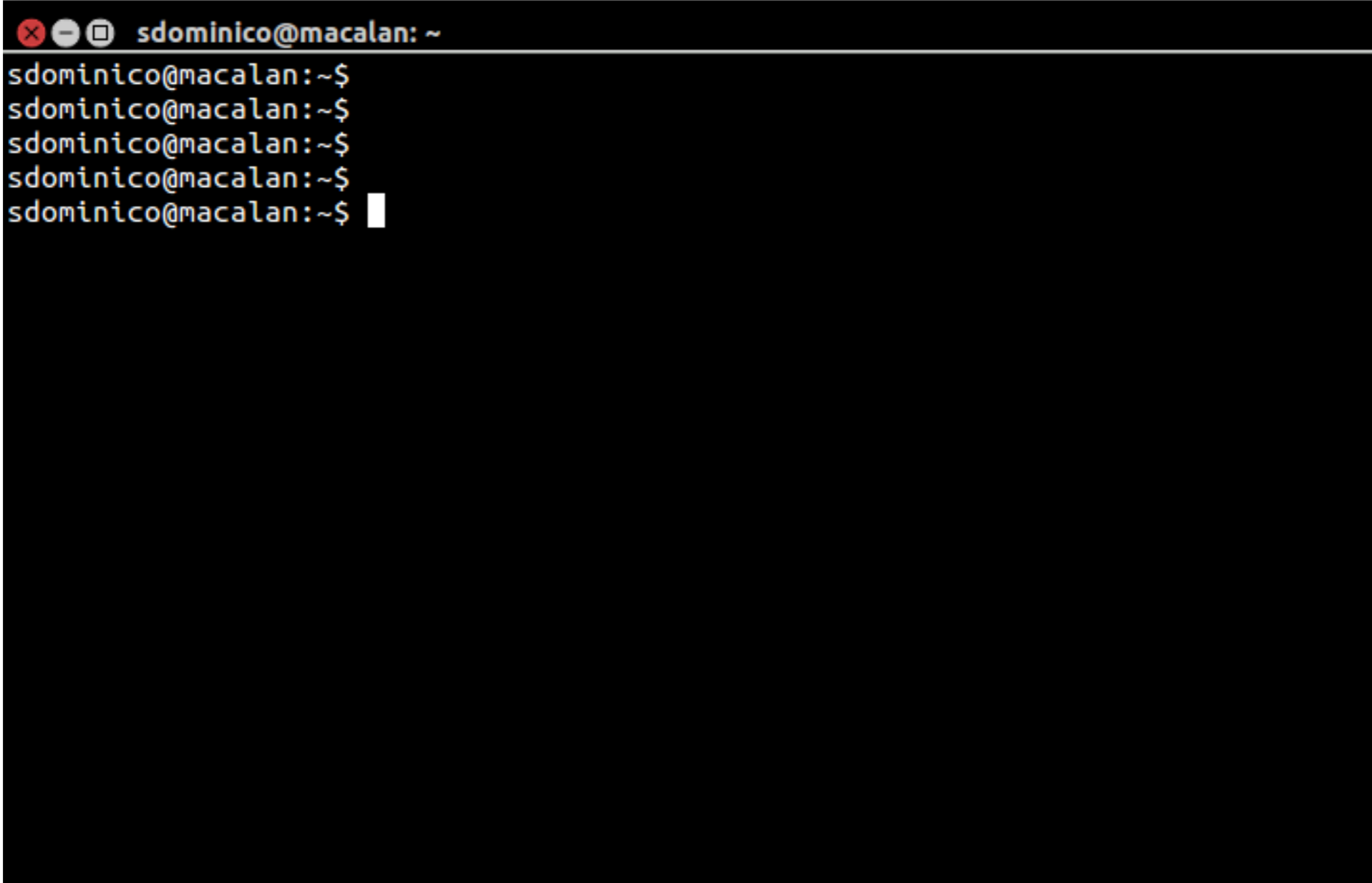
INICIANDO O TERMINAL



INICIANDO O TERMINAL



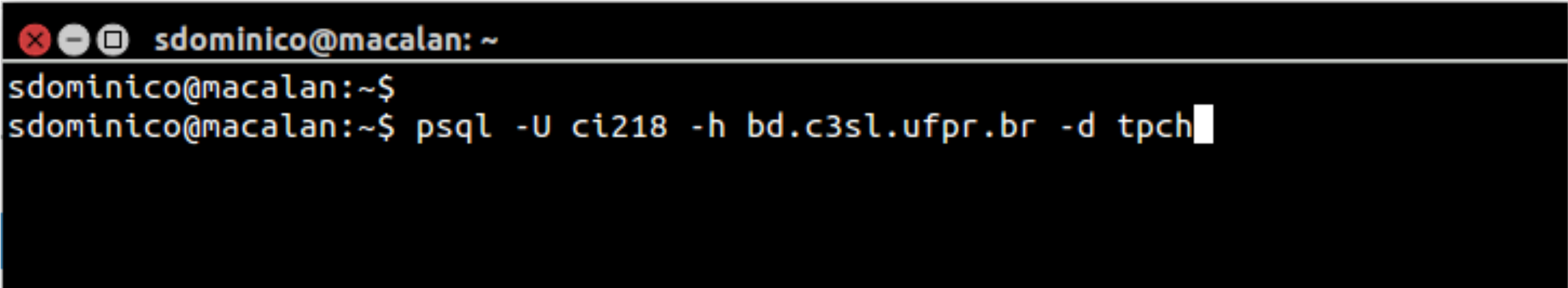
INICIANDO O TERMINAL

A screenshot of a terminal window on a Mac. The title bar at the top shows a red close button, a grey minimize button, and a grey maximize button, followed by the text "sdominico@macalan: ~". The terminal content consists of five lines of the prompt "sdominico@macalan:~\$" stacked vertically. The fifth line has a white cursor block at the end, indicating it is the current line for input.

```
sdominico@macalan: ~  
sdominico@macalan:~$  
sdominico@macalan:~$  
sdominico@macalan:~$  
sdominico@macalan:~$  
sdominico@macalan:~$ █
```

INICIANDO O TERMINAL

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

A screenshot of a terminal window with a black background and white text. The window title bar shows three icons (a red 'x', a grey dash, and a grey square) followed by the text 'sdominico@macalan: ~'. The terminal content shows the prompt 'sdominico@macalan:~\$' followed by the command 'psql -U ci218 -h bd.c3sl.ufpr.br -d tpch' with a white cursor at the end.

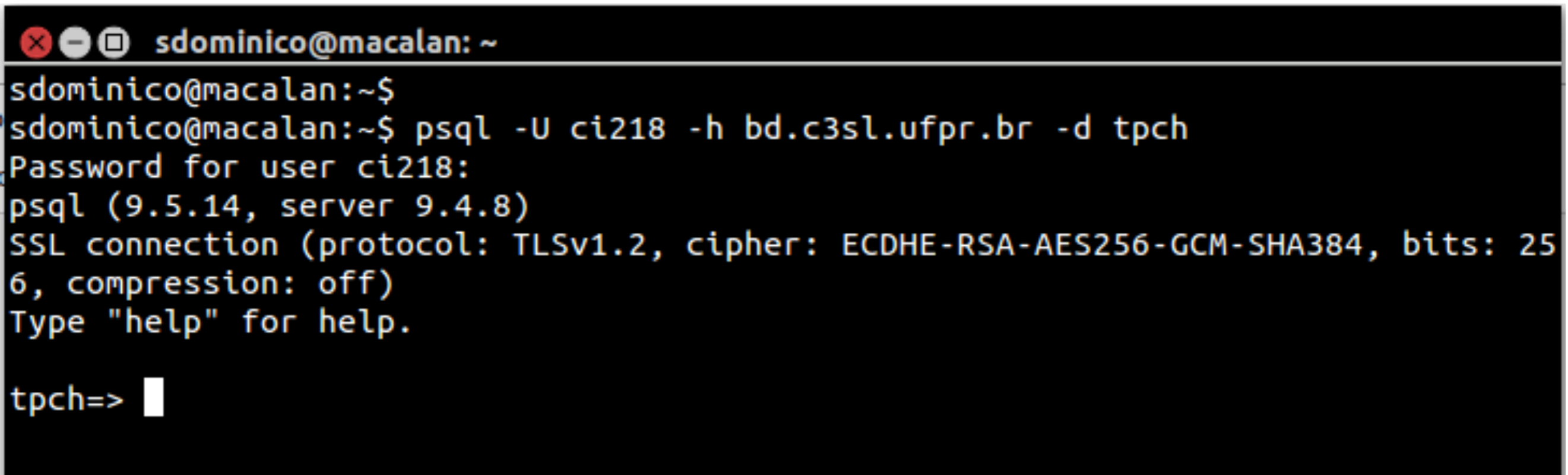
```
sdominico@macalan: ~
```

```
sdominico@macalan:~$
```

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

INICIANDO O TERMINAL

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



```
sdominico@macalan: ~  
sdominico@macalan:~$  
sdominico@macalan:~$ psql -U ci218 -h bd.c3sl.ufpr.br -d tpch  
Password for user ci218:  
psql (9.5.14, server 9.4.8)  
SSL connection (protocol: TLSv1.2, cipher: ECDHE-RSA-AES256-GCM-SHA384, bits: 256, compression: off)  
Type "help" for help.  
tpch=> █
```

COMANDOS ÚTEIS

- ▶ **\d:** lista as tabelas da base de dados.

```
sdominico@macalan: ~
sdominico@macalan:~$
sdominico@macalan:~$ psql -U ci218 -h bd.c3sl.ufpr.br -d tpch
Password for user ci218:
psql (9.5.14, server 9.4.8)
SSL connection (protocol: TLSv1.2, cipher: ECDHE-RSA-AES256-GCM-SHA384, bits: 256, compression: off)
Type "help" for help.

tpch=> \d
          List of relations
 Schema |   Name   | Type  | Owner
-----+-----+-----+-----
 public | customer | table | eduardo
 public | lineitem | table | eduardo
 public | nation   | table | eduardo
 public | orders   | table | eduardo
 public | part     | table | eduardo
 public | partsupp | table | eduardo
 public | region   | table | eduardo
 public | supplier | table | eduardo
(8 rows)

tpch=> █
```

COMANDOS ÚTEIS

- ▶ **\d nome tabela:** Descreve todos os atributos da tabela e suas propriedades

```
tpch=> \d customer
Table "public.customer"
  Column          |          Type          | Modifiers
-----+-----+-----
 c_custkey       | integer                | not null
 c_name          | character varying(25) | not null
 c_address       | character varying(40) | not null
 c_nationkey     | integer                | not null
 c_phone         | character(15)          | not null
 c_acctbal       | numeric(15,2)          | not null
 c_mktsegment    | character(10)          | not null
 c_comment       | character varying(117)| not null

tpch=> █
```


COMANDOS ÚTEIS

- ▶ **\l**: Lista o nome, dono e codificação.

```
tpch=> \l
```

List of databases					
Name	Owner	Encoding	Collate	Ctype	Access privileges
bdproduto	carmem	UTF8	pt_BR.UTF-8	pt_BR.UTF-8	
bduniv	carmem	UTF8	pt_BR.UTF-8	pt_BR.UTF-8	
postgres	postgres	UTF8	pt_BR.UTF-8	pt_BR.UTF-8	
rest	carmem	UTF8	pt_BR.UTF-8	pt_BR.UTF-8	
template0	postgres	UTF8	pt_BR.UTF-8	pt_BR.UTF-8	=c/postgres + postgres=CTc/postgres
template1	postgres	UTF8	pt_BR.UTF-8	pt_BR.UTF-8	=c/postgres + postgres=CTc/postgres
tpch	eduardo	UTF8	pt_BR.UTF-8	pt_BR.UTF-8	

(7 rows)

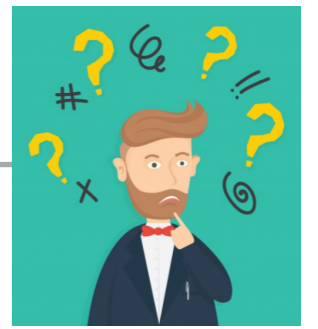
COMANDOS ÚTEIS

\q: Terminar o programa psql.

```
tpch=> \q
sdominico@macalan:~$
sdominico@macalan:~$ █
```

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

CRIANDO INSTRUÇÕES SQL



- ▶ **As instruções SQL sem distinção de maiúsculas e minúsculas.**
- ▶ **Podem estar em uma ou mais linhas.**
- ▶ **Palavras chaves não podem ser abreviadas ou divididas em outras linhas.**
- ▶ **Cláusulas são colocadas em linhas separadas.**

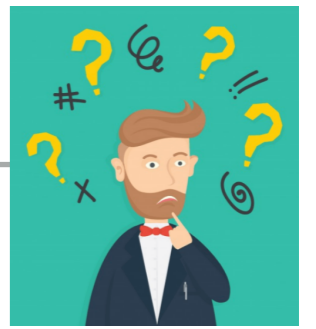
SELECCIONANDO TODAS AS COLUNAS

```
tpch=> select * from region;
```

SELECCIONANDO TODAS AS COLUMNAS

```
tpch=> select * from region;
```

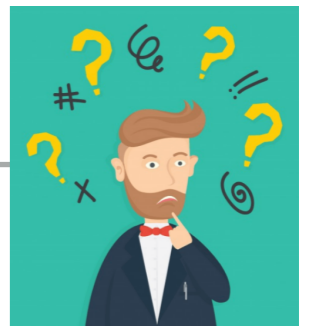
```
r_regionkey |             r_name             |
              |             r_comment             |
-----+-----+-----
              |             |
          0 | AFRICA          | lar deposits. blithely final
packages cajole. regular waters are final requests. regular accounts are
according to
          1 | AMERICA          | hs use ironic, even requests.
s
          2 | ASIA             | ges. thinly even pinto beans
ca
          3 | EUROPE           | ly final courts cajole furiou
sly final excuse
          4 | MIDDLE EAST      | uickly special accounts cajol
e carefully blithely close requests. carefully final asymptotes haggle f
uriousl
(5 rows)
```



EXPRESSÕES ARITMÉTICAS

- ▶ **Dados do tipo numéricos e datas**
- ▶ **+ : Adicionar.**
- ▶ **- : Subtrair.**
- ▶ *** : multiplicar.**
- ▶ **/ : dividir.**

EXPRESSIONES ARITMÉTICAS



```
tpch=> select p_name, p_size, p_size+100 from part;
```

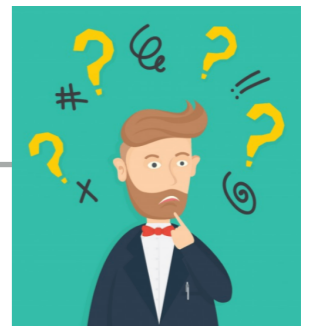


EXPRESSÕES ARITMÉTICAS

```
tpch=> select p_name, p_size, p_size+100 from part;
```

p_name	p_size	?column?
goldenrod lavender spring chocolate lace	7	107
blush thistle blue yellow saddle	1	101
spring green yellow purple cornsilk	21	121
cornflower chocolate smoke green pink	14	114
forest brown coral puff cream	15	115
bisque cornflower lawn forest magenta	4	104
moccasin green thistle khaki floral	45	145
misty lace thistle snow royal	41	141

EXPRESSÕES ARITMÉTICAS



```
tpch=> select p_name, p_size, p_size+100 from part;
```

p_name	p_size	?column?
goldenrod lavender spring chocolate lace	7	107
blush thistle blue yellow saddle	1	101
spring green yellow purple cornsilk	21	121
cornflower chocolate smoke green pink	14	114
forest brown coral puff cream	15	115
bisque cornflower lawn forest magenta	4	104
moccasin green thistle khaki floral	45	145
misty lace thistle snow royal	41	141

EXPRESSÕES ARITMÉTICAS – PRECEDÊNCIA DO OPERADOR

```
tpch=> select p_name, p_size, 2*p_size+100 from part;
```

EXPRESSÕES ARITMÉTICAS – PRECEDÊNCIA

```
tpch=> select p_name, p_size, 2*p_size+100 from part;
```

p_name	p_size	?column?
goldenrod lavender spring chocolate lace	7	114
blush thistle blue yellow saddle	1	102
spring green yellow purple cornsilk	21	142
cornflower chocolate smoke green pink	14	128
forest brown coral puff cream	15	130
bisque cornflower lawn forest magenta	4	108
moccasin green thistle khaki floral	45	190
misty lace thistle snow royal	41	182
thistle dim navajo dark gainsboro	12	124
linen pink saddle puff powder	44	188
spring maroon seashell almond orchid	43	186

EXPRESSÕES ARITMÉTICAS – PRECEDÊNCIA DO OPERADOR

```
tpch=> select p_name, p_size, 2*p_size+100 from part;
```

p_name	p_size	?column?
goldenrod lavender spring chocolate lace	7	114
blush thistle blue yellow saddle	1	102
spring green yellow purple cornsilk	21	142
cornflower chocolate smoke green pink	14	128
forest brown coral puff cream	15	130
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linen pink saddle puff powder	44	188
spring maroon seashell almond orchid	43	186

EXPRESSÕES ARITMÉTICAS – USANDO PARÊNTESES

```
tpch=> select p_name, p_size, 2*(p_size+100) from part;
```

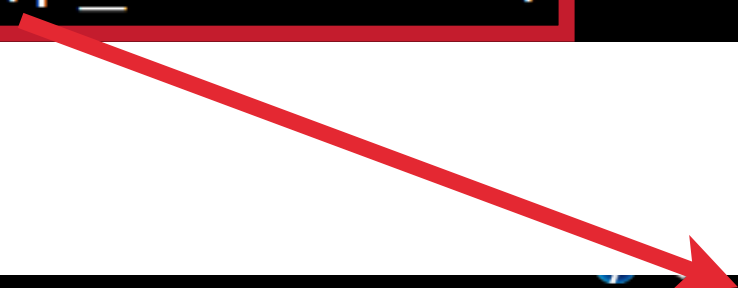
EXPRESSÕES ARITMÉTICAS – USANDO PARÊNTESES

```
tpch=> select p_name, p_size, 2*(p_size+100) from part;
```

p_name	p_size	?column?
goldenrod lavender spring chocolate lace	7	214
blush thistle blue yellow saddle	1	202
spring green yellow purple cornsilk	21	242
cornflower chocolate smoke green pink	14	228
forest brown coral puff cream	15	230
bisque cornflower lawn forest magenta	4	208
moccasin green thistle khaki floral	45	290
misty lace thistle snow royal	41	282
thistle dim navajo dark gainsboro	12	224
linen pink saddle puff powder	44	288
spring maroon seashell almond orchid	43	286

EXPRESSÕES ARITMÉTICAS – USANDO PARÊNTESES

```
tpch=> select p_name, p_size, 2*(p_size+100) from part;
```



p_name	p_size	?column?
goldenrod lavender spring chocolate lace	7	214
blush thistle blue yellow saddle	1	202
spring green yellow purple cornsilk	21	242
cornflower chocolate smoke green pink	14	228
forest brown coral puff cream	15	230
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thistle dim navajo dark gainsboro	12	224
linen pink saddle puff powder	44	288
spring maroon seashell almond orchid	43	286

APELIDO DE COLUNA

```
tpch=> select p_name, p_size, 2*p_size+100 from part;
```

p_name	p_size	?column?
goldenrod lavender spring chocolate lace	7	114
blush thistle blue yellow saddle	1	102
spring green yellow purple cornsilk	21	142
cornflower chocolate smoke green pink	14	128
forest brown coral puff cream	15	130
bisque cornflower lawn forest magenta	4	108
moccasin green thistle khaki floral	45	190
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thistle dim navajo dark gainsboro	12	124
linen pink saddle puff powder	44	188
spring maroon seashell almond orchid	43	186

APELIDO DE COLUNA

```
tpch=> select p_name, p_size, 2*p_size+100 as calc from part;
```

APELIDO DE COLUNA

```
tpch=> select p_name, p_size, 2*p_size+100 as calc from part;
```

p_name	p_size	calc
goldenrod lavender spring chocolate lace	7	114
blush thistle blue yellow saddle	1	102
spring green yellow purple cornsilk	21	142
cornflower chocolate smoke green pink	14	128
forest brown coral puff cream	15	130
bisque cornflower lawn forest magenta	4	108
moccasin green thistle khaki floral	45	190
misty lace thistle snow royal	41	182
thistle dim navajo dark gainsboro	12	124
linen pink saddle puff powder	44	188
spring maroon seashell almond orchid	43	186

OPERADOR DE CONCATENAÇÃO

```
tpch=> select p_name || p_type as NewName from part;
```

OPERADOR DE CONCATENAÇÃO

```
tpch=> select p_name || p_type as NewName from part;
```

newname

goldenrod lavender spring chocolate lacePROMO BURNISHED COPPER
blush thistle blue yellow saddleLARGE BRUSHED BRASS
spring green yellow purple cornsilkSTANDARD POLISHED BRASS
cornflower chocolate smoke green pinkSMALL PLATED BRASS
forest brown coral puff creamSTANDARD POLISHED TIN
bisque cornflower lawn forest magentaPROMO PLATED STEEL
moccasin green thistle khaki floralSMALL PLATED COPPER
misty lace thistle snow royalPROMO BURNISHED TIN
thistle dim navajo dark gainsboroSMALL BURNISHED STEEL
linen pink saddle puff powderLARGE BURNISHED STEEL

STRINGS LITERAIS DE CARACTERES

```
tpch=> select p_name || ' is a ' || p_type as "NewName type" from part;
```

STRINGS LITERAIS DE CARACTERES

```
tpch=> select p_name || ' is a ' || p_type as "NewName type" from part;
```

NewName type

goldenrod lavender spring chocolate lace is a PROMO BURNISHED COPPER
blush thistle blue yellow saddle is a LARGE BRUSHED BRASS
spring green yellow purple cornsilk is a STANDARD POLISHED BRASS
cornflower chocolate smoke green pink is a SMALL PLATED BRASS
forest brown coral puff cream is a STANDARD POLISHED TIN
bisque cornflower lawn forest magenta is a PROMO PLATED STEEL
moccasin green thistle khaki floral is a SMALL PLATED COPPER
misty lace thistle snow royal is a PROMO BURNISHED TIN
thistle dim navajo dark gainsboro is a SMALL BURNISHED STEEL

STRINGS LITERAIS DE CARACTERES

```
tpch=> select p_name || ' is a ' || p_type as "NewName type" from part;
```

NewName type

```
goldenrod lavender spring chocolate lace is a PROMO BURNISHED COPPER  
blush thistle blue yellow saddle is a LARGE BRUSHED BRASS  
spring green yellow purple cornsilk is a STANDARD POLISHED BRASS  
cornflower chocolate smoke green pink is a SMALL PLATED BRASS  
forest brown coral puff cream is a STANDARD POLISHED TIN  
bisque cornflower lawn forest magenta is a PROMO PLATED STEEL  
moccasin green thistle khaki floral is a SMALL PLATED COPPER  
misty lace thistle snow royal is a PROMO BURNISHED TIN  
thistle dim navajo dark gainsboro is a SMALL BURNISHED STEEL
```

STRINGS LITERAIS DE CARACTERES

```
tpch=> select p_name || ' is a ' || p_type as "NewName type" from part;
```

NewName type

```
goldenrod lavender spring chocolate lace is a PROMO BURNISHED COPPER  
blush thistle blue yellow saddle is a LARGE BRUSHED BRASS  
spring green yellow purple cornsilk is a STANDARD POLISHED BRASS  
cornflower chocolate smoke green pink is a SMALL PLATED BRASS  
forest brown coral puff cream is a STANDARD POLISHED TIN  
bisque cornflower lawn forest magenta is a PROMO PLATED STEEL  
moccasin green thistle khaki floral is a SMALL PLATED COPPER  
misty lace thistle snow royal is a PROMO BURNISHED TIN  
thistle dim navajo dark gainsboro is a SMALL BURNISHED STEEL
```

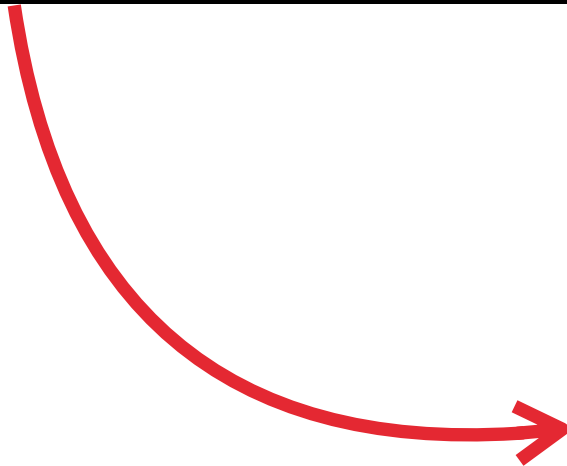
LINHAS DUPLICADAS

```
tpch=> select c_mktsegment from customer;
```

LINHAS DUPLICADAS

```
tpch=> select c_mktsegment from customer;
```

150000 rows



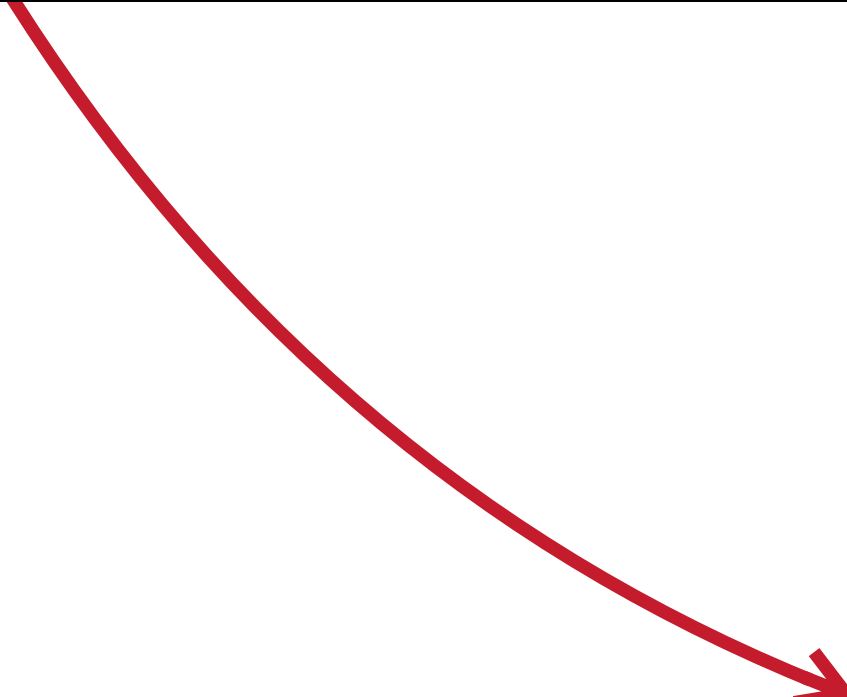
```
c_mktsegment  
-----  
BUILDING  
AUTOMOBILE  
AUTOMOBILE  
MACHINERY  
HOUSEHOLD  
AUTOMOBILE  
AUTOMOBILE  
BUILDING  
FURNITURE  
HOUSEHOLD
```

ELIMINANDO LINHAS DUPLICADAS

```
tpch=> select distinct c_mktsegment from customer;
```

ELIMINANDO LINHAS DUPLICADAS

```
tpch=> select distinct c_mktsegment from customer;
```



```
c_mktsegment  
-----  
FURNITURE  
MACHINERY  
AUTOMOBILE  
BUILDING  
HOUSEHOLD  
(5 rows)
```

EXERCÍCIOS

EXERCÍCIOS – SAÍDA

1. Listar todos os dados da tabela Nation.

```
n_nationkey |          n_name          | n_regionkey |          n_comment
-----+-----+-----+-----
          0 | ALGERIA                  |             0 | haggles carefully final deposits detect slyly again
          1 | ARGENTINA                |             1 | all foxes promise slyly according to the regular accounts. bold requests along
          2 | BRAZIL                   |             1 | y alongside of the pending deposits. carefully special packages are about the ironic fo
rger. 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 furious
ly regular d
          5 | ETHIOPIA                 |             0 | ven packages wake quickly. regul
          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 around
          9 | INDONESIA                |             2 | slyly express asymptotes. regular deposits haggle slyly. carefully ironic hockey playe
rs sleep blithely. careful
         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 | rns. blithely bold courts among the closely regular packages use furiously bold platele
ts?
         16 | MOZAMBIQUE               |             0 | s. ironic, unusual asymptotes wake blithely r
         17 | PERU                     |             1 | platelets. blithely pending dependencies use fluffily across the even pinto beans. care
fully silent accoun
         18 | CHINA                    |             2 | c dependencies. furiously express notornis sleep slyly regular accounts. ideas sleep. d
epos
         19 | ROMANIA                  |             3 | ular asymptotes are about the furious multipliers. express dependencies nag above the i
ronically 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. careful
         24 | UNITED STATES            |             1 | y final packages. slow foxes cajole quickly. quickly silent platelets breach ironic acc
ounts. unusual pinto be
(25 rows)
```

EXERCÍCIOS – SAÍDA

2. Listar somente n_comment e n_name.

n_comment	n_name
haggle. carefully final deposits detect slyly agai	ALGERIA
al foxes promise slyly according to the regular accounts. bold requests alon	ARGENTINA
y alongside of the pending deposits. carefully special packages are about the ironic forges. slyly special	BRAZIL
eas hang ironic, silent packages. slyly regular packages are furiously over the tithes. fluffily bold	CANADA
y above the carefully unusual theodolites. final dugouts are quickly across the furiously regular d	EGYPT
ven packages wake quickly. regu	ETHIOPIA
refully final requests. regular, ironi	FRANCE
l platelets. regular accounts x-ray: unusual, regular acco	GERMANY
ss excuses cajole slyly across the packages. deposits print aroun	INDIA
slyly express asymptotes. regular deposits haggle slyly. carefully ironic hockey players sleep blithely. carefull	INDONESIA
efully alongside of the slyly final dependencies.	IRAN
nic deposits boost atop the quickly final requests? quickly regula	IRAQ
ously. final, express gifts cajole a	JAPAN
ic deposits are blithely about the carefully regular pa	JORDAN
pending excuses haggle furiously deposits. pending, express pinto beans wake fluffily past t	KENYA
rns. blithely bold courts among the closely regular packages use furiously bold platelets?	MOROCCO
s. ironic, unusual asymptotes wake blithely r	MOZAMBIQUE
platelets. blithely pending dependencies use fluffily across the even pinto beans. carefully silent accoun	PERU
c dependencies. furiously express notornis sleep slyly regular accounts. ideas sleep. depos	CHINA
ular asymptotes are about the furious multipliers. express dependencies nag above the ironically ironic account	ROMANIA
ts. silent requests haggle. closely express packages sleep across the blithely	SAUDI ARABIA
hely enticingly express accounts. even, final	VIETNAM
requests against the platelets use never according to the quickly regular pint	RUSSIA
eans boost carefully special requests. accounts are. carefull	UNITED KINGDOM
y final packages. slow foxes cajole quickly. quickly silent platelets breach ironic accounts. unusual pinto be	UNITED STATES

(25 rows)

EXERCÍCIOS – SAÍDA

3. Criar uma consulta para exibir as prioridades (o_orderpriority) a partir da tabela orders.

```
o_orderpriority
-----
5-LOW
1-URGENT
5-LOW
5-LOW
5-LOW
4-NOT SPECIFIED
2-HIGH
2-HIGH
3-MEDIUM
3-MEDIUM
4-NOT SPECIFIED
1-URGENT
3-MEDIUM
4-NOT SPECIFIED
3-MEDIUM
3-MEDIUM
1-URGENT
5-LOW
4-NOT SPECIFIED
3-MEDIUM
4-NOT SPECIFIED
5-LOW
4-NOT SPECIFIED
2-HIGH
3-MEDIUM
1-URGENT
4-NOT SPECIFIED
```

1500000 rows

EXERCÍCIOS – SAÍDA

4. Criar uma consulta para exibir os descontos (l_discount) a partir da tabela lineitem.

```
l_discount
-----
0.04
0.09
0.10
0.09
0.10
0.07
0.00
0.06
0.10
0.06
0.01
0.04
0.10
0.03
0.02
0.07
0.08
0.08
0.07
0.08
0.10
0.03
0.08
0.06
0.04
```

6001215 rows

EXERCÍCIOS

5. Qual/quais as consultas executadas corretamente:
1. `select * from nation;`
 2. `select n_name from nation`
 3. `select r_name r_comment from region;`
 4. `select p_name, 12 x p_retailprice from part;`
6. Reescrever as consultas incorretas do exercício 5.

EXERCÍCIOS

7. Exibir o p_name e p_type da tabela part, separado por --- nomeando a coluna com Nome e Tipo.

```
Nome e Tipo
-----
goldenrod lavender spring chocolate lace---PROMO BURNISHED COPPER
blush thistle blue yellow saddle---LARGE BRUSHED BRASS
spring green yellow purple cornsilk---STANDARD POLISHED BRASS
cornflower chocolate smoke green pink---SMALL PLATED BRASS
forest brown coral puff cream---STANDARD POLISHED TIN
bisque cornflower lawn forest magenta---PROMO PLATED STEEL
moccasin green thistle khaki floral---SMALL PLATED COPPER
misty lace thistle snow royal---PROMO BURNISHED TIN
thistle dim navajo dark gainsboro---SMALL BURNISHED STEEL
linen pink saddle puff powder---LARGE BURNISHED STEEL
spring maroon seashell almond orchid---STANDARD BURNISHED NICKEL
cornflower wheat orange maroon ghost---MEDIUM ANODIZED STEEL
ghost olive orange rosy thistle---MEDIUM BURNISHED NICKEL
khaki seashell rose cornsilk navajo---SMALL POLISHED STEEL
blanched honeydew sky turquoise medium---LARGE ANODIZED BRASS
deep sky turquoise drab peach---PROMO PLATED TIN
indian navy coral pink deep---ECONOMY BRUSHED STEEL
turquoise indian lemon lavender misty---SMALL BURNISHED STEEL
chocolate navy tan deep brown---SMALL ANODIZED NICKEL
```

200000 rows