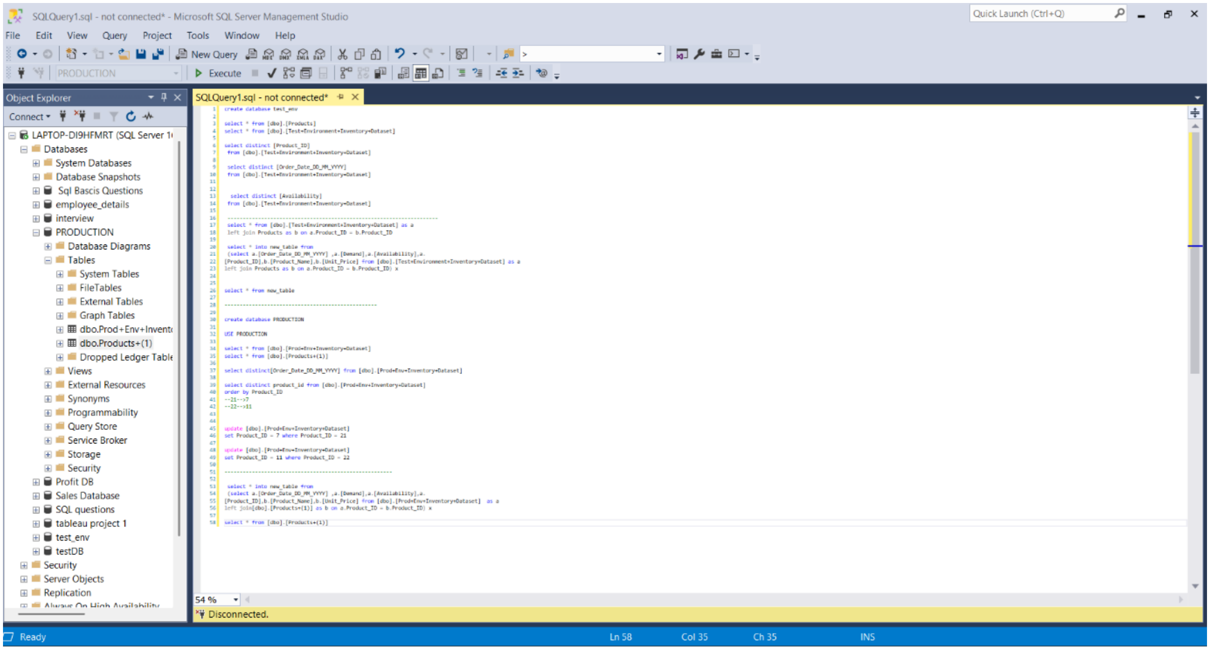
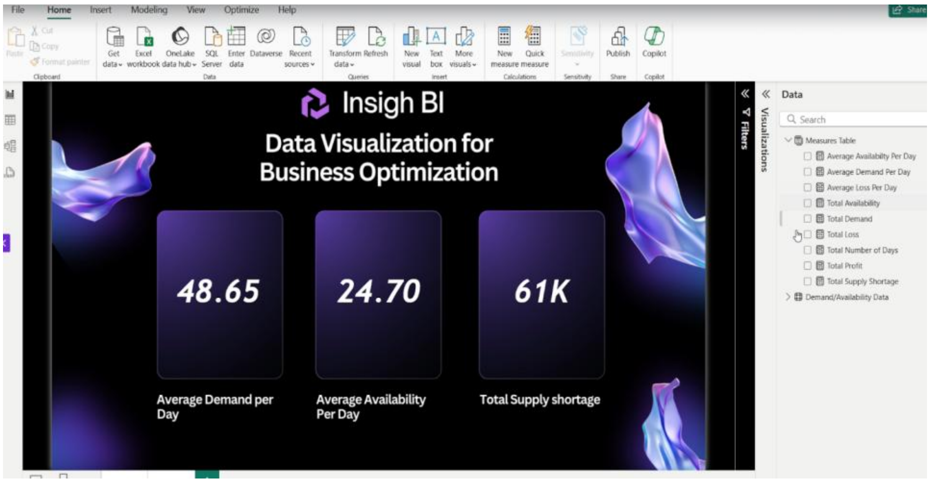
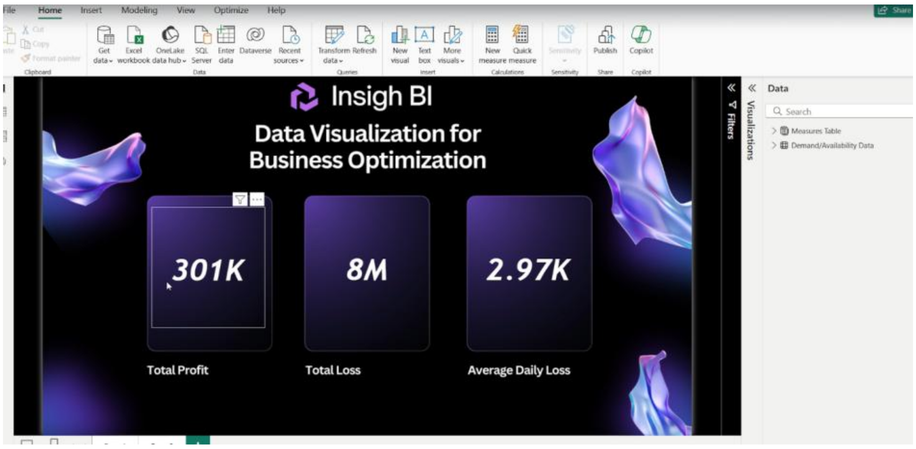
Step 1: Imported the data for the **Test Environment (MSSQL)** and performed necessary **LEFT JOINs** to clean and integrate the data. A similar process was followed for the **Production Environment**, as shown in the figure/code.



```sql
create database test_env

select * from [dbo].[Products]
select * from [dbo].[Test+Environment+Inventory+Dataset]

select distinct [Product_ID]
 from [dbo].[Test+Environment+Inventory+Dataset]

 select distinct [Order_Date_DD_MM_YYYY]
 from [dbo].[Test+Environment+Inventory+Dataset]


  select distinct [Availability]
 from [dbo].[Test+Environment+Inventory+Dataset]

 ----------------------------------------------------------------------
 select * from [dbo].[Test+Environment+Inventory+Dataset] as a
 left join Products as b on a.Product_ID = b.Product_ID

 select * into new_table from
 (select a.[Order_Date_DD_MM_YYYY] ,a.[Demand],a.[Availability],a.
[Product_ID],b.[Product_Name],b.[Unit_Price] from [dbo].[Test+Environment+Inventory+Dataset] as a
left join Products as b on a.Product_ID = b.Product_ID) x


select * from new_table

---------------------------------------------------

create database PRODUCTION

USE PRODUCTION

select * from [dbo].[Prod+Env+Inventory+Dataset]
select * from [dbo].[Products+(1)]

select distinct[Order_Date_DD_MM_YYYY] from [dbo].[Prod+Env+Inventory+Dataset]

select distinct product_id from [dbo].[Prod+Env+Inventory+Dataset]
order by Product_ID
--21-->7
--22-->11


update [dbo].[Prod+Env+Inventory+Dataset]
set Product_ID = 7 where Product_ID = 21

update [dbo].[Prod+Env+Inventory+Dataset]
set Product_ID = 11 where Product_ID = 22

--------------------------------------------------------

 select * into new_table from
 (select a.[Order_Date_DD_MM_YYYY] ,a.[Demand],a.[Availability],a.
[Product_ID],b.[Product_Name],b.[Unit_Price] from [dbo].[Prod+Env+Inventory+Dataset]  as a
left join[dbo].[Products+(1)] as b on a.Product_ID = b.Product_ID) x

select * from [dbo].[Products+(1)]
```

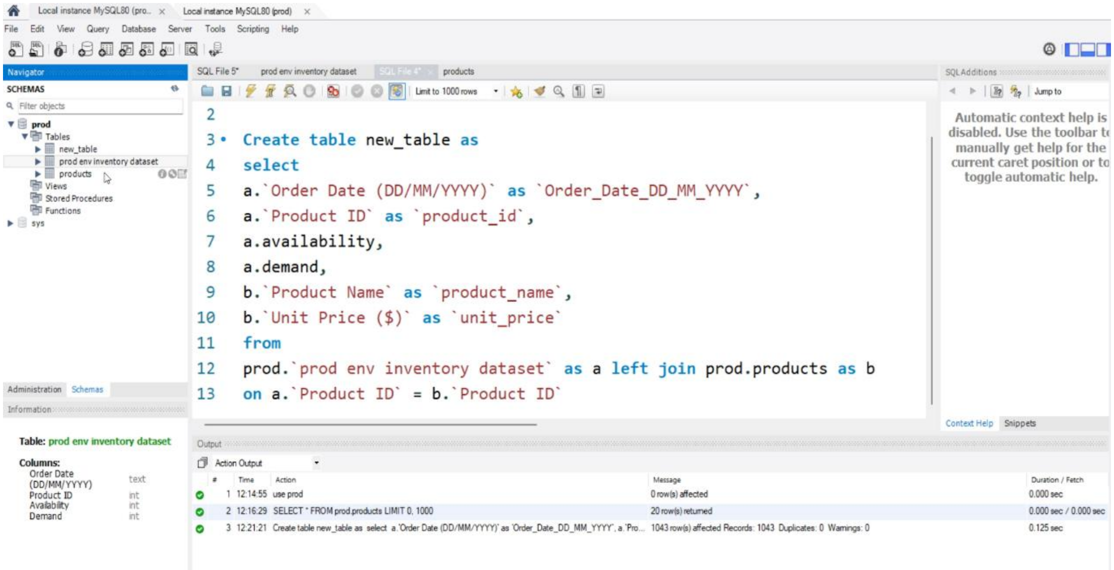
Step 2: Imported the cleaned data into **Power BI** and created custom **DAX measures** and **KPI functions** to calculate key metrics. Separate DAX logic was developed for both **Page 1 (Test Environment)** and **Page 2 (Production Environment)** to enable accurate performance analysis.





Step 3: Imported the data into the **Production Environment** using **MySQL Workbench** by writing equivalent SQL code to generate the required tables. The resulting structured data was then imported into **Power BI** for further analysis and reporting.transition report using advanced editor in

Power BI editor



```
Create table new_table as
select
a.`Order Date (DD/MM/YYYY)` as `Order_Date_DD_MM_YYYY`,
a.`Product ID` as `product_id`,
a.availability,
a.demand,
b.`Product Name` as `product_name`,
b.`Unit Price ($)` as `unit_price`
from
prod.`prod env inventory dataset` as a left join prod.products as b
on a.`Product ID` = b.`Product ID`
```

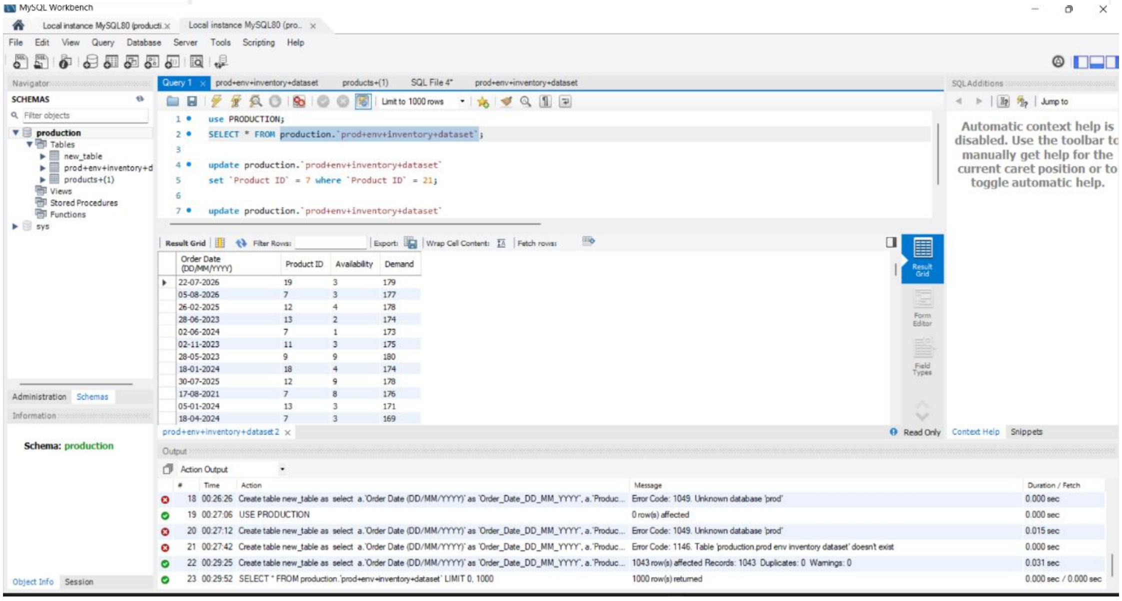
Automatic context help is disabled. Use the toolbar t manually get help for the current caret position or to toggle automatic help.

Table: prod env inventory dataset

Columns:

Order Date (DD/MM/YYYY)	text
Product ID	int
Availability	int
Demand	int

```
#  Time      Action                                                                          Message                                                          Duration / Fetch
1  12:14:55  use prod                                                                        0 row(s) affected                                                0.000 sec
2  12:16:29  SELECT * FROM prod.products LIMIT 0, 1000                                       20 row(s) returned                                               0.000 sec / 0.000 sec
3  12:21:21  Create table new_table as select a.'Order Date (DD/MM/YYYY)' as 'Order_Date_DD_MM_YYYY', a.'Pro...  1043 row(s) affected Records: 1043 Duplicates: 0 Warnings: 0  0.125 sec
```



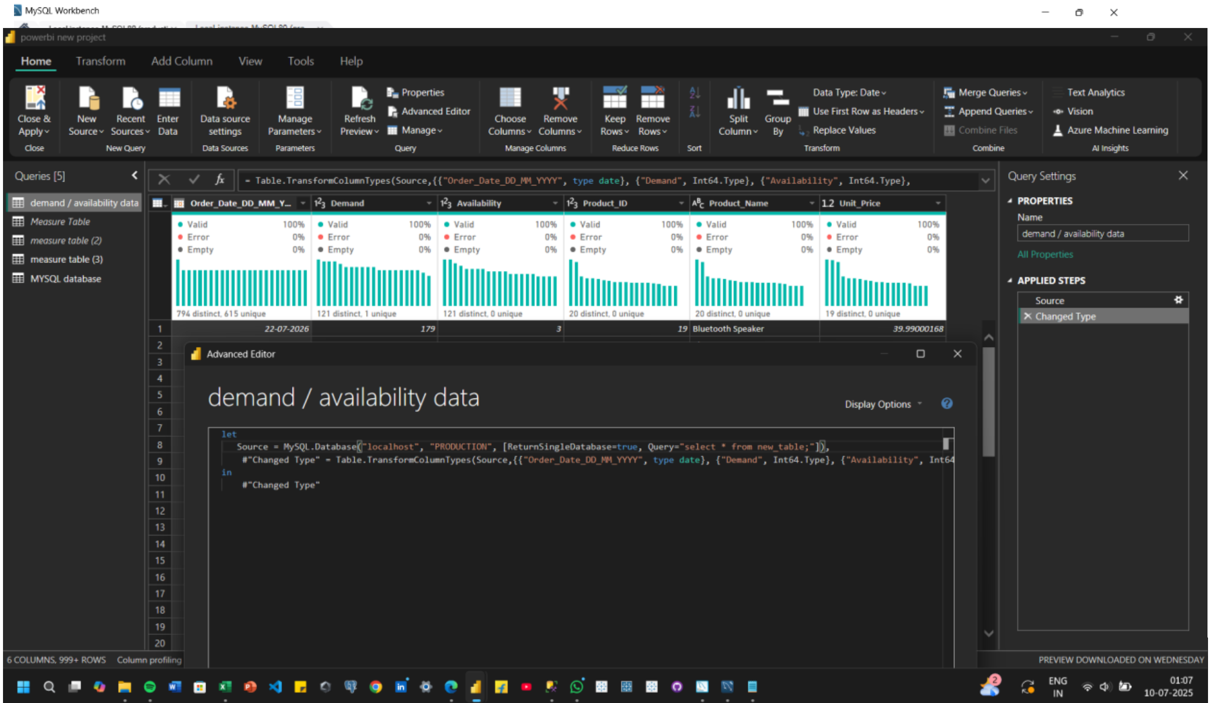
```
use PRODUCTION;
SELECT * FROM production.`prod+env+inventory+dataset`;

update production.`prod+env+inventory+dataset`
set `Product ID` = 7 where `Product ID` = 21;

update production.`prod+env+inventory+dataset`
```

Order Date (DD/MM/YYYY)	Product ID	Availability	Demand
22-07-2026	19	3	179
05-08-2026	7	3	177
26-02-2025	12	4	178
28-06-2023	13	2	174
02-06-2024	7	1	173
02-11-2023	11	3	175
28-05-2023	9	9	180
18-01-2024	18	4	174
30-07-2025	12	9	178
17-08-2021	7	8	176
05-01-2024	13	3	171
18-04-2024	7	3	169

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Schema: production

```
#   Time      Action                                                                              Message                                                                   Duration / Fetch
18  00:26:26  Create table new_table as select a.'Order Date (DD/MM/YYYY)' as 'Order_Date_DD_MM_YYYY', a.'Produc...  Error Code: 1049. Unknown database 'prod'                      0.000 sec
19  00:27:06  USE PRODUCTION                                                                      0 row(s) affected                                                         0.000 sec
20  00:27:12  Create table new_table as select a.'Order Date (DD/MM/YYYY)' as 'Order_Date_DD_MM_YYYY', a.'Produc...  Error Code: 1049. Unknown database 'prod'                      0.015 sec
21  00:27:42  Create table new_table as select a.'Order Date (DD/MM/YYYY)' as 'Order_Date_DD_MM_YYYY', a.'Produc...  Error Code: 1146. Table 'production.prod env inventory dataset' doesn't exist  0.000 sec
22  00:29:25  Create table new_table as select a.'Order Date (DD/MM/YYYY)' as 'Order_Date_DD_MM_YYYY', a.'Produc...  1043 row(s) affected Records: 1043 Duplicates: 0 Warnings: 0  0.031 sec
23  00:29:52  SELECT * FROM production.'prod+env+inventory+dataset' LIMIT 0, 1000                1000 row(s) returned                                                      0.000 sec / 0.000 sec
```



```
= Table.TransformColumnTypes(Source,{{"Order_Date_DD_MM_YYYY", type date}, {"Demand", Int64.Type}, {"Availability", Int64.Type},
```

Queries [5]: demand / availability data; Measure Table; measure table (2); measure table (3); MYSQL database

PROPERTIES
Name: demand / availability data

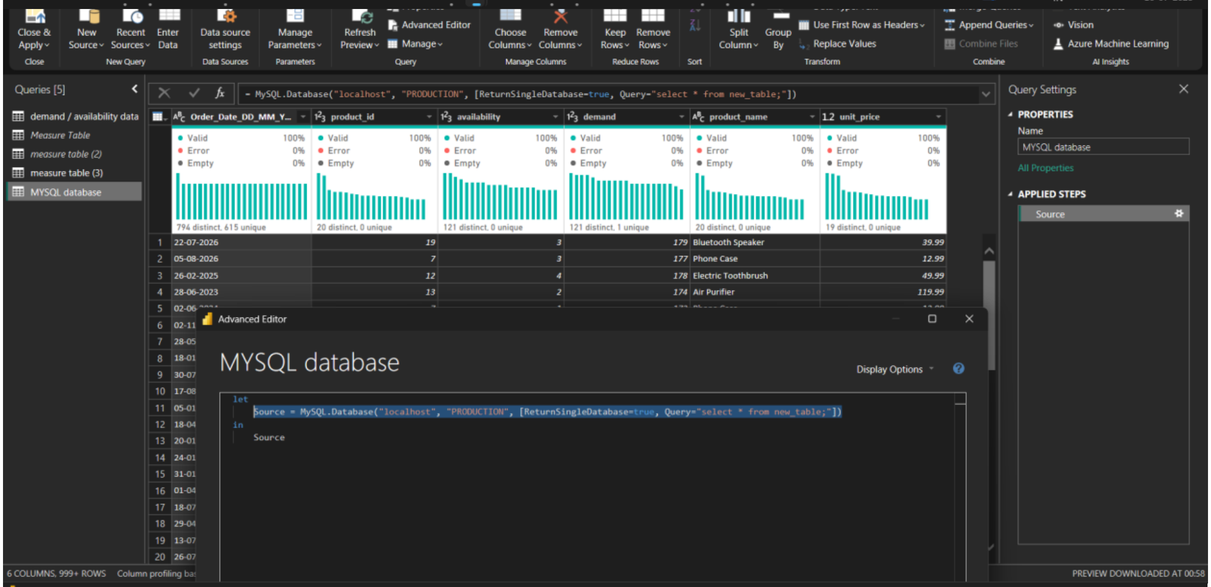
APPLIED STEPS
Source
Changed Type

	Order_Date_DD_MM_Y...	Demand	Availability	Product_ID	Product_Name	Unit_Price
	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%
	794 distinct, 615 unique	121 distinct, 1 unique	121 distinct, 0 unique	20 distinct, 0 unique	20 distinct, 0 unique	19 distinct, 0 unique
1	22-07-2026	179	3	19	Bluetooth Speaker	39.99000168

Advanced Editor

demand / availability data

```
let
    Source = MySQL.Database("localhost", "PRODUCTION", [ReturnSingleDatabase=true, Query="select * from new_table;"]),
     #"Changed Type" = Table.TransformColumnTypes(Source,{{"Order_Date_DD_MM_YYYY", type date}, {"Demand", Int64.Type}, {"Availability", Int64
in
     #"Changed Type"
```



```
= MySQL.Database("localhost", "PRODUCTION", [ReturnSingleDatabase=true, Query="select * from new_table;"])
```

Queries [5]: demand / availability data; Measure Table; measure table (2); measure table (3); MYSQL database

PROPERTIES
Name: MYSQL database

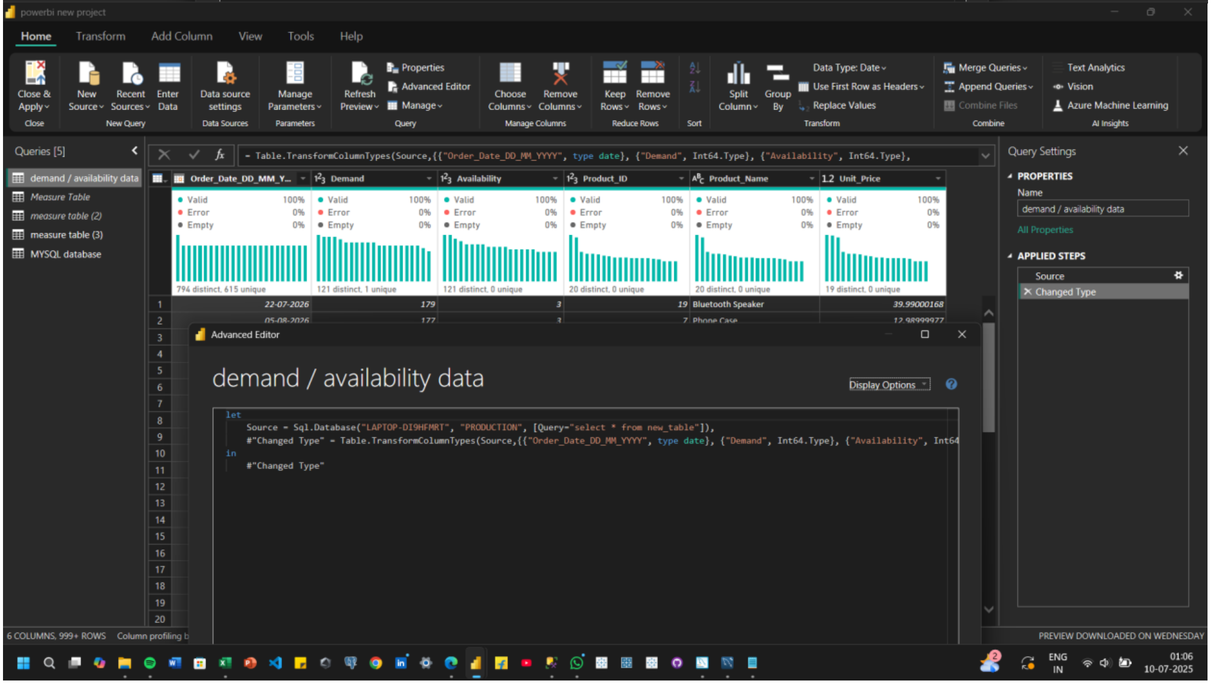
APPLIED STEPS
Source

	Order_Date_DD_MM_Y...	product_id	availability	demand	product_name	unit_price
	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%
	794 distinct, 615 unique	20 distinct, 0 unique	121 distinct, 0 unique	121 distinct, 1 unique	20 distinct, 0 unique	19 distinct, 0 unique
1	22-07-2026	19	3	179	Bluetooth Speaker	39.99
2	05-08-2026	7	3	177	Phone Case	12.99
3	26-02-2025	12	4	178	Electric Toothbrush	49.99
4	28-06-2023	13	2	174	Air Purifier	119.99
5	02-06					
6	02-11					
7	28-05					
8	18-01					
9	30-07					
10	17-08					
11	05-01					
12	18-04					
13	20-01					
14	24-01					
15	31-01					
16	01-04					
17	18-07					
18	29-04					
19	13-07					
20	26-07					

Advanced Editor

MYSQL database

```
let
    Source = MySQL.Database("localhost", "PRODUCTION", [ReturnSingleDatabase=true, Query="select * from new_table;"])
in
    Source
```



```
= Table.TransformColumnTypes(Source,{{"Order_Date_DD_MM_YYYY", type date}, {"Demand", Int64.Type}, {"Availability", Int64.Type},
```

Queries [5]: demand / availability data; Measure Table; measure table (2); measure table (3); MYSQL database

PROPERTIES
Name: demand / availability data

APPLIED STEPS
Source
Changed Type

	Order_Date_DD_MM_Y...	Demand	Availability	Product_ID	Product_Name	Unit_Price
	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%
	794 distinct, 615 unique	121 distinct, 1 unique	121 distinct, 0 unique	20 distinct, 0 unique	20 distinct, 0 unique	19 distinct, 0 unique
1	22-07-2026	179	3	19	Bluetooth Speaker	39.99000168
2	05-08-2026	177	3	7	Phone Case	12.98999977

Advanced Editor

demand / availability data

```
let
    Source = Sql.Database("LAPTOP-DI9HFMRT", "PRODUCTION", [Query="select * from new_table"]),
    #"Changed Type" = Table.TransformColumnTypes(Source,{{"Order_Date_DD_MM_YYYY", type date}, {"Demand", Int64.Type}, {"Availability", Int64
in
    #"Changed Type"
```