

SQL

◈ **Structured Query Language, ou Linguagem de Consulta Estruturada**

SQL

- ◊ **DQL - Linguagem de Consulta de Dados**
 - ◊ (SELECT)
- ◊ **DML - Linguagem de Manipulação de Dados**
 - ◊ (INSERT, UPDATE, DELETE)
- ◊ **DDL - Linguagem de Definição de Dados**
 - ◊ (CREATE TABLE, INDEX, VIEW)
 - ◊ (ALTER TABLE, INDEX, VIEW)
- ◊ **DCL - Linguagem de Controle de Dados**
 - ◊ GRANT, REVOKE
- ◊ **DTL – Linguagem de Transação de Dados**
 - ◊ (BEGIN TRANSACTION, COMMIT, ROLLBACK)

DQL

- ◆ SELECT DISTINCT FROM WHERE GROUP BY ORDER BY

- ◆ OPERADORES

 - ◆ AND, OR, NOT

 - ◆ <, >, <=, >=, <>

 - ◆ BETWEEN, LIKE, IN

- ◆ AGREGAÇÃO

 - ◆ COUNT, SUM, AVG, MAX, MIN

```
ed=# select * from relacional.clientes;
```

idcliente	cliente	estado	sexo	status
1	Adelina Buenaventura	RJ	M	Silver
2	Adelino Gago	RJ	M	Silver
3	Adélio Lisboa	SE	M	Silver
4	Adérito Bahía	MA	M	Silver
5	Adolfo Patrício	PE	M	Silver
6	Adriana Guedelha	RO	F	Platinum
7	Aida Dorneles	RN	F	Silver
8	Alarico Quintero	AC	M	Silver
9	Alberto Cezimbra	AM	M	Silver
10	Alberto Monsanto	RN	M	Gold
11	Albino Canela	AC	M	Silver
12	Alceste Varanda	RR	F	Silver
13	Alcides Carvalhais	RO	M	Silver
14	Aldo Martins	GO	M	Silver
15	Alexandra Tabares	MG	F	Silver
16	Alfredo Cotrim	SC	M	Silver
17	Almeno Figueira	SC	M	Silver
18	Alvito Peralta	AM	M	Silver
19	Amadeu Martinho	RN	M	Silver
20	Amélia Estévez	PE	F	Silver
21	Ana Homem	RN	F	Silver
22	Ana Peseiro	PA	F	Silver
23	Anacleto Garrau	TO	M	Silver
24	Anacleto Guterres	PI	M	Silver

DQL


```
ed=# select clientes, sexo, status from relacional.clientes
ed-# where status = 'Silver';
```

clientes	sexo	status
(1,"Adelina Buenaventura",RJ,M,Silver)	M	Silver
(2,"Adelino Gago",RJ,M,Silver)	M	Silver
(3,"Adélio Lisboa",SE,M,Silver)	M	Silver
(4,"Adérito Bahía",MA,M,Silver)	M	Silver
(5,"Adolfo Patrício",PE,M,Silver)	M	Silver
(7,"Aida Dorneles",RN,F,Silver)	F	Silver
(8,"Alarico Quintero",AC,M,Silver)	M	Silver
(9,"Alberto Cezimbra",AM,M,Silver)	M	Silver
(11,"Albino Canela",AC,M,Silver)	M	Silver
(12,"Alceste Varanda",RR,F,Silver)	F	Silver
(13,"Alcides Carvalhais",RO,M,Silver)	M	Silver
(14,"Aldo Martins",GO,M,Silver)	M	Silver
(15,"Alexandra Tabares",MG,F,Silver)	F	Silver
(16,"Alfredo Cotrim",SC,M,Silver)	M	Silver
(17,"Almeno Figueira",SC,M,Silver)	M	Silver
(18,"Alvito Peralta",AM,M,Silver)	M	Silver
(19,"Amadeu Martinho",RN,M,Silver)	M	Silver
(20,"Amélia Estévez",PE,F,Silver)	F	Silver
(21,"Ana Homem",RN,F,Silver)	F	Silver
(22,"Ana Peseiro",PA,F,Silver)	F	Silver

```
ed=# select clientes, sexo, status from relacional.clientes
ed-# where status = 'Silver' OR status = 'Platinum';
```

clientes	sexo	status
(1,"Adelina Buenaventura",RJ,M,Silver)	M	Silver
(2,"Adelino Gago",RJ,M,Silver)	M	Silver
(3,"Adélio Lisboa",SE,M,Silver)	M	Silver
(4,"Adérito Bahía",MA,M,Silver)	M	Silver
(5,"Adolfo Patrício",PE,M,Silver)	M	Silver
(6,"Adriana Guedelha",RO,F,Platinum)	F	Platinum
(7,"Aida Dorneles",RN,F,Silver)	F	Silver
(8,"Alarico Quintero",AC,M,Silver)	M	Silver
(9,"Alberto Cezimbra",AM,M,Silver)	M	Silver
(11,"Albino Canela",AC,M,Silver)	M	Silver
(12,"Alceste Varanda",RR,F,Silver)	F	Silver
(13,"Alcides Carvalhais",RO,M,Silver)	M	Silver
(14,"Aldo Martins",GO,M,Silver)	M	Silver
(15,"Alexandra Tabares",MG,F,Silver)	F	Silver
(16,"Alfredo Cotrim",SC,M,Silver)	M	Silver
(17,"Almeno Figueira",SC,M,Silver)	M	Silver
(18,"Alvito Peralta",AM,M,Silver)	M	Silver
(19,"Amadeu Martinho",RN,M,Silver)	M	Silver
(20,"Amélia Estévez",PE,F,Silver)	F	Silver
(21,"Ana Homem",RN,F,Silver)	F	Silver

DQL

```
ed=# select clientes, sexo, status from relacional.clientes
ed-# where status IN('Silver','Platinum');
```

clientes	sexo	status
(1,"Adelina Buenaventura",RJ,M,Silver)	M	Silver
(2,"Adelino Gago",RJ,M,Silver)	M	Silver
(3,"Adélio Lisboa",SE,M,Silver)	M	Silver
(4,"Adérito Bahía",MA,M,Silver)	M	Silver
(5,"Adolfo Patrício",PE,M,Silver)	M	Silver
(6,"Adriana Guedelha",RO,F,Platinum)	F	Platinum
(7,"Aida Dorneles",RN,F,Silver)	F	Silver
(8,"Alarico Quinterno",AC,M,Silver)	M	Silver
(9,"Alberto Cezimbra",AM,M,Silver)	M	Silver
(11,"Albino Canela",AC,M,Silver)	M	Silver
(12,"Alceste Varanda",RR,F,Silver)	F	Silver
(13,"Alcides Carvalhais",RO,M,Silver)	M	Silver
(14,"Aldo Martins",GO,M,Silver)	M	Silver
(15,"Alexandra Tabares",MG,F,Silver)	F	Silver
(16,"Alfredo Cotrim",SC,M,Silver)	M	Silver
(17,"Almeno Figueira",SC,M,Silver)	M	Silver
(18,"Alvito Peralta",AM,M,Silver)	M	Silver
(19,"Amadeu Martinho",RN,M,Silver)	M	Silver
(20,"Amélia Estêvez",PE,F,Silver)	F	Silver
(21,"Ana Homem",RN,F,Silver)	F	Silver
(22,"Ana Peseiro",PA,F,Silver)	F	Silver
(23,"Anacleto Garrau",TO,M,Silver)	M	Silver
(24,"Anacleto Guterres",PI,M,Silver)	M	Silver
(25,"Andreia Carvalhal",SP,F,Silver)	F	Silver

```
ed=# select clientes, sexo, status from relacional.clientes
ed-# where status NOT IN('Silver','Platinum');
```

clientes	sexo	status
(10,"Alberto Monsanto",RN,M,Gold)	M	Gold
(29,"Anna Carvajal",RS,F,Gold)	F	Gold
(50,"Bento Quintão",SP,M,Gold)	M	Gold
(71,"Carmina Dias",AM,F,Gold)	F	Gold
(88,"Cláudio Jorge",TO,M,Gold)	M	Gold
(123,"Dionísio Saltão",PR,M,Gold)	M	Gold
(166,"Firmino Meireles",AM,M,Gold)	M	Gold
(222,"Honorina Villaverde",PE,F,Gold)	F	Gold
(237,"Iracema Rodríguez",BA,F,Gold)	F	Gold

(9 rows)

DQL

```
ed=# select clientes, sexo, status from relacional.clientes
ed=# where cliente like '%Alb%';
```

clientes	sexo	status
(9, "Alberto Cezimbra", AM, M, Silver)	M	Silver
(10, "Alberto Monsanto", RN, M, Gold)	M	Gold
(11, "Albino Canela", AC, M, Silver)	M	Silver
(246, "Jandaíra Albuquerque", SP, F, Silver)	F	Silver

(4 rows)

DQL


```
ed=# select * from relacional.vendas
where total > 6000;
```

idvenda	idvendedor	idcliente	data	total
1	1	1	01-01-2016	8053.60
3	7	31	02-01-2016	6087.00
4	5	1	02-01-2016	13828.60
5	8	120	03-01-2016	26096.66
6	9	74	04-01-2016	18402.00
7	9	191	06-01-2016	7524.20
8	6	2	06-01-2016	12036.60
10	2	202	06-01-2016	8852.00
11	1	3	08-01-2016	16545.25
12	7	32	09-01-2016	11411.88
13	4	136	10-01-2016	15829.70
14	3	249	12-01-2016	6154.36
17	2	79	13-01-2016	15829.70
18	10	136	14-01-2016	16996.36
22	2	74	17-01-2016	7652.04
25	2	58	19-01-2016	11290.19
26	2	74	21-01-2016	8979.84
30	4	218	23-01-2016	7128.70

```
ed=# select * from relacional.vendas
ed=# where total between 6000 and 8000;
```

idvenda	idvendedor	idcliente	data	total
3	7	31	02-01-2016	6087.00
7	9	191	06-01-2016	7524.20
14	3	249	12-01-2016	6154.36
22	2	74	17-01-2016	7652.04
30	4	218	23-01-2016	7128.70
37	7	192	27-01-2016	6510.16
44	2	185	02-02-2016	7524.20
46	8	58	03-02-2016	7296.08
54	1	185	11-02-2016	7753.70
60	4	136	14-02-2016	7901.00
63	10	191	20-02-2016	7820.85
67	4	191	22-02-2016	6678.50
73	3	89	27-02-2016	7038.77
80	6	54	04-03-2016	7233.50
83	8	54	09-03-2016	7196.40
90	4	115	15-03-2016	7205.75
93	9	186	17-03-2016	7038.77

DQL


```
ed=# select count(*) from relacional.vendas;  
count
```

```
-----  
400  
(1 row)
```

-> total de vendas

```
ed=# select count(*) from relacional.vendas  
where total > 6000;  
count
```

```
-----  
214  
(1 row)
```

DQL

```
ed=# select distinct status from relacional.clientes;
```

status
Silver
Gold
Platinum

(3 rows)

```
ed=# select idvendedor, count(idvendedor) from relacional.vendas
ed=# group by idvendedor;
```

idvendedor	count
8	30
10	46
9	43
7	38
1	38
5	39
4	37
2	50
6	35
3	44

(10 rows)

→ Don't
Vendas

Casa
Venda de 20?

tem

DQL