

## **Project Idea: Adventure Work Datasets Analysis**

**Project Name: Strategic Insights and Performance Evaluation of Adventure Works**

**Team Name: Insight Masters**

**Name: Mohamed Ahmed Ragab**

**Questions to Answer:**

**HR and Employee Data:**

### **1. Employee Demographics**

- a) What is the total number of employees in the organization?
- b) What is the gender distribution of employees in each department?

### **2. Salary and Compensation**

- a) What is the average salary of employees in each department?
- b) What is the average salary of employees in each job title?

### **3. Employee Tenure and Retention**

- a) What is the average tenure of employees in each department?
- b) What is the average number of years of service for employees in each job title?

### **4. Time-off and Leave**

- a) What is the average number of vacation hours taken by employees in each department?
- b) What is the average number of sick leave hours taken by employees in each department?

### **5. Job Titles and Roles**

- a) What is the average number of employees in each job title?
- b) What is the average number of employees in each shift?

## **Procurement and Supply Chain**

### **1. Purchase Order Metrics**

- a) What is the total number of purchase orders placed in the last quarter?
- b) What is the average total due for each purchase order?
- c) What is the average number of products ordered per purchase order?
- d) What is the average unit price of products ordered?

### **2. Vendor Performance**

- a) Which vendor has the highest total due for all purchase orders?
- b) What is the average number of days between order date and ship date for each vendor?
- c) What is the average number of products received per purchase order for each vendor?

### **3. Product Metrics**

- a) What is the average number of products received per purchase order?
- b) What is the average number of products rejected per purchase order?
- c) What is the average number of products stocked per purchase order?
- d) What is the average lead time for each product?

### **4. Procurement Efficiency**

- a) What is the average number of employees in each department, and what is the average salary of those employees?
- b) What is the average number of purchase orders placed by each employee, and what is the average total due for those orders?
- c) What is the average number of products ordered by each vendor, and what is the average unit price of those products?

## Tables Needed:

### Human Resources (HR)

- a) [Human Resources]. [Department]
- b) [Human Resources]. [Employee]
- c) [Human Resources]. [Employee Department History]
- d) [Human Resources]. [Employee Pay History]
- e) [Human Resources]. [Job Candidate]
- f) [Human Resources]. [Shift]

### Procurement and Supply Chain

- a) [Purchasing]. [Product Vendor]
- b) [Purchasing]. [Purchase Order Detail]
- c) [Purchasing]. [Purchase Order Header]
- d) [Purchasing]. [Ship Method]
- e) [Purchasing]. [Vendor]

- **Data Cleaning**

I utilized Power Query to meticulously clean and preprocess the data, employing a range of techniques to ensure data quality and consistency. Specifically, I applied the **Trim** function to remove any unnecessary whitespace, and the **clean** function to eliminate any errors or inconsistencies in the data. Additionally, I carefully evaluated and adjusted the **data types** as needed to ensure that each column was accurately represented and optimized for analysis. Through this rigorous process, I was able to transform the raw data into a refined and reliable dataset, ready for further analysis and insights.

HumanResources Department - Power Query Editor

File Home Transform Add Column View

Queries [1] = Table.TransformColumnTypes("#Cleaned Text",{"DepartmentID", Int64.Type}, {"ModifiedDate", type

	DepartmentID	Name	GroupName	ModifiedDate
	Valid 100%	Valid 100%	Valid 100%	Valid 100%
	Error 0%	Error 0%	Error 0%	Error 0%
	Empty 0%	Empty 0%	Empty 0%	Empty 0%
1	1	Engineering	Research And Development	30/04/2008 00:00:00
2	2	Tool Design	Research And Development	30/04/2008 00:00:00
3	3	Sales	Sales And Marketing	30/04/2008 00:00:00
4	4	Marketing	Sales And Marketing	30/04/2008 00:00:00
5	5	Purchasing	Inventory Management	30/04/2008 00:00:00
6	6	Research And Development	Research And Development	30/04/2008 00:00:00
7	7	Production	Manufacturing	30/04/2008 00:00:00
8	8	Production Control	Manufacturing	30/04/2008 00:00:00
9	9	Human Resources	Executive General And Administration	30/04/2008 00:00:00
10	10	Finance	Executive General And Administration	30/04/2008 00:00:00
11	11	Information Services	Executive General And Administration	30/04/2008 00:00:00
12	12	Document Control	Quality Assurance	30/04/2008 00:00:00
13	13	Quality Assurance	Quality Assurance	30/04/2008 00:00:00
14	14	Facilities And Maintenance	Executive General And Administration	30/04/2008 00:00:00
15	15	Shipping And Receiving	Inventory Management	30/04/2008 00:00:00
16	16	Executive	Executive General And Administration	30/04/2008 00:00:00

Query Settings

PROPERTIES

Name

HumanResources Department

APPLIED STEPS

Source

Navigation

Removed Other Columns

Capitalized Each Word

Trimmed Text

Cleaned Text

Changed Type

Activate Windows

Go to Settings to activate Windows.

4 COLUMNS, 16 ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 00:07

Type here to search

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11:28

11/10/2024

HumanResources Employee - Power Query Editor

File Home Transform Add Column View

Queries [1] = Table.TransformColumnTypes("#Cleaned Text",{"BusinessEntityID", Int64.Type}, {"NationalIDNumber", type

	BusinessEntityID	NationalIDNumber	LoginID	OrganizationNode	OrganizationLevel
	Valid 100%	Valid 100%	Valid 100%	Valid 99%	Valid 99%
	Error 0%	Error 0%	Error 0%	Error 0%	Error 0%
	Empty 0%	Empty 0%	Empty 0%	Empty < 1%	Empty < 1%
1	1	295847284	Adventure-Works\Ken0	null	
2	2	245797967	Adventure-Works\Terr0	/1/	1
3	3	509647174	Adventure-Works\Roberto0	/1/1/	2
4	4	112457891	Adventure-Works\Rob0	/1/1/1/	3
5	5	695256908	Adventure-Works\Gail0	/1/1/2/	3
6	6	998320692	Adventure-Works\Jossef0	/1/1/3/	3
7	7	134969118	Adventure-Works\Dylan0	/1/1/4/	3
8	8	811994146	Adventure-Works\Diane1	/1/1/4/1/	4
9	9	658797903	Adventure-Works\Gigi0	/1/1/4/2/	4
10	10	879342154	Adventure-Works\Michael6	/1/1/4/3/	4
11	11	974026903	Adventure-Works\Ovidiu0	/1/1/5/	3
12	12	480168528	Adventure-Works\Thierry0	/1/1/5/1/	4
13	13	486228782	Adventure-Works\Janice0	/1/1/5/2/	4
14	14	42487730	Adventure-Works\Michael8	/1/1/6/	3
15	15	56920285	Adventure-Works\Sharon0	/1/1/7/	3
16	16	24756624	Adventure-Works\David0	/2/	1
17	17	253022876	Adventure-Works\Kevin0	/2/1/	2
18	18	222969461	Adventure-Works\John5	/2/2/	2
19	19	52541318	Adventure-Works\Mary2	/2/3/	2
20	20	323403273	Adventure-Works\Wanida0	/2/4/	2
21	21	243322160	Adventure-Works\Terr0	/2/5/	2
22	22	95958330	Adventure-Works\Sariya0	/2/6/	2
23	23	36555122	Adventure-Works\Stefan0	/2/7/	2

Query Settings

PROPERTIES

Name

HumanResources Employee

APPLIED STEPS

Source

Navigation

Removed Other Columns

Capitalized Each Word

Trimmed Text

Cleaned Text

Changed Type

Activate Windows

Go to Settings to activate Windows.

16 COLUMNS, 290 ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 00:04

Type here to search

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11/10/2024

HumanResources EmployeeDepartmentHistory - Power Query Editor

File Home Transform Add Column View

Queries [11]

- HumanResources De...
- HumanResources Em...
- HumanResources Em...
- HumanResources Em...
- HumanResources Job...
- HumanResources Shift
- Purchasing ProductV...
- Purchasing Purchase...
- Purchasing Purchase...
- Purchasing ShipMeth...
- Purchasing Vendor

fx = Table.TransformColumnTypes("#Cleaned Text",{"BusinessEntityID", Int64.Type}, {"DepartmentID",

	123 BusinessEntityID	123 DepartmentID	123 ShiftID	StartDate	EndDate
	Valid 100%	Valid 100%	Valid 100%	Valid 100%	Valid 2%
	Error 0%	Error 0%	Error 0%	Error 0%	Error 0%
	Empty 0%	Empty 0%	Empty 0%	Empty 0%	Empty 98%
1	1	16	1	14/01/2009	
2	2	1	1	31/01/2008	
3	3	1	1	11/11/2007	
4	4	1	1	05/12/2007	30/05/2010
5	4	2	1	31/05/2010	
6	5	1	1	06/01/2008	
7	6	1	1	24/01/2008	
8	7	6	1	08/02/2009	
9	8	6	1	29/12/2008	
10	9	6	1	16/01/2009	
11	10	6	1	03/05/2009	
12	11	2	1	05/12/2010	
13	12	2	1	11/12/2007	
14	13	2	1	23/12/2010	
15	14	1	1	30/12/2010	
16	15	1	1	18/01/2011	
17	16	5	1	20/12/2007	14/07/2009
18	16	4	1	15/07/2009	
19	17	4	1	26/01/2007	
20	18	4	1	07/02/2011	
21	19	4	1	14/02/2011	
22	20	4	1	07/01/2011	
23					

6 COLUMNS, 296 ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 00:20

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HumanResources EmployeePayHistory - Power Query Editor

File Home Transform Add Column View

Queries [11]

- HumanResources De...
- HumanResources Em...
- HumanResources Em...
- HumanResources Em...
- HumanResources Job...
- HumanResources Shift
- Purchasing ProductV...
- Purchasing Purchase...
- Purchasing Purchase...
- Purchasing ShipMeth...
- Purchasing Vendor

fx = Table.TransformColumnTypes("#Cleaned Text",{"BusinessEntityID", Int64.Type}, {"RateChangeDate",

	123 BusinessEntityID	RateChangeDate	Rate	123 PayFrequency	ModifiedDate
	Valid 100%	Valid 100%	Valid 100%	Valid 100%	Valid 100%
	Error 0%	Error 0%	Error 0%	Error 0%	Error 0%
	Empty 0%	Empty 0%	Empty 0%	Empty 0%	Empty 0%
1	1	14/01/2009 00:00:00	125.50	2	30/06/2014 00:00:00
2	2	31/01/2008 00:00:00	63.46	2	30/06/2014 00:00:00
3	3	11/11/2007 00:00:00	43.27	2	30/06/2014 00:00:00
4	4	05/12/2007 00:00:00	8.62	2	21/11/2007 00:00:00
5	4	31/05/2010 00:00:00	23.72	2	16/05/2010 00:00:00
6	4	15/12/2011 00:00:00	29.85	2	01/12/2011 00:00:00
7	5	06/01/2008 00:00:00	32.69	2	30/06/2014 00:00:00
8	6	24/01/2008 00:00:00	32.69	2	30/06/2014 00:00:00
9	7	08/02/2009 00:00:00	50.48	2	30/06/2014 00:00:00
10	8	29/12/2008 00:00:00	40.87	2	30/06/2014 00:00:00
11	9	16/01/2009 00:00:00	40.87	2	30/06/2014 00:00:00
12	10	03/05/2009 00:00:00	42.48	2	30/06/2014 00:00:00
13	11	05/12/2010 00:00:00	28.85	2	30/06/2014 00:00:00
14	12	11/12/2007 00:00:00	25.00	2	30/06/2014 00:00:00
15	13	23/12/2010 00:00:00	25.00	2	30/06/2014 00:00:00
16	14	30/12/2010 00:00:00	36.06	2	30/06/2014 00:00:00
17	15	18/01/2011 00:00:00	32.69	2	30/06/2014 00:00:00
18	16	20/12/2007 00:00:00	24.00	2	06/12/2007 00:00:00
19	16	15/07/2009 00:00:00	28.75	2	01/07/2009 00:00:00
20	16	30/04/2012 00:00:00	37.50	2	16/04/2012 00:00:00
21	17	26/01/2007 00:00:00	13.46	2	30/06/2014 00:00:00
22	18	07/02/2011 00:00:00	14.42	2	30/06/2014 00:00:00
23					

5 COLUMNS, 316 ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 00:20

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HumanResources JobCandidate - Power Query Editor

FileHomeTransformAdd ColumnView

Queries [1]

HumanResources De...  
HumanResources Em...  
HumanResources Em...  
HumanResources Em...  
**HumanResources Job...**  
HumanResources Shift  
Purchasing ProductV...  
Purchasing Purchase...  
Purchasing Purchase...  
Purchasing ShipMeth...  
Purchasing Vendor

fx

= Table.TransformColumnTypes(#"Cleaned Text",{"JobCandidateID", Int64.Type}, {"BusinessEntityID",

	JobCandidateID	BusinessEntityID	Resume	ModifiedDate	
			<div><div>Valid100%</div><div>Error0%</div><div>Empty0%</div></div>	<div><div>Valid15%</div><div>Error0%</div><div>Empty85%</div></div>	<div><div>Valid100%</div><div>Error0%</div><div>Empty0%</div></div>
1	1	null	<Ns:Resume xmlns:Ns="http://schemas.microsoft.com/sqlserver/200...	23/06/2007	
2	2	null	<Ns:Resume xmlns:Ns="http://schemas.microsoft.com/sqlserver/200...	23/06/2007	
3	3	null	<Ns:Resume xmlns:Ns="http://schemas.microsoft.com/sqlserver/200...	23/06/2007	
4	4	274	<Ns:Resume xmlns:Ns="http://schemas.microsoft.com/sqlserver/200...	22/12/2013	
5	5	null	<Ns:Resume xmlns:Ns="http://schemas.microsoft.com/sqlserver/200...	23/06/2007	
6	6	null	<Ns:Resume xmlns:Ns="http://schemas.microsoft.com/sqlserver/200...	23/06/2007	
7	7	null	<Ns:Resume xmlns:Ns="http://schemas.microsoft.com/sqlserver/200...	23/06/2007	
8	8	212	<Ns:Resume xmlns:Ns="http://schemas.microsoft.com/sqlserver/200...	22/12/2013	
9	9	null	<Ns:Resume xmlns:Ns="http://schemas.microsoft.com/sqlserver/200...	23/06/2007	
10	10	null	<Ns:Resume xmlns:Ns="http://schemas.microsoft.com/sqlserver/200...	23/06/2007	
11	11	null	<Ns:Resume xmlns:Ns="http://schemas.microsoft.com/sqlserver/200...	23/06/2007	
12	12	null	<Ns:Resume xmlns:Ns="http://schemas.microsoft.com/sqlserver/200...	23/06/2007	
13	13	null	<Ns:Resume xmlns:Ns="http://schemas.microsoft.com/sqlserver/200...	23/06/2007	

Query Settings

PROPERTIES

Name

HumanResources JobCandidate

All Properties

APPLIED STEPS

Source

Navigation

Removed Other Columns

Capitalized Each Word

Trimmed Text

Cleaned Text

**Changed Type**

4 COLUMNS, 13 ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 00:20

Type here to search

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11/10/2024

HumanResources Shift - Power Query Editor

FileHomeTransformAdd ColumnView

Queries [1]

HumanResources De...  
HumanResources Em...  
HumanResources Em...  
HumanResources Em...  
HumanResources Job...  
**HumanResources Shift**  
Purchasing ProductV...  
Purchasing Purchase...  
Purchasing Purchase...  
Purchasing ShipMeth...  
Purchasing Vendor

fx

= Table.TransformColumnTypes(#"Cleaned Text",{"StartTime", type time}, {"ShiftID", Int64.Type},

	ShiftID	Name	StartTime	EndTime	ModifiedDate	
			<div><div>Valid100%</div><div>Error0%</div><div>Empty0%</div></div>	<div><div>Valid100%</div><div>Error0%</div><div>Empty0%</div></div>	<div><div>Valid100%</div><div>Error0%</div><div>Empty0%</div></div>	<div><div>Valid100%</div><div>Error0%</div><div>Empty0%</div></div>
1	1	Day	07:00:00	15:00:00	30/04/2008 00:00:00	
2	2	Evening	15:00:00	23:00:00	30/04/2008 00:00:00	
3	3	Night	23:00:00	07:00:00	30/04/2008 00:00:00	

Query Settings

PROPERTIES

Name

HumanResources Shift

All Properties

APPLIED STEPS

Source

Navigation

Removed Other Columns

Capitalized Each Word

Trimmed Text

Cleaned Text

**Changed Type**

5 COLUMNS, 3 ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 00:20

Type here to search

25°C

11:29

11/10/2024



Purchasing ProductVendor - Power Query Editor

File Home Transform Add Column View

Queries [11]

HumanResources De...  
HumanResources Em...  
HumanResources Em...  
HumanResources Em...  
HumanResources Job...  
HumanResources Shift  
Purchasing ProductV...  
Purchasing Purchase...  
Purchasing Purchase...  
Purchasing ShipMeth...  
Purchasing Vendor

fx = Table.ReplaceValue("#Removed Errors",null,3,Replacer.ReplaceValue,{"OnOrderQty"})

	ProductID	BusinessEntityID	AverageLeadTime	StandardPrice	LastReceiptCost
	Valid 100%	Valid 100%	Valid 100%	Valid 100%	Valid 100%
	Error 0%	Error 0%	Error 0%	Error 0%	Error 0%
	Empty 0%	Empty 0%	Empty 0%	Empty 0%	Empty 0%
1	1	1580	17:00:00	47.87	50
2	2	1688	19:00:00	39.92	41
3	4	1650	17:00:00	54.31	57
4	317	1578	19:00:00	28.17	25
5	317	1678	17:00:00	25.77	27
6	318	1578	19:00:00	34.38	36
7	318	1678	17:00:00	31.98	35
8	319	1556	19:00:00	44.21	46
9	319	1578	19:00:00	46.27	48
10	319	1678	17:00:00	43.87	46
11	320	1514	19:00:00	47.28	45
12	320	1602	17:00:00	45.21	47
13	320	1604	17:00:00	43.21	45
14	321	1514	19:00:00	42.21	44
15	321	1602	17:00:00	40.76	42
16	321	1604	17:00:00	38.56	40
17	322	1514	19:00:00	27.33	28
18	322	1602	17:00:00	24.21	25
19	322	1604	17:00:00	25.11	26
20	323	1698	17:00:00	47.87	50
21	325	1590	19:00:00	0.20	0
22	326	1590	19:00:00	0.20	0
23	327	1590	19:00:00	0.20	0

Query Settings

PROPERTIES

Name  
Purchasing ProductVendor

APPLIED STEPS

- Source
- Navigation
- Removed Other Columns
- Capitalized Each Word
- Trimmed Text
- Cleaned Text
- Changed Type
- Removed Errors
- Replaced Value

11 COLUMNS, 412 ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 00:20

25°C 11:29 11/10/2024

Purchasing PurchaseOrderDetail - Power Query Editor

File Home Transform Add Column View

Queries [11]

HumanResources De...  
HumanResources Em...  
HumanResources Em...  
HumanResources Em...  
HumanResources Job...  
HumanResources Shift  
Purchasing ProductV...  
Purchasing Purchase...  
Purchasing Purchase...  
Purchasing ShipMeth...  
Purchasing Vendor

fx = Table.TransformColumnTypes("#Cleaned Text",{"PurchaseOrderID", Int64.Type},

	PurchaseOrderID	PurchaseOrderDetailID	DueDate	OrderQty	ProductID
	Valid 100%	Valid 100%	Valid 100%	Valid 100%	Valid 100%
	Error 0%	Error 0%	Error 0%	Error 0%	Error 0%
	Empty 0%	Empty 0%	Empty 0%	Empty 0%	Empty 0%
1	1	1	30/04/2011 00:00:00	4	4
2	2	2	30/04/2011 00:00:00	3	3
3	2	3	30/04/2011 00:00:00	3	3
4	3	4	30/04/2011 00:00:00	550	550
5	4	5	30/04/2011 00:00:00	3	3
6	5	6	14/05/2011 00:00:00	550	550
7	6	7	14/05/2011 00:00:00	550	550
8	7	8	14/05/2011 00:00:00	550	550
9	7	9	14/05/2011 00:00:00	550	550
10	7	10	14/05/2011 00:00:00	550	550
11	8	11	14/05/2011 00:00:00	3	3
12	8	12	14/05/2011 00:00:00	3	3
13	8	13	14/05/2011 00:00:00	3	3
14	8	14	14/05/2011 00:00:00	3	3
15	8	15	14/05/2011 00:00:00	3	3
16	9	16	28/12/2011 00:00:00	3	3
17	9	17	28/12/2011 00:00:00	3	3
18	9	18	28/12/2011 00:00:00	3	3
19	9	19	28/12/2011 00:00:00	3	3
20	9	20	28/12/2011 00:00:00	3	3
21	10	21	28/12/2011 00:00:00	3	3
22	10	22	28/12/2011 00:00:00	3	3
23	10	23	28/12/2011 00:00:00	3	3

Query Settings

PROPERTIES

Name  
Purchasing PurchaseOrderDetail

APPLIED STEPS

- Source
- Navigation
- Removed Other Columns
- Capitalized Each Word
- Trimmed Text
- Cleaned Text
- Changed Type

11 COLUMNS, 999+ ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 00:20

25°C 11:29 11/10/2024

Purchasing ShipMethod - Power Query Editor

File Home Transform Add Column View

Queries [11]

HumanResources De...  
HumanResources Em...  
HumanResources Em...  
HumanResources Em...  
HumanResources Job...  
HumanResources Shift  
Purchasing ProductV...  
Purchasing Purchase...  
Purchasing Purchase...  
Purchasing ShipMeth...  
Purchasing Vendor

fx = Table.TransformColumnTypes(#"Cleaned Text",{"ShipMethodID", Int64.Type}, {"ShipBase",

i23 ShipMethodID	A6C Name	\$ ShipBase	\$ ShipRate	A6C rowguid	
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%	
1	1 Xrq - Truck Ground		3.95	0.99	68e756D9-D78e-4463-8F2C-Ae
2	2 Zy - Express		9.95	1.99	3455079B-F773-4Dc6-8F1E-2A5
3	3 Overseas - Deluxe		29.95	2.99	22f4E461-28Cf-4Ace-A980-F68
4	4 Overnight J-Fast		21.95	1.29	107E8356-E7A8-463D-B60C-07f
5	5 Cargo Transport 5		8.99	1.49	B166019A-B134-4E76-B957-2Bf

Query Settings

PROPERTIES

Name  
Purchasing ShipMethod

APPLIED STEPS

Source  
Navigation  
Removed Other Columns  
Capitalized Each Word  
Trimmed Text  
Cleaned Text  
X Changed Type

Activate Windows  
Go to Settings to activate Windows.

6 COLUMNS, 5 ROWS Column profiling based on top 1000 rows PREVIEW DOWNLOADED AT 00:20

Type here to search

25°C 11:30 11/10/2024

Purchasing PurchaseOrderHeader - Power Query Editor

File Home Transform Add Column View

Queries [11]

HumanResources De...  
HumanResources Em...  
HumanResources Em...  
HumanResources Em...  
HumanResources Job...  
HumanResources Shift  
Purchasing ProductV...  
Purchasing Purchase...  
Purchasing Purchase...  
Purchasing ShipMeth...  
Purchasing Vendor

fx = Table.TransformColumnTypes(#"Cleaned Text",{"PurchaseOrderID", Int64.Type}, {"RevisionNumber",

i23 PurchaseOrderID	i23 RevisionNumber	i23 Status	i23 EmployeeID	i23 VendorID	
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%	
1	1	4	4	258	1.
2	2	4	1	254	1.
3	3	4	4	257	1.
4	4	4	3	261	1.
5	5	4	4	251	1.
6	6	4	4	253	1.
7	7	4	4	255	1.
8	8	4	4	256	1.
9	9	5	4	259	1.
10	10	4	4	250	1.
11	11	4	4	258	1.
12	12	4	4	254	1.
13	13	4	4	257	1.
14	14	4	3	261	1.
15	15	4	4	251	1.
16	16	4	4	253	1.
17	17	4	4	255	1.
18	18	4	4	256	1.
19	19	4	4	259	1.
20	20	4	4	260	1.
21	21	4	4	250	1.
22	22	4	4	254	1.
23	23	4	4	254	1.

Query Settings

PROPERTIES

Name  
Purchasing PurchaseOrderHeader

APPLIED STEPS

Source  
Navigation  
Removed Other Columns  
Capitalized Each Word  
Trimmed Text  
Cleaned Text  
X Changed Type

Activate Windows  
Go to Settings to activate Windows.

13 COLUMNS, 999+ ROWS Column profiling based on top 1000 rows PREVIEW DOWNLOADED AT 00:20

Type here to search

25°C 11:31 11/10/2024



Purchasing Vendor - Power Query Editor

File Home Transform Add Column View

Queries [11]

- HumanResources De...
- HumanResources Em...
- HumanResources Em...
- HumanResources Em...
- HumanResources Job...
- HumanResources Shift
- Purchasing ProductV...
- Purchasing Purchase...
- Purchasing Purchase...
- Purchasing ShipMeth...
- Purchasing Vendor**

fx = Table.RemoveRowsWithErrors(#"Changed Type", {"ModifiedDate"})

	BusinessEntityID	AccountNumber	Name	CreditRating	PreferredVendorStatus
	Valid	100%	Valid	100%	Valid
	Error	0%	Error	0%	Error
	Empty	0%	Empty	0%	Empty
1	1492	Australi0001	Australia Bike Retailer	1	
2	1494	Allenson0001	Allenson Cycles	2	
3	1496	Advanced0001	Advanced Bicycles	1	
4	1498	Trikes0001	Trikes, Inc.	2	
5	1500	Morganb0001	Morgan Bike Accessories	1	
6	1502	Cycling0001	Cycling Master	1	
7	1504	Chicago0002	Chicago Rent-All	2	
8	1506	Greenwoo0001	Greenwood Athletic Company	1	
9	1508	Compete0001	Compete Enterprises, Inc	1	
10	1510	Internat0001	International	1	
11	1512	Lightsp0001	Light Speed	1	
12	1514	Training0001	Training Systems	1	
13	1516	Gardner0001	Gardner Touring Cycles	1	
14	1518	Internat0004	International Trek Center	1	
15	1520	G&Kbi0001	G & K Bicycle Corp.	1	
16	1522	Firstna0001	First National Sport Co.	1	
17	1524	Recreat0001	Recreation Place	4	
18	1526	Internat0002	International Bicycles	1	
19	1528	Imagem0001	Image Makers Bike Center	1	
20	1530	Comfort0001	Comfort Road Bicycles	1	
21	1532	Knopfler0001	Knopfler Cycles	1	
22	1534	Readyre0001	Ready Rentals	1	
23	1536	Greenb0001	Green Bike Company	1	

Query Settings

PROPERTIES

Name

Purchasing Vendor

APPLIED STEPS

- Source
- Navigation
- Removed Other Columns
- Capitalized Each Word
- Trimmed Text
- Cleaned Text
- Changed Type
- Removed Errors**

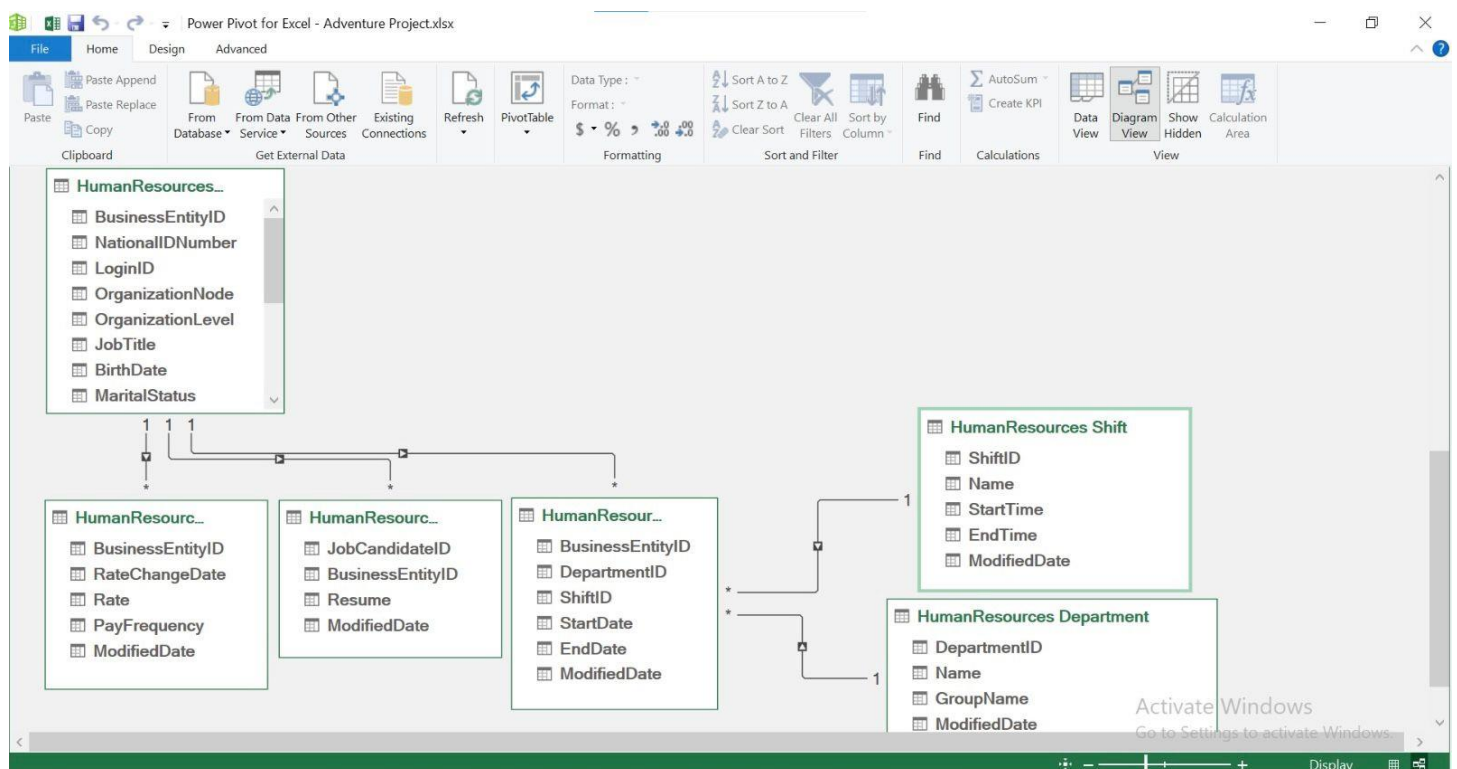
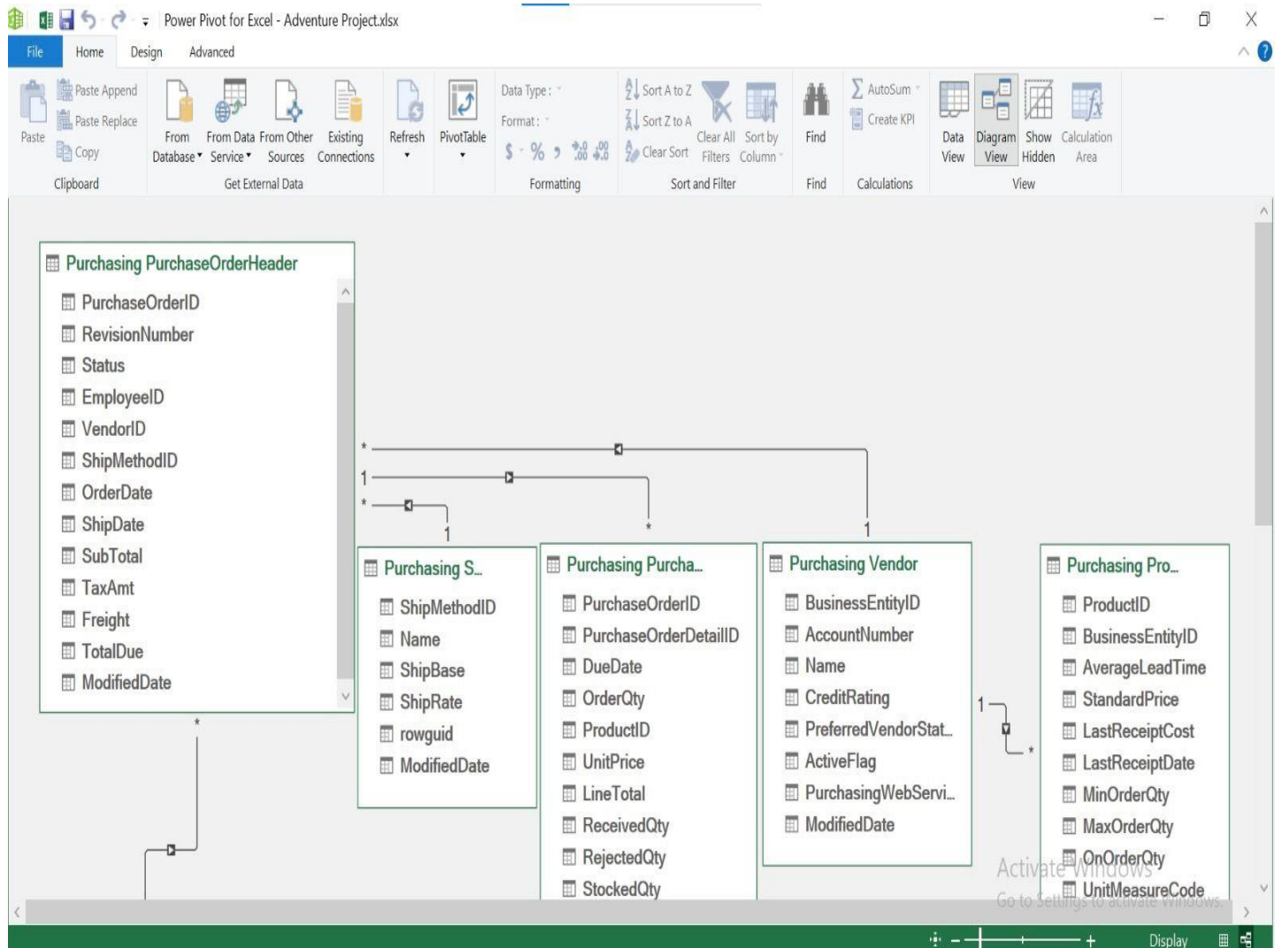
8 COLUMNS, 104 ROWS Column profiling based on top 1000 rows

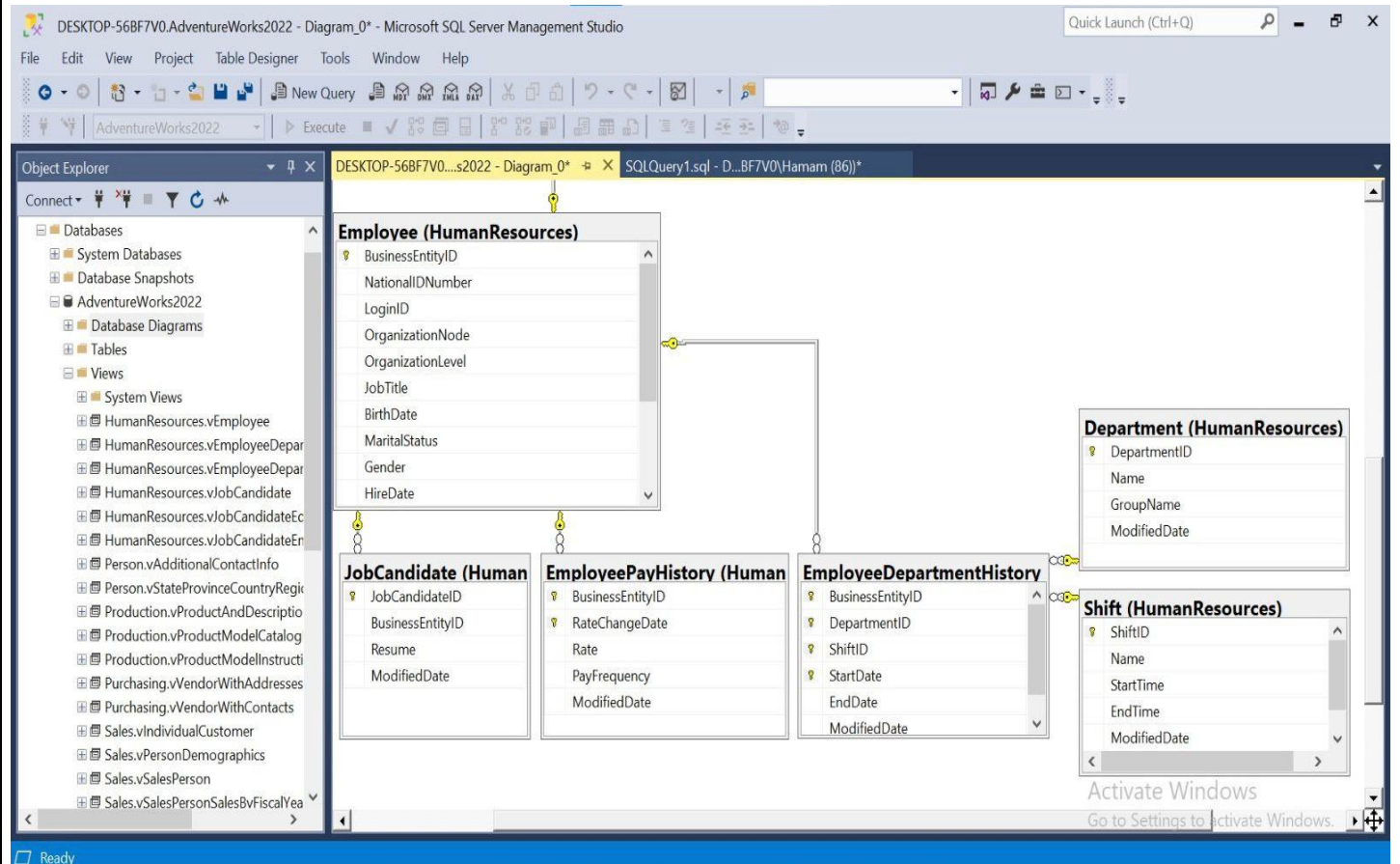
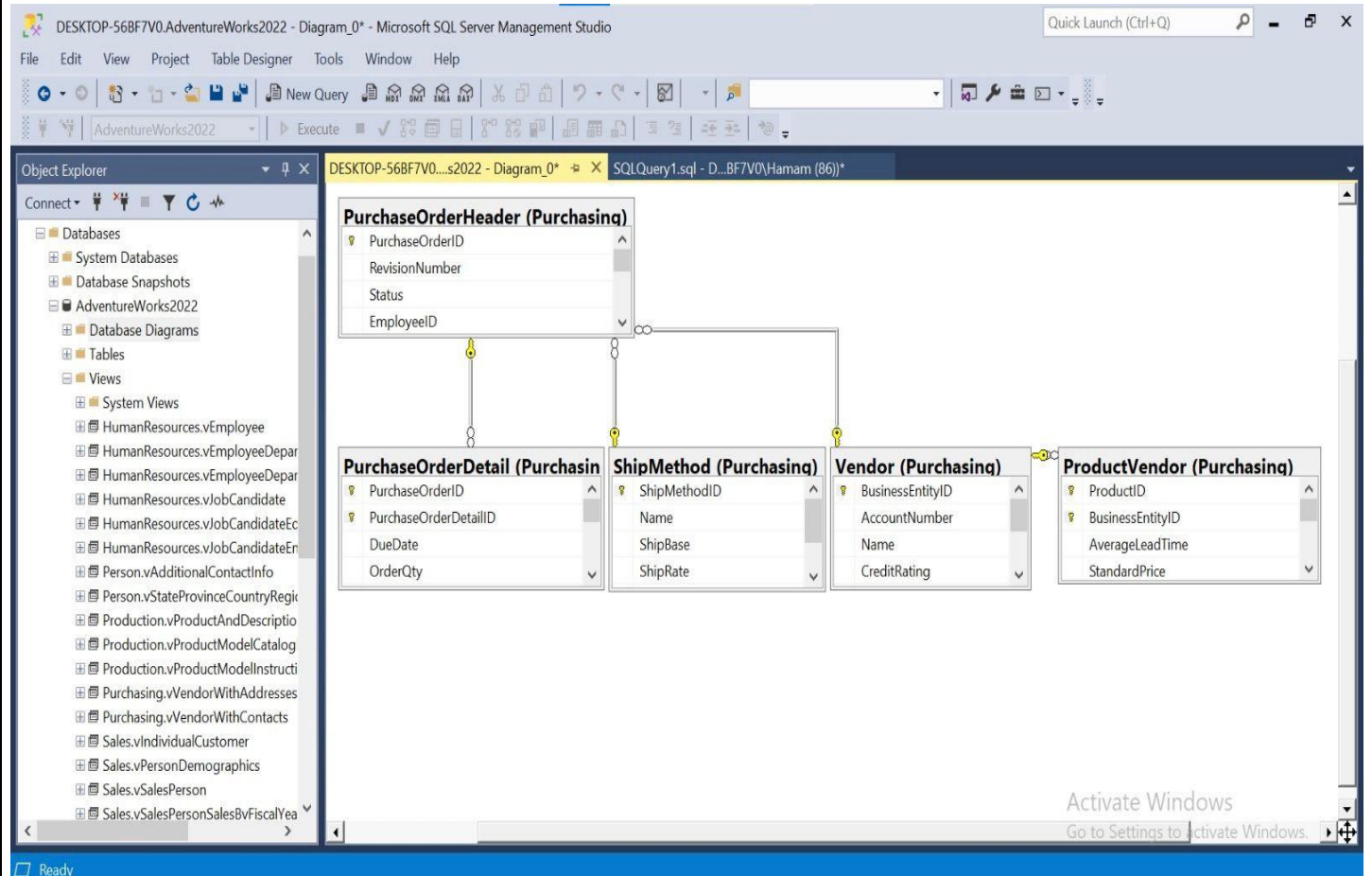
PREVIEW DOWNLOADED AT 00:20

25°C 11:32 11/10/2024

- Data Modelling**

I utilize both **Power Pivot** and **SQL Server** for **data modelling** purposes, leveraging their capabilities to design and create data models that effectively organize and structure data for analysis and reporting.







- Answering The Questions

--1. What is the total number of employees in the organization?

```
Select Count(HRE.BusinessEntityID) AS TotalNumberOfEmployees
From [HumanResources].[Employee] HRE
```

	TotalNumberOfEmployees
1	290

--2. What is the average salary of employees in each department?

```
Select HRD.DepartmentID,HRD.Name,AVG(HRP.Rate) AS TheAverageSalary
From [HumanResources].[EmployeeDepartmentHistory] HRH
Left Join [HumanResources].[Department] HRD
On HRH.DepartmentID = HRD.DepartmentID
Left Join [HumanResources].[EmployeePayHistory] HRP
On HRH.BusinessEntityID = HRP.BusinessEntityID
Group by HRD.DepartmentID,HRD.Name
```

	DepartmentID	Name	TheAverageSalary
1	1	Engineering	33.6723
2	2	Tool Design	23.5054
3	3	Sales	29.9719
4	4	Marketing	18.9364
5	5	Purchasing	20.1489
6	6	Research and Development	43.6731
7	7	Production	13.5409
8	8	Production Control	16.7746
9	9	Human Resources	18.0248
10	10	Finance	29.7742
11	11	Information Services	34.1586
12	12	Document Control	14.3884
13	13	Quality Assurance	17.2387
14	14	Facilities and Maintenance	13.0316
15	15	Shipping and Receiving	10.8718
16	16	Executive	68.3034

--3. Which department has the highest number of employees?

```
Select TOP 1 HRD.Name,COUNT(HRH.BusinessEntityID) AS TotalNumberOfEmployees
From [HumanResources].[EmployeeDepartmentHistory] HRH
Left Join [HumanResources].[Department] HRD
ON HRH.DepartmentID = HRD.DepartmentID
Group by HRD.Name
Order by TotalNumberOfEmployees Desc
```

	Name	TotalNumberOfEmployees
1	Production	180

--4. What is the average tenure of employees in each department?

```
Select HRD.DepartmentID,HRD.Name,
AVG(DATEDIFF(MONTH,HRH.StartDate,ISNULL(HRH.EndDate,GETDATE())))) AS AverageTenure
From [HumanResources].[EmployeeDepartmentHistory] HRH
Left Join [HumanResources].[Department] HRD
On HRH.DepartmentID = HRD.DepartmentID
Group by HRD.DepartmentID,HRD.Name
```

DepartmentID	Name	AverageTenure
1	Engineering	166
2	Tool Design	176
3	Sales	154
4	Marketing	164
5	Purchasing	162
6	Research and Development	188
7	Production	186
8	Production Control	183
9	Human Resources	189
10	Finance	176
11	Information Services	188
12	Document Control	188
13	Quality Assurance	161
14	Facilities and Maintenance	178
15	Shipping and Receiving	189
16	Executive	160



--5. What is the gender distribution of employees in each department?

```

] Select HRD.DepartmentID,HRD.Name AS DepartmentName,HRE.Gender,
Count(HRE.BusinessEntityID) AS TotalNumberOfEmployees
From [HumanResources].[EmployeeDepartmentHistory] HRH
Left Join [HumanResources].[Employee] HRE
On HRH.BusinessEntityID = HRE.BusinessEntityID
Left Join [HumanResources].[Department] HRD
On HRH.DepartmentID = HRD.DepartmentID
Group by HRD.DepartmentID,HRD.Name,HRE.Gender
Order by TotalNumberOfEmployees Desc

```

DepartmentID	DepartmentName	Gender	TotalNumberOfEmployees
7	Production	M	134
7	Production	F	46
3	Sales	M	11
5	Purchasing	M	9
3	Sales	F	7
10	Finance	F	6
8	Production Control	M	6
11	Information Services	M	6
13	Quality Assurance	M	6
14	Facilities and Maintenance	M	5
10	Finance	M	5
4	Marketing	M	5
4	Marketing	F	5
5	Purchasing	F	4
11	Information Services	F	4
1	Engineering	M	4
12	Document Control	M	4
9	Human Resources	M	4
15	Shipping and Receiving	M	4
2	Tool Design	M	3
1	Engineering	F	3
9	Human Resources	F	2
6	Research and Developm...	F	2
14	Facilities and Maintenance	F	2
15	Shipping and Receiving	F	2
6	Research and Developm...	M	2

--6. What is the average number of vacation hours taken by employees in each department?

```

Select HRD.DepartmentID,HRD.Name AS DepartmentName,
AVG(HRE.VacationHours) AS AverageNumberOfVacationHours
From [HumanResources].[EmployeeDepartmentHistory] HRH
Left Join [HumanResources].[Employee] HRE
On HRH.BusinessEntityID = HRE.BusinessEntityID
Left Join [HumanResources].[Department] HRD
On HRH.DepartmentID = HRD.DepartmentID
Group by HRD.DepartmentID,HRD.Name
Order by AverageNumberOfVacationHours Desc

```

DepartmentID	DepartmentName	AverageNumberOfVacationHours
15	Shipping and Receiving	95
14	Facilities and Maintenance	89
12	Document Control	77
13	Quality Assurance	77
11	Information Services	69
10	Finance	54
5	Purchasing	53
9	Human Resources	51
6	Research and Developm...	50
7	Production	49
16	Executive	49
8	Production Control	45
4	Marketing	44
3	Sales	27
2	Tool Design	18
1	Engineering	9

--7. What is the average number of sick leave hours taken by employees in each department?

```
Select HRD.DepartmentID,HRD.Name AS DepartmentName,
AVG(HRE.SickLeaveHours) AS AverageNumberOfSickLeaveHours
From [HumanResources].[EmployeeDepartmentHistory] HRH
Left Join [HumanResources].[Employee] HRE
On HRH.BusinessEntityID = HRE.BusinessEntityID
Left Join [HumanResources].[Department] HRD
On HRH.DepartmentID = HRD.DepartmentID
Group by HRD.DepartmentID,HRD.Name
Order by AverageNumberOfSickLeaveHours Desc
```

DepartmentID	DepartmentName	AverageNumberOfSickLeaveHours
15	Shipping and Receiving	67
14	Facilities and Maintenance	64
12	Document Control	58
13	Quality Assurance	58
11	Information Services	54
6	Research and Developm...	54
5	Purchasing	46
10	Finance	46
9	Human Resources	45
7	Production	44
16	Executive	44
8	Production Control	42
4	Marketing	42
2	Tool Design	37
3	Sales	33
1	Engineering	29



--8. What is the average salary of employees in each job title?

```

Select HRE.JobTitle,AVG(HRP.Rate) AS AverageSalary
From [HumanResources].[Employee] HRE
Left Join [HumanResources].[EmployeePayHistory] HRP
On HRE.BusinessEntityID = HRP.BusinessEntityID
Group by HRE.JobTitle
Order by AverageSalary DESC

```

JobTitle	AverageSalary
Chief Executive Officer	125.50
Vice President of Production	84.1346
Vice President of Sales	72.1154
Vice President of Engineer...	63.4615
Information Services Mana...	50.4808
Chief Financial Officer	49.2379
European Sales Manager	48.101
North American Sales Man...	48.101
Pacific Sales Manager	48.101
Research and Developme...	46.4808
Engineering Manager	43.2692
Finance Manager	43.2692
Research and Developme...	40.8654
Network Manager	39.6635
Database Administrator	38.4615
Senior Design Engineer	36.0577
Accounts Manager	34.7356
Design Engineer	32.6923
Network Administrator	32.4519
Marketing Manager	30.0833
Quality Assurance Manager	28.8462
Application Specialist	27.4038
Human Resources Manager	27.1394
Accountant	26.4423
Production Supervisor - W...	25.00
Production Supervisor - W...	25.00

--9. What is the average number of years of service for employees in each job title?

```
Select HRE.JobTitle,AVG(DATEDIFF(YEAR,HRH.StartDate,ISNULL(HRH.EndDate,GETDATE())) AS Average
From [HumanResources].[EmployeeDepartmentHistory] HRH
Left Join [HumanResources].[Employee] HRE
On HRH.BusinessEntityID = HRE.BusinessEntityID
Group by HRE.JobTitle
```

JobTitle	Average
Accountant	15
Accounts Manager	15
Accounts Payable Specialist	15
Accounts Receivable Specialist	15
Application Specialist	15
Assistant to the Chief Financial Officer	15
Benefits Specialist	16
Buyer	14
Chief Executive Officer	15
Chief Financial Officer	7
Control Specialist	15
Database Administrator	15
Design Engineer	15
Document Control Assistant	15
Document Control Manager	15
Engineering Manager	17
European Sales Manager	12
Facilities Administrative Assistant	15
Facilities Manager	15
Finance Manager	16
Human Resources Administrative As...	15
Human Resources Manager	16
Information Services Manager	16



--10. What is the average number of employees in each shift?

```
Select HRS.ShiftID,HRS.Name,Count(BusinessEntityID) AS AverageNumberOfEmployees
From [HumanResources].[EmployeeDepartmentHistory] HRH
Left Join [HumanResources].[Shift] HRS
On HRH.ShiftID = HRS.ShiftID
Group by HRS.ShiftID,HRS.Name
Order by AverageNumberOfEmployees
```

ShiftID	Name	AverageNumberOfEmployees
3	Night	52
2	Evening	62
1	Day	182

--11. What is the total number of purchase orders placed in the last quarter?

```
Select Count(POH.PurchaseOrderID) AS TotalNumberOfPurchaseOrder
From [Purchasing].[PurchaseOrderHeader] POH
where OrderDate>=DATEADD(QUARTER,-1,GETDATE())
```

	TotalNumberOfPurchaseOrder
1	0

--12. What is the average total due for each purchase order?

```
Select POH.PurchaseOrderID,PV.Name,Sum(POH.TotalDue) AS AverageTotalDue
From [Purchasing].[PurchaseOrderHeader] POH
Left Join [Purchasing].[Vendor] PV
On POH.VendorID = PV.BusinessEntityID
Group by POH.PurchaseOrderID,PV.Name
Order by AverageTotalDue Desc
```

PurchaseOrderID	Name	AverageTotalDue
4012	Integrated Sport Products	1097448.00
4007	Fitness Association	609422.00
4008	Team Athletic Co.	436401.90
3475	Chicago City Saddles	168602.3089
2685	Chicago City Saddles	168602.3089
335	Chicago City Saddles	168602.3089
1895	Chicago City Saddles	168602.3089
1737	Chicago City Saddles	112401.5393
177	Chicago City Saddles	112401.5393
2527	Chicago City Saddles	112401.5393
3317	Chicago City Saddles	112401.5393
3288	Superior Bicycles	100685.3348
3367	Superior Bicycles	100685.3348
3446	Superior Bicycles	100685.3348
3525	Superior Bicycles	100685.3348
3604	Superior Bicycles	100685.3348
3683	Superior Bicycles	100685.3348
3762	Superior Bicycles	100685.3348
3999	Superior Bicycles	100685.3348
3841	Superior Bicycles	100685.3348
3920	Superior Bicycles	100685.3348
2577	Superior Bicycles	100685.3348
2498	Superior Bicycles	100685.3348
2656	Superior Bicycles	100685.3348
2261	Superior Bicycles	100685.3348
2340	Superior Bicycles	100685.3348

--13. Which vendor has the highest total due for all purchase orders?

```
Select TOP 1 POH.PurchaseOrderID,PV.Name,Sum(POH.TotalDue) AS AverageTotalDue
From [Purchasing].[PurchaseOrderHeader] POH
Left Join [Purchasing].[Vendor] PV
On POH.VendorID = PV.BusinessEntityID
Group by POH.PurchaseOrderID,PV.Name
Order by AverageTotalDue Desc
```

PurchaseOrderID	Name	AverageTotalDue
4012	Integrated Sport Products	1097448.00

--14. What is the average number of days between order date and ship date?

```
Select PV.BusinessEntityID,AVG(DATEDIFF(DAY,POH.OrderDate,POH.ShipDate)) AS AverageNumberOfDays
From [Purchasing].[PurchaseOrderHeader] POH
Left Join [Purchasing].[Vendor] PV
On POH.VendorID = PV.BusinessEntityID
Group by PV.BusinessEntityID
```

BusinessEntityID	AverageNumberOfDays
1566	9
1520	25
1658	9
1612	9
1652	9
1698	9
1506	9
1632	9
1618	9
1626	9
1526	9
1592	9
1586	9
1492	9
1540	9
1638	9
1686	9
1500	9
1546	25
1692	9
1646	9
1672	9
1678	9
1666	9
1572	9
1518	25

```
--15. What is the average number of products ordered per purchase order?
Select POD.PurchaseOrderID, Count(POD.OrderQty) AS AverageNumberOfProductOrderd
From [Purchasing].[PurchaseOrderDetail] POD
Group by POD.PurchaseOrderID
Order by AverageNumberOfProductOrderd Desc
```

PurchaseOrderID	AverageNumberOfProductOrderd
1015	30
135	26
2485	26
3275	26
1255	24
515	20
1115	19
685	19
1855	19
765	17
835	16
925	16
1325	16
1305	15
1805	15
4008	15
3625	14
2835	14
2045	14
1905	13
2695	13
2645	13
3435	13
3485	13
475	12



--16. What is the average unit price of products ordered?

```
Select POD.PurchaseOrderID,AVG(POD.UnitPrice) AS AverageUnitsPriceOfProductOrdered
From [Purchasing].[PurchaseOrderDetail] POD
Group by POD.PurchaseOrderID
Order by AverageUnitsPriceOfProductOrdered Desc
```

PurchaseOrderID	AverageUnitsPriceOfProductOrdered
69	82.8345
148	82.8345
227	82.8345
306	82.8345
385	82.8345
494	82.8345
577	82.8345
664	82.8345
743	82.8345
826	82.8345
913	82.8345
1000	82.8345
1060	82.8345
1155	82.8345
1234	82.8345
1313	82.8345
1392	82.8345
1471	82.8345
1550	82.8345
1629	82.8345
1708	82.8345
1787	82.8345
1866	82.8345
1945	82.8345
2024	82.8345



--17. What is the average number of products received per purchase order?

```
Select POD.PurchaseOrderID,AVG(POD.ReceivedQty) AS AverageNumberOfProductReceived
From [Purchasing].[PurchaseOrderDetail] POD
Group by POD.PurchaseOrderID
Order by AverageNumberOfProductReceived Desc
```

--18. What is the average number of products rejected per purchase order?

```
Select POD.PurchaseOrderID,AVG(POD.RejectedQty) AS AverageNumberOfProductRejected
From [Purchasing].[PurchaseOrderDetail] POD
Group by POD.PurchaseOrderID
Order by AverageNumberOfProductRejected Desc
```

--19. What is the average number of products stocked per purchase order?

```
Select POD.PurchaseOrderID,AVG(POD.StockedQty) AS AverageNumberOfProductStocked
From [Purchasing].[PurchaseOrderDetail] POD
Group by POD.PurchaseOrderID
Order by AverageNumberOfProductStocked Desc
```

	PurchaseOrderID	AverageNumberOfProductReceived
1	4010	8000.000000
2	4012	6000.000000
3	4009	2750.000000
4	4007	2255.555555
5	4000	1250.000000
6	3684	1250.000000
7	3763	1250.000000
8	3842	1250.000000

	PurchaseOrderID	AverageNumberOfProductRejected
1	744	1250.000000
2	2104	1250.000000
3	2204	550.000000
4	2404	550.000000
5	1904	550.000000
6	2004	550.000000
7	1204	550.000000
8	1304	550.000000

	PurchaseOrderID	AverageNumberOfProductStocked
1	4010	8000.000000
2	4012	6000.000000
3	4009	2750.000000
4	4007	2255.555555
5	3921	1250.000000
6	3684	1250.000000
7	3763	1250.000000
8	3842	1250.000000

--20. What is the average lead time for each product?

```
Select PV.ProductID,AVG(PV.AverageLeadTime) AS AverageLeadTime  
From [Purchasing].[ProductVendor] PV  
Group by PV.ProductID  
Order by PV.ProductID
```

	ProductID	AverageLeadTime
1	1	17
2	2	19
3	4	17
4	317	18
5	318	18
6	319	18
7	320	17
8	321	17
9	322	17
10	323	17
11	325	19
12	326	19
13	332	19
14	341	17
15	342	17
16	343	17
17	344	17
18	345	17
19	346	17
20	347	17
21	348	17
22	349	17
23	351	15
24	352	15
25	355	15
26	356	17

--21. What is the average number of employees in each department, and what is the average salary of those employees?

```

Select HRD.DepartmentID,HRD.Name,Count(HRE.BusinessEntityID) AS AverageNumberOfEmployee,
AVG(HRP.Rate) AS AverageSalaryOfEmployee
From [HumanResources].[EmployeeDepartmentHistory] HRH
Left Join [HumanResources].[Employee] HRE
On HRH.BusinessEntityID = HRE.BusinessEntityID
Left Join [HumanResources].[EmployeePayHistory] HRP
On HRH.BusinessEntityID = HRP.BusinessEntityID
Left Join [HumanResources].[Department] HRD
On HRH.DepartmentID = HRD.DepartmentID
Group by HRD.DepartmentID,HRD.Name

```

DepartmentID	Name	AverageNumberOfEmployee	AverageSalaryOfEmployee
1	Engineering	9	33.6723
2	Tool Design	6	23.5054
3	Sales	18	29.9719
4	Marketing	14	18.9364
5	Purchasing	17	20.1489
6	Research and Development	4	43.6731
7	Production	198	13.5409
8	Production Control	8	16.7746
9	Human Resources	6	18.0248
10	Finance	13	29.7742
11	Information Services	10	34.1586
12	Document Control	5	14.3884
13	Quality Assurance	9	17.2387
14	Facilities and Maintenance	7	13.0316
15	Shipping and Receiving	6	10.8718
16	Executive	4	68.3034

--22. What is the average number of purchase orders placed by each employee, and what is the average total due for those orders?

```

Select POH.EmployeeID,Count(POH.PurchaseOrderID) AS AverageNumbersOfPurchaseOrders ,
Sum(POH.TotalDue) AS AverageTotalDueForOrders
From [Purchasing].[PurchaseOrderHeader] POH
Group by POH.EmployeeID

```

EmployeeID	AverageNumbersOfPurchaseOrders	AverageTotalDueForOrders
261	401	7239495.3668
252	164	2978027.3706
258	361	5556272.2301
255	360	6305115.8315
259	360	5186032.1159
250	160	2501613.0427
256	361	6552648.5738
253	400	7423411.2039
254	362	6578521.3325
251	361	7426610.6434
257	360	6942815.7662
260	362	5788769.1609



--23. What is the average number of products ordered by each vendor, and what is the average unit price of those products?

```

Select POH.VendorID,PV.Name,Count(POD.OrderQty) AS AverageNumberOfProductOrdered,
AVG(POD.UnitPrice) AS AverageUnitPriceProduct
From [Purchasing].[PurchaseOrderHeader] POH
Left Join [Purchasing].[PurchaseOrderDetail] POD
On POH.PurchaseOrderID = POD.PurchaseOrderID
Left Join [Purchasing].[Vendor] PV
On POH.VendorID = PV.BusinessEntityID
Group by POH.VendorID,PV.Name
Order by VendorID

```

VendorID	Name	AverageNumberOfProductOrdered	AverageUnitPriceProduct
1492	Australia Bike Retailer	176	42.9522
1494	Allenson Cycles	51	16.086
1496	Advanced Bicycles	199	43.2056
1498	Trikes, Inc.	100	24.0502
1500	Morgan Bike Accessories	50	6.9825
1504	Chicago Rent-All	51	9.198
1506	Greenwood Athletic Company	102	39.8895
1508	Compete Enterprises, Inc	126	22.6135
1510	International	51	47.6805
1514	Training Systems	125	40.9845
1516	Gardner Touring Cycles	102	3.7905
1518	International Trek Center	7	15.5971
1520	G & K Bicycle Corp.	3	13.0842
1522	First National Sport Co.	51	3.6435
1526	International Bicycles	102	25.6357
1530	Comfort Road Bicycles	102	25.5202
1534	Ready Rentals	165	43.2104
1536	Cruger Bike Company	226	42.0451
1538	Vista Road Bikes	100	34.4032
1540	Bergeron Off-Roads	275	42.3662
1542	Hill's Bicycle Service	102	25.767
1544	Circuit Cycles	126	4.235
1546	Green Lake Bike Company	9	14.9911
1548	Consumer Cycles	51	19.9815
1554	WestAmerica Bicycle Co.	176	42.9522
1556	West Junction Cycles	50	46.4205

--24. What is the average number of days between order date and ship date for each vendor?

```
Select PV.Name,AVG(DATEDIFF(DAY,POH.OrderDate,POH.ShipDate)) AS AverageNumberOfDays
From [Purchasing].[PurchaseOrderHeader] POH
Left Join [Purchasing].[Vendor] PV
On POH.VendorID = PV.BusinessEntityID
Group by PV.Name
```

Name	AverageNumberOfDays
Electronic Bike Repair & Supplies	9
Bergeron Off-Roads	9
Expert Bike Co	9
Inner City Bikes	9
Vista Road Bikes	9
WestAmerica Bicycle Co.	9
Cruger Bike Company	9
Wood Fitness	9
American Bicycles and Wheels	9
Reliance Fitness, Inc.	9
Signature Cycles	9
Mitchell Sports	9
Chicago Rent-All	9
Inline Accessories	9
Green Lake Bike Company	25
Federal Sport	9
Hybrid Bicycle Center	9
Comfort Road Bicycles	9
Speed Corporation	9
Proseware, Inc.	9
Premier Sport, Inc.	9
Allenson Cycles	9
Consumer Cycles	9
Circuit Cycles	9
Training Systems	9
Gardner Touring Cycles	9



--25. What is the average number of products received per purchase order for each vendor?

```

Select PV.BusinessEntityID,PV.Name,Count(POD.ReceivedQty) AS NumberOfProductsReceived
From [Purchasing].[PurchaseOrderHeader] POH
Left Join[Purchasing].[Vendor] PV
On POH.VendorID = PV.BusinessEntityID
Left Join [Purchasing].[PurchaseOrderDetail] POD
On POH.PurchaseOrderID = POD.PurchaseOrderID
Group by PV.BusinessEntityID,PV.Name
Order by NumberOfProductsReceived

```

BusinessEntityID	Name	NumberOfProductsReceived
1520	G & K Bicycle Corp.	3
1574	Jeff's Sporting Goods	4
1518	International Trek Center	7
1546	Green Lake Bike Company	9
1594	Fitness Association	9
1636	Integrated Sport Products	10
1676	Team Athletic Co.	15
1682	Premier Sport, Inc.	50
1688	Wood Fitness	50
1662	Northern Bike Travel	50
1674	Varsity Sport Co.	50
1608	Sport Playground	50
1612	Midwest Sport, Inc.	50
1618	Metro Sport Equipment	50
1556	West Junction Cycles	50
1500	Morgan Bike Accessories	50
1504	Chicago Rent-All	51
1494	Allenson Cycles	51
1510	International	51
1522	First National Sport Co.	51
1548	Consumer Cycles	51
1580	Litware, Inc.	51
1566	Burnett Road Warriors	51
1620	Lakewood Bicycle	51
1610	Hybrid Bicycle Center	51
1600	Federal Sport	51

• **Dashboards:**

I have utilized **Power BI** to create interactive and visually appealing **dashboards**, effectively presenting complex data **insights** and **key performance** indicators to stakeholders.

