

Resumo do Projeto

1. Baixar o SQL Server 2022 Express

Acesse o link: [SQL Server 2022 Express](#)

2. Instalar o SQL Server Management Studio (SSMS)

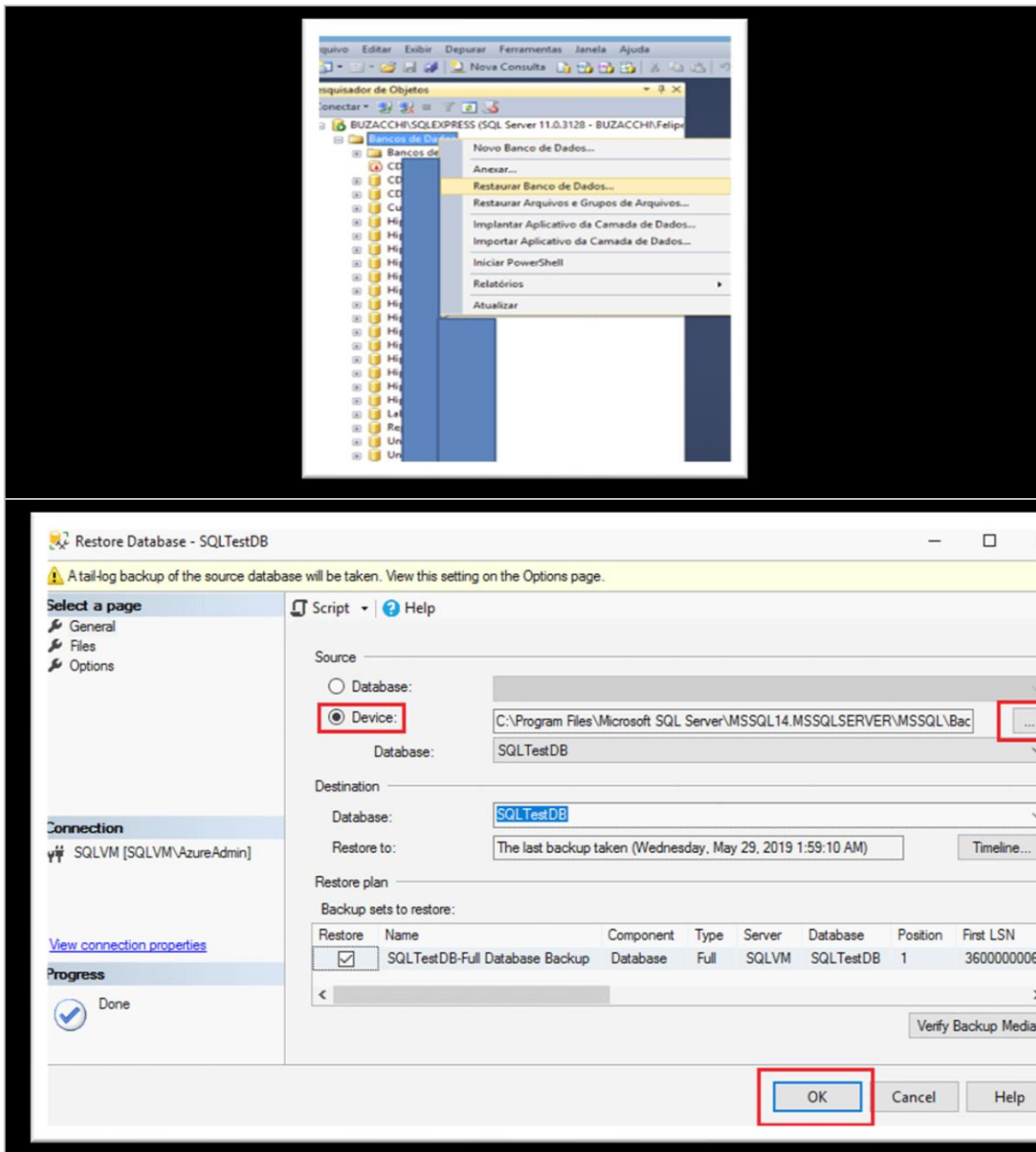
Baixe através do link: [SQL Server Management Studio](#)

3. Baixar o Banco de Dados AdventureWorks2022

Siga as instruções disponíveis em: [AdventureWorks2022 - Instalação e Configuração](#)

4. Restaurar o Banco de Dados no SQL Server Management Studio

Utilize o SSMS para restaurar o banco de dados conforme as instruções fornecidas na Imagem a seguir.



Consulta SQL para Carregar Dados de Vendas

Aqui está uma consulta SQL otimizada que busca as informações solicitadas das tabelas Sales.SalesOrderHeader, Sales.SalesOrderDetail, Person.Address, e Production.Product:

```
1)
SELECT
    SOH.OrderDate,
    SUM(SOH.TotalDue) AS Valor_total,
    A.StateProvinceID,
    A.AddressLine1 AS Nome,
    A.City AS Endereco,
    P.Name AS ProdutoNome,
    P.ProductNumber
FROM
    Sales.SalesOrderHeader AS SOH
INNER JOIN
    Sales.SalesOrderDetail AS SOD ON
    SOH.SalesOrderID =
    SOD.SalesOrderID
INNER JOIN
    Production.Product AS P ON
    SOD.ProductID = P.ProductID
INNER JOIN
    Person.Address AS A ON
    SOH.ShipToAddressID = A.AddressID
GROUP BY
    SOH.OrderDate,
    A.StateProvinceID,
    A.AddressLine1,
    A.City,
    P.Name,
    P.ProductNumber;
```

```
2)
SELECT
    SOH.OrderDate,
    SUM(SOH.TotalDue) AS Valor_total,
    A.StateProvinceID,
    A.AddressLine1 AS Nome,
    A.City AS Endereco,
    SST.Name AS Territorio,
    P.Name AS ProdutoNome,
    P.ProductNumber
FROM
    Sales.SalesOrderHeader AS SOH
INNER JOIN
    Sales.SalesTerritory AS SST ON
    SOH.TerritoryID = SST.TerritoryID
INNER JOIN
    Sales.SalesOrderDetail AS SOD ON
    SOH.SalesOrderID =
    SOD.SalesOrderID
INNER JOIN
    Production.Product AS P ON
    SOD.ProductID = P.ProductID
INNER JOIN
    Person.Address AS A ON
    SOH.ShipToAddressID = A.AddressID
GROUP BY
    SOH.OrderDate,
    A.StateProvinceID,
    A.AddressLine1,
    A.City,
    SST.Name,
    P.Name,
    P.ProductNumber
```

Foi um pouco confuso em relação à parte da região! Acredito que o StateProvinceID não forneceria informações suficientes para análises. Ambos os códigos respondem exatamente ao que foi solicitado, mas a diferença está na coluna (Territorio) utilizada para responder às perguntas a seguir.

Results		Messages						
	OrderDate	Valor_total	StateProvinceID	Nome	Endereco	ProdutoNome	ProductNumber	
1	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	AWC Logo Cap	CA-1098	
2	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	LL Road Frame - Black, 52	FR-R38B-52	
3	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	LL Road Frame - Black, 58	FR-R38B-58	
4	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	LL Road Frame - Red, 44	FR-R38R-44	
5	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	LL Road Frame - Red, 48	FR-R38R-48	
6	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	LL Road Frame - Red, 60	FR-R38R-60	
7	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	LL Road Frame - Red, 62	FR-R38R-62	
8	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Long-Sleeve Logo Jersey, L	LJ-0192-L	
9	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Long-Sleeve Logo Jersey, M	LJ-0192-M	
10	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Long-Sleeve Logo Jersey, XL	LJ-0192-X	
11	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	ML Road Frame - Red, 48	FR-R72R-48	
12	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	ML Road Frame - Red, 52	FR-R72R-52	
13	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Road-150 Red, 56	BK-R93R-56	
14	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Road-450 Red, 44	BK-R68R-44	
15	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Road-450 Red, 52	BK-R68R-52	
16	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Road-450 Red, 58	BK-R68R-58	
17	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Road-450 Red, 60	BK-R68R-60	
18	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Road-650 Black, 44	BK-R50B-44	
19	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Road-650 Black, 52	BK-R50B-52	
20	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Road-650 Black, 58	BK-R50B-58	
21	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Road-650 Black, 60	BK-R50B-60	
22	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Road-650 Red, 44	BK-R50R-44	
23	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Road-650 Red, 48	BK-R50R-48	

	OrderDate	Valor_total	StateProvinceID	Nome	Endereco	Territorio	ProdutoNome	ProductNumber
1	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Canada	AWC Logo Cap	CA-1098
2	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Canada	LL Road Frame - Black, 52	FR-R38B-52
3	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Canada	LL Road Frame - Black, 58	FR-R38B-58
4	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Canada	LL Road Frame - Red, 44	FR-R38R-44
5	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Canada	LL Road Frame - Red, 48	FR-R38R-48
6	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Canada	LL Road Frame - Red, 60	FR-R38R-60
7	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Canada	LL Road Frame - Red, 62	FR-R38R-62
8	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Canada	Long-Sleeve Logo Jersey, L	LJ-0192-L
9	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Canada	Long-Sleeve Logo Jersey, M	LJ-0192-M
10	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Canada	Long-Sleeve Logo Jersey, XL	LJ-0192-X
11	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Canada	ML Road Frame - Red, 48	FR-R72R-48
12	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Canada	ML Road Frame - Red, 52	FR-R72R-52
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19	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Canada	Road-650 Black, 52	BK-R50B-52
20	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Canada	Road-650 Black, 58	BK-R50B-58
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22	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Canada	Road-650 Red, 44	BK-R50R-44
23	2011-05-31 00:00:00.000	40487,7233	7	254480 River Rd	Richmond	Canada	Road-650 Red, 48	BK-R50R-48

Salvei o arquivo e fui para o Jupyter Notebook. Para as próximas etapas, é necessário ter o **Anaconda** instalado para acessar os **arquivos .ipynb e py**. Além do Anaconda, algumas bibliotecas, como **Streamlit e widgets**, também precisam ser instaladas.

Use o CMD.

1 - pip install --upgrade pip setuptools

2 - conda install -c conda-forge notebook jupyter_contrib_nbextensions

3 - pip install jupyter_contrib_nbextensions --no-cache-dir

4 - pip install jupyter_contrib_nbextensions==0.5.1

5 - pip install ipywidgets

Ao seguir essas etapas, você conseguirá acessar a parte de filtragem com widgets para manipular filtros, regiões, produtos e valores. O arquivo Case.ipynb é autoexplicativo e responde às questões solicitadas.

Para acessar o Jupyter, basta digitar: `cd C:\caminhoarquivo\jupyter notebook`

Última questão sobre a visualização com Streamlit: para executá-la, basta abrir o CMD e digitar os seguintes comandos:

1. `cd Caminhoarquivo\`
2. `streamlit run Dashboard_completo.py`