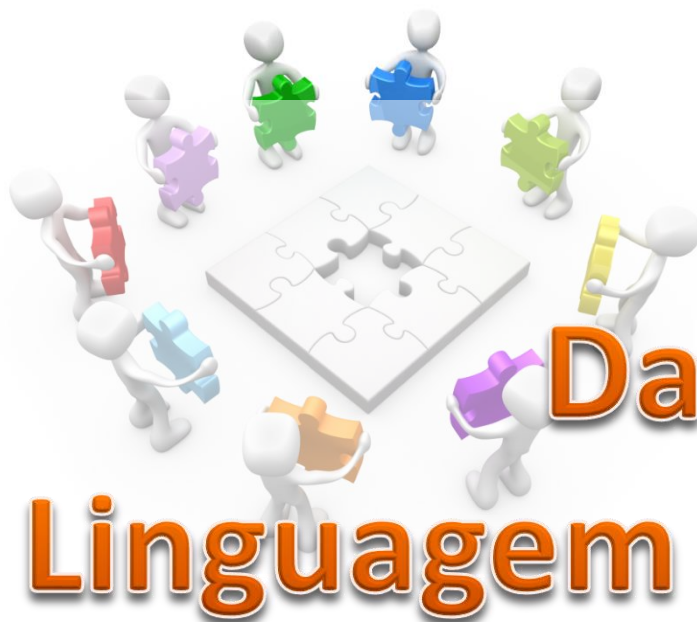


Banco de Dados



SQL – DML

Data Manipulation Language
Linguagem de Manipulação de Dados

***** Segunda Parte *****



MySQL – Data Manipulation Language



- Um empório de cervejas deseja catalogar sua coleção de cervejas. Para isso será necessário modelar um banco de dados que permita o registro do nome da cerveja, volume em ml, teor alcoólico, temperatura ideal para consumo e o país de origem.
- O país de origem deve respeitar a tabela de países fornecida pela Divisão de Estatísticas das Nações Unidas, que consiste em siglas de três caracteres alpha numéricos.
- A temperatura ideal consiste em valor mínimo e máximo.
- Os dados referentes a temperatura ideal e teor alcoólico não são obrigatórios.



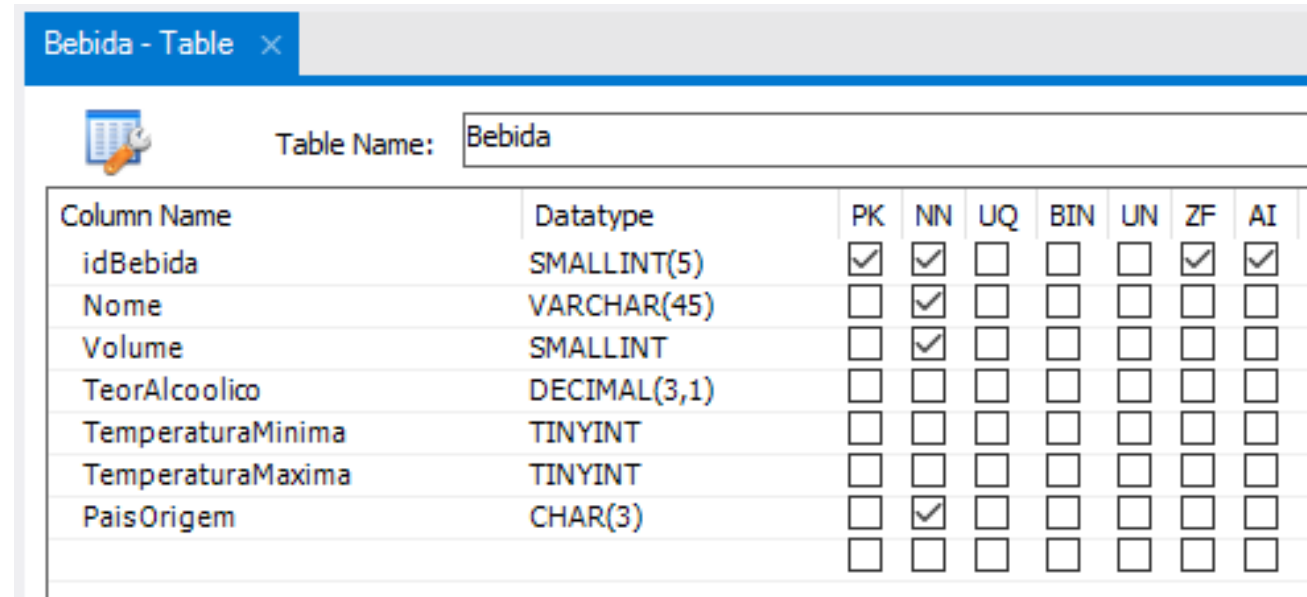


MySQL – Data Manipulation Language



**Modelo de
Dados?**







MySQL – Data Manipulation Language



Bebida	
idBebida	SMALLINT(5)
Nome	VARCHAR(45)
Volume	SMALLINT
TeorAlcoolico	DECIMAL(3,1)
TemperaturaMinima	TINYINT
TemperaturaMaxima	TINYINT
PaisOrigem	CHAR(3)
Indexes	
PRIMARY	



```
CREATE TABLE Bebida (  
    idBebida SMALLINT(5) UNSIGNED ZEROFILL NOT NULL AUTO_INCREMENT,  
    Nome VARCHAR(45) NOT NULL,  
    Volume SMALLINT NOT NULL,  
    TeorAlcoolico DECIMAL(3,1) ,  
    TemperaturaMinima TINYINT(4) ,  
    TemperaturaMaxima TINYINT(4) ,  
    PaisOrigem CHAR(3) NOT NULL,  
    PRIMARY KEY (idBebida)  
);
```



MySQL – Data Manipulation Language



```
INSERT INTO Bebida (Nome, Volume, TeorAlcoolico,  
                   TemperaturaMinima, TemperaturaMaxima, PaisOrigem)  
VALUES('Brahma Extra Weiss', 355, 4.9, 0, 4, 'BRA');
```



`SELECT * FROM Bebida;`

Result Grid							
Filter Rows:		Edit:		Export/Import:		Wrap Cell Content:	
idBebida	Nome	Volume	TeorAlcoolico	TemperaturaMinima	TemperaturaMaxima	PaisOrigem	
00001	Brahma Extra Weiss	355	4.9	0	4	BRA	



MySQL – Data Manipulation Language



```
INSERT INTO Bebida (idBebida, Nome, Volume, TeorAlcoolico,  
                    TemperaturaMinima, TemperaturaMaxima, PaisOrigem)  
VALUES(2, 'Antarctica Cristal', 355, 5.5, 0, 4, 'BRA');
```



`SELECT * FROM Bebida;`

Result Grid							
		Filter Rows:			Edit:	Export/Import:	Wrap Cell Content
	idBebida	Nome	Volume	TeorAlcoolico	TemperaturaMinima	TemperaturaMaxima	PaisOrigem
	00001	Brahma Extra Weiss	355	4.9	0	4	BRA
	00002	Antarctica Cristal	355	5.5	0	4	BRA



MySQL – Data Manipulation Language



```
INSERT INTO Bebida (Nome, Volume, TeorAlcoolico,  
                   TemperaturaMinima, TemperaturaMaxima, PaisOrigem)  
VALUES('Bohemia Pilsen', 355, 5.0, 0, 4, 'BRA'),  
      ('Negra Modelo Long Neck', 355, 4.8, 5, 7, 'MEX'),  
      ('Budweiser', 343, 5.0, 0, 4, 'USA'),  
      ('Stella Artois', 275, 5.2, 0, 4, 'BEL'),  
      ('Coronita Extra', 210, 4.6, 0, 4, 'MEX'),  
      ('Skol Beats', 330, 5.2, 0, 4, 'BRA'),  
      ('Antarctica Original', 600, 5.0, 0, 4, 'BRA'),  
      ('Hoegaarden White', 330, 4.9, 5, 7, 'BEL'),  
      ('Norteña', 960, 5.0, 0, 4, 'URY'),  
      ('Bourbon County Stout', 360, 13.0, 8, 12, 'USA');
```



D'OH!





MySQL – Data Manipulation Language



Result Grid Filter Rows: <input type="text"/> Edit: Export/Import: Wrap Cell Content:							
	idBebida	Nome	Volume	TeorAlcoolico	TemperaturaMinima	TemperaturaMaxima	PaisOrigem
	00001	Brahma Extra Weiss	355	4.9	0	4	BRA
	00002	Antarctica Cristal	355	5.5	0	4	BRA
	00003	Bohemia Pilsen	355	5.0	0	4	BRA
	00004	Negra Modelo Long Neck	355	4.8	5	7	MEX
	00005	Budweiser	343	5.0	0	4	USA
	00006	Stella Artois	275	5.2	0	4	BEL
	00007	Coronita Extra	210	4.6	0	4	MEX
	00008	Skol Beats	330	5.2	0	4	BRA
	00009	Antarctica Original	600	5.0	0	4	BRA
	00010	Hoegaarden White	330	4.9	5	7	BEL
	00011	Norteña	960	5.0	0	4	URY
	00012	Bourbon County Stout	360	13.0	8	12	USA



```
SELECT * FROM Bebida;
```



MySQL – Data Manipulation Language



```
SELECT * FROM Bebida;
```



=

```
SELECT b.idBebida, b.Nome, b.Volume, b.TeorAlcoolico,  
       b.TemperaturaMinima, b.TemperaturaMaxima, b.PaisOrigem  
FROM Bebida b;
```

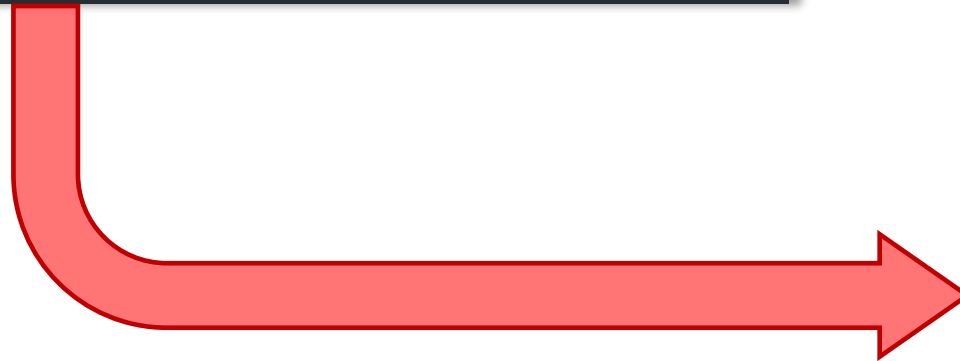




MySQL – Data Manipulation Language



```
SELECT b.idBebida, b.Nome FROM Bebida b;
```



Result Grid			Filter Rows:
	idBebida	Nome	
	00001	Brahma Extra Weiss	
	00002	Antarctica Cristal	
	00003	Bohemia Pilsen	
	00004	Negra Modelo Long Neck	
	00005	Budweiser	
	00006	Stella Artois	
	00007	Coronita Extra	
	00008	Skol Beats	
	00009	Antarctica Original	
	00010	Hoegaarden White	
	00011	Norteña	
	00012	Bourbon County Stout	



MySQL – Data Manipulation Language



```
SELECT b.PaisOrigem, b.idBebida, b.Nome FROM Bebida b;
```



Result Grid			
Filter Rows:			
	PaisOrigem	idBebida	Nome
	BRA	00001	Brahma Extra Weiss
	BRA	00002	Antarctica Cristal
	BRA	00003	Bohemia Pilsen
	MEX	00004	Negra Modelo Long Neck
	USA	00005	Budweiser
	BEL	00006	Stella Artois
	MEX	00007	Coronita Extra
	BRA	00008	Skol Beats
	BRA	00009	Antarctica Original
	BEL	00010	Hoegaarden White
	URY	00011	Norteña
	USA	00012	Bourbon County Stout




MySQL – Data Manipulation Language



```
SELECT b.PaisOrigem, b.idBebida, b.Nome  
FROM Bebida b  
ORDER BY b.PaisOrigem;
```



Result Grid  Filter Rows: <input type="text"/>			
	PaisOrigem	idBebida	Nome
	BEL	00010	Hoegaarden White
	BEL	00006	Stella Artois
	BRA	00001	Brahma Extra Weiss
	BRA	00002	Antarctica Cristal
	BRA	00003	Bohemia Pilsen
	BRA	00009	Antarctica Original
	BRA	00008	Skol Beats
	MEX	00007	Coronita Extra
	MEX	00004	Negra Modelo Long Neck
	URY	00011	Norteña
	USA	00005	Budweiser
	USA	00012	Bourbon County Stout



MySQL – Data Manipulation Language



```
SELECT b.PaisOrigem, b.idBebida, b.Nome  
FROM Bebida b  
ORDER BY b.PaisOrigem;
```



```
SELECT b.PaisOrigem, b.idBebida, b.Nome  
FROM Bebida b  
ORDER BY b.PaisOrigem ASC;
```



MySQL – Data Manipulation Language



```
SELECT b.PaisOrigem, b.idBebida, b.Nome  
FROM Bebida b  
ORDER BY b.PaisOrigem DESC;
```



Result Grid Filter Rows: <input type="text"/>			
	PaisOrigem	idBebida	Nome
	USA	00012	Bourbon County Stout
	USA	00005	Budweiser
	URY	00011	Norteña
	MEX	00007	Coronita Extra
	MEX	00004	Negra Modelo Long Neck
	BRA	00003	Bohemia Pilsen
	BRA	00008	Skol Beats
	BRA	00009	Antarctica Original
	BRA	00002	Antarctica Cristal
	BRA	00001	Brahma Extra Weiss
	BEL	00006	Stella Artois
	BEL	00010	Hoegaarden White



MySQL – Data Manipulation Language



```
SELECT b.PaisOrigem, b.idBebida, b.Nome  
FROM Bebida b  
ORDER BY b.PaisOrigem DESC, b.Nome ASC;
```



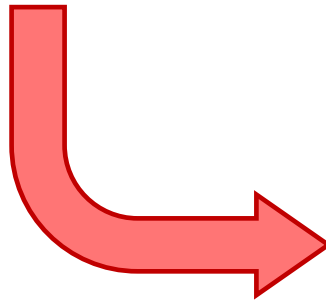
Result Grid			
		Filter Rows:	
	PaisOrigem	idBebida	Nome
	USA	00012	Bourbon County Stout
	USA	00005	Budweiser
	URY	00011	Norteña
	MEX	00007	Coronita Extra
	MEX	00004	Negra Modelo Long Neck
	BRA	00002	Antarctica Cristal
	BRA	00009	Antarctica Original
	BRA	00003	Bohemia Pilsen
	BRA	00001	Brahma Extra Weiss
	BRA	00008	Skol Beats
	BEL	00010	Hoegaarden White
	BEL	00006	Stella Artois



MySQL – Data Manipulation Language



```
SELECT b.idBebida, b.Nome, b.TeorAlcoolico, b.PaisOrigem  
FROM Bebida b  
WHERE b.idBebida = 2;
```



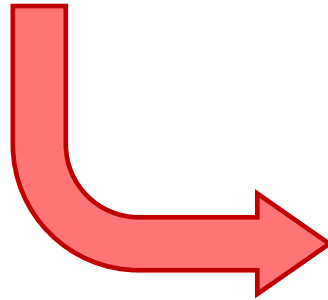
Result Grid					Filter Rows:	Edit:
	idBebida	Nome	TeorAlcoolico	PaisOrigem		
	00002	Antarctica Cristal	5.5	BRA		





MySQL – Data Manipulation Language





```
SELECT b.idBebida, b.Nome, b.TeorAlcoolico, b.PaisOrigem
FROM Bebida b
WHERE b.idBebida <> 5
ORDER BY b.idBebida;
```



Result Grid

Filter Rows:

Edit:



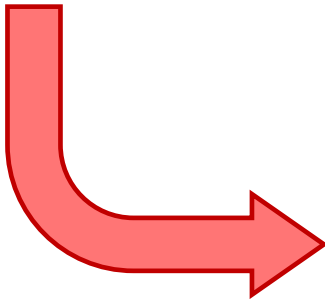
	idBebida	Nome	TeorAlcoolico	PaisOrigem
	00001	Brahma Extra Weiss	4.9	BRA
	00002	Antarctica Cristal	5.5	BRA
	00003	Bohemia Pilsen	5.0	BRA
	00004	Negra Modelo Long Neck	4.8	MEX
	00006	Stella Artois	5.2	BEL
	00007	Coronita Extra	4.6	MEX
	00008	Skol Beats	5.2	BRA
	00009	Antarctica Original	5.0	BRA
	00010	Hoegaarden White	4.9	BEL
	00011	Norteña	5.0	URY
	00012	Bourbon County Stout	13.0	USA






MySQL – Data Manipulation Language



```
SELECT b.idBebida, b.Nome, b.TeorAlcoolico, b.PaisOrigem
FROM Bebida b
WHERE b.idBebida < 4
ORDER BY b.idBebida;
```



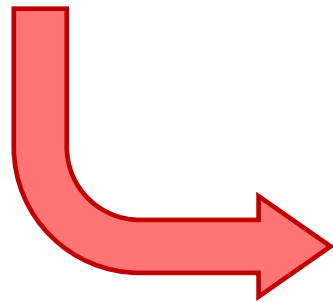
Result Grid   Filter Rows: <input type="text"/> Edit: 				
	idBebida	Nome	TeorAlcoolico	PaisOrigem
	00001	Brahma Extra Weiss	4.9	BRA
	00002	Antarctica Cristal	5.5	BRA
	00003	Bohemia Pilsen	5.0	BRA



MySQL – Data Manipulation Language



```
SELECT b.idBebida, b.Nome, b.TeorAlcoolico, b.PaisOrigem  
FROM Bebida b  
WHERE b.idBebida <= 4  
ORDER BY b.idBebida;
```



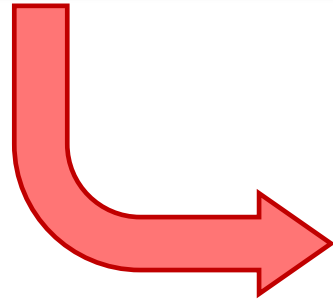
Result Grid					Filter Rows:		Edit:
	idBebida	Nome	TeorAlcoolico	PaisOrigem			
	00001	Brahma Extra Weiss	4.9	BRA			
	00002	Antarctica Cristal	5.5	BRA			
	00003	Bohemia Pilsen	5.0	BRA			
	00004	Negra Modelo Long Neck	4.8	MEX			



MySQL – Data Manipulation Language



```
SELECT b.idBebida, b.Nome, b.TeorAlcoolico, b.PaisOrigem  
FROM Bebida b  
WHERE b.idBebida > 7  
ORDER BY b.idBebida;
```



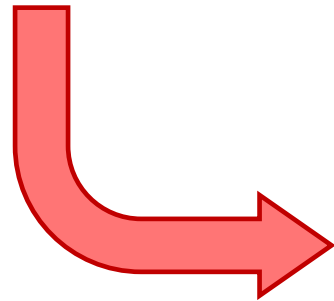
Result Grid					Filter Rows:		Edit:
	idBebida	Nome	TeorAlcoolico	PaisOrigem			
	00008	Skol Beats	5.2	BRA			
	00009	Antarctica Original	5.0	BRA			
	00010	Hoegaarden White	4.9	BEL			
	00011	Norteña	5.0	URY			
	00012	Bourbon County Stout	13.0	USA			



MySQL – Data Manipulation Language



```
SELECT b.idBebida, b.Nome, b.TeorAlcoolico, b.PaisOrigem  
FROM Bebida b  
WHERE b.idBebida >= 7  
ORDER BY b.idBebida;
```



Result Grid Filter Rows: <input type="text"/> Edit:				
	idBebida	Nome	TeorAlcoolico	PaisOrigem
	00007	Coronita Extra	4.6	MEX
	00008	Skol Beats	5.2	BRA
	00009	Antarctica Original	5.0	BRA
	00010	Hoegaarden White	4.9	BEL
	00011	Norteña	5.0	URY
	00012	Bourbon County Stout	13.0	USA



MySQL – Data Manipulation Language



```
SELECT b.idBebida, b.Nome, b.TeorAlcoolico, b.PaisOrigem
FROM Bebida b
WHERE b.idBebida = 2 OR b.idBebida = 7
ORDER BY b.idBebida;
```




Result Grid					Filter Rows:		Edit:
	idBebida	Nome	TeorAlcoolico	PaisOrigem			
	00002	Antarctica Cristal	5.5	BRA			
	00007	Coronita Extra	4.6	MEX			



MySQL – Data Manipulation Language



```
SELECT b.idBebida, b.Nome, b.TeorAlcoolico, b.PaisOrigem
FROM Bebida b
WHERE NOT (b.idBebida = 2 OR b.idBebida = 7)
ORDER BY b.idBebida;
```

Result Grid   Filter Rows: <input type="text"/> Edit:  				
	idBebida	Nome	TeorAlcoolico	PaisOrigem
	00001	Brahma Extra Weiss	4.9	BRA
	00003	Bohemia Pilsen	5.0	BRA
	00004	Negra Modelo Long Neck	4.8	MEX
	00005	Budweiser	5.0	USA
	00006	Stella Artois	5.2	BEL
	00008	Skol Beats	5.2	BRA
	00009	Antarctica Original	5.0	BRA
	00010	Hoegaarden White	4.9	BEL
	00011	Norteña	5.0	URY
	00012	Bourbon County Stout	13.0	USA



MySQL – Data Manipulation Language



```
SELECT b.idBebida, b.Nome, b.TeorAlcoolico, b.PaisOrigem
FROM Bebida b
WHERE b.idBebida >= 5 AND b.TeorAlcoolico > 5.0
ORDER BY b.idBebida;
```

Result Grid					Filter Rows:		Edit:
	idBebida	Nome	TeorAlcoolico	PaisOrigem			
	00006	Stella Artois	5.2	BEL			
	00008	Skol Beats	5.2	BRA			
	00012	Bourbon County Stout	13.0	USA			



MySQL – Data Manipulation Language



```
SELECT b.idBebida, b.Nome, b.TeorAlcoolico, b.PaisOrigem
FROM Bebida b
WHERE b.idBebida >= 5 AND b.idBebida <= 10
ORDER BY b.idBebida;
```

Result Grid					Filter Rows:		Edit:
	idBebida	Nome	TeorAlcoolico	PaisOrigem			
	00005	Budweiser	5.0	USA			
	00006	Stella Artois	5.2	BEL			
	00007	Coronita Extra	4.6	MEX			
	00008	Skol Beats	5.2	BRA			
	00009	Antarctica Original	5.0	BRA			
	00010	Hoegaarden White	4.9	BEL			



MySQL – Data Manipulation Language



```
SELECT b.idBebida, b.Nome, b.TeorAlcoolico, b.PaisOrigem
FROM Bebida b
WHERE b.idBebida BETWEEN 5 AND 10
ORDER BY b.idBebida;
```



Result Grid					Filter Rows:		Edit:
	idBebida	Nome	TeorAlcoolico	PaisOrigem			
	00005	Budweiser	5.0	USA			
	00006	Stella Artois	5.2	BEL			
	00007	Coronita Extra	4.6	MEX			
	00008	Skol Beats	5.2	BRA			
	00009	Antarctica Original	5.0	BRA			
	00010	Hoegaarden White	4.9	BEL			



MySQL – Data Manipulation Language



```
SELECT b.idBebida, b.Nome, b.TeorAlcoolico, b.PaisOrigem
FROM Bebida b
WHERE b.idBebida >= 5 AND b.idBebida <= 10
ORDER BY b.idBebida;
```

```
SELECT b.idBebida, b.Nome, b.TeorAlcoolico, b.PaisOrigem
FROM Bebida b
WHERE b.idBebida BETWEEN 5 AND 10
ORDER BY b.idBebida;
```

Result Grid					Filter Rows:				
	idBebida	Nome	TeorAlcoolico	PaisOrigem					
	00005	Budweiser	5.0	USA					
	00006	Stella Artois	5.2	BEL					
	00007	Coronita Extra	4.6	MEX					
	00008	Skol Beats	5.2	BRA					
	00009	Antarctica Original	5.0	BRA					
	00010	Hoegaarden White	4.9	BEL					



MySQL – Data Manipulation Language



```
SELECT b.idBebida, b.Nome, b.TeorAlcoolico, b.PaisOrigem
FROM Bebida b
WHERE b.idBebida NOT BETWEEN 5 AND 10
ORDER BY b.idBebida;
```

Result Grid

Filter Rows:

Edit:

	idBebida	Nome	TeorAlcoolico	PaisOrigem
	00001	Brahma Extra Weiss	4.9	BRA
	00002	Antarctica Cristal	5.5	BRA
	00003	Bohemia Pilsen	5.0	BRA
	00004	Negra Modelo Long Neck	4.8	MEX
	00011	Norteña	5.0	URY
	00012	Bourbon County Stout	13.0	USA



MySQL – Data Manipulation Language



```
SELECT b.idBebida, b.Nome, b.TeorAlcoolico, b.PaisOrigem  
FROM Bebida b  
WHERE b.idBebida = 2 OR b.idBebida = 4 OR b.idBebida = 12 OR  
      b.idBebida = 8 OR b.idBebida = 5 OR b.idBebida = 13  
ORDER BY b.idBebida;
```

Repetições!!!





MySQL – Data Manipulation Language



```
SELECT b.idBebida, b.Nome, b.TeorAlcoolico, b.PaisOrigem
FROM Bebida b
WHERE b.idBebida IN (2, 4, 12, 8, 5, 13)
ORDER BY b.idBebida;
```



Result Grid					Filter Rows:		Edit:
	idBebida	Nome	TeorAlcoolico	PaisOrigem			
	00002	Antarctica Cristal	5.5	BRA			
	00004	Negra Modelo Long Neck	4.8	MEX			
	00005	Budweiser	5.0	USA			
	00008	Skol Beats	5.2	BRA			
	00012	Bourbon County Stout	13.0	USA			



MySQL – Data Manipulation Language



```
SELECT b.idBebida, b.Nome, b.TeorAlcoolico, b.PaisOrigem
FROM Bebida b
WHERE b.idBebida NOT IN (2, 4, 12, 8, 5, 13)
ORDER BY b.idBebida;
```

Result Grid



Filter Rows:

Edit:



	idBebida	Nome	TeorAlcoolico	PaisOrigem
	00001	Brahma Extra Weiss	4.9	BRA
	00003	Bohemia Pilsen	5.0	BRA
	00006	Stella Artois	5.2	BEL
	00007	Coronita Extra	4.6	MEX
	00009	Antarctica Original	5.0	BRA
	00010	Hoegaarden White	4.9	BEL
	00011	Nortefia	5.0	URY



MySQL – Data Manipulation Language



Exercícios

DER, DDL e DML (Filmes) - 02 de 04

Exercícios - DER, DDL e DML (Filmes) - 02 de 04 – Questões.pdf

- Leia o enunciado com atenção;
- Mantenha a concentração;
- Avance gradativamente;
- Verifique o resultado a cada etapa.