

Q1.

For yearly Basis - over the years 2018-2021?

Query :

SELECT

SUBSTRING([CREATION DATE], 7, 4) AS YEAR,
COUNT(*) AS REQUEST_COUNT

FROM

[master].[d2].[stg_Kansas_city]

WHERE

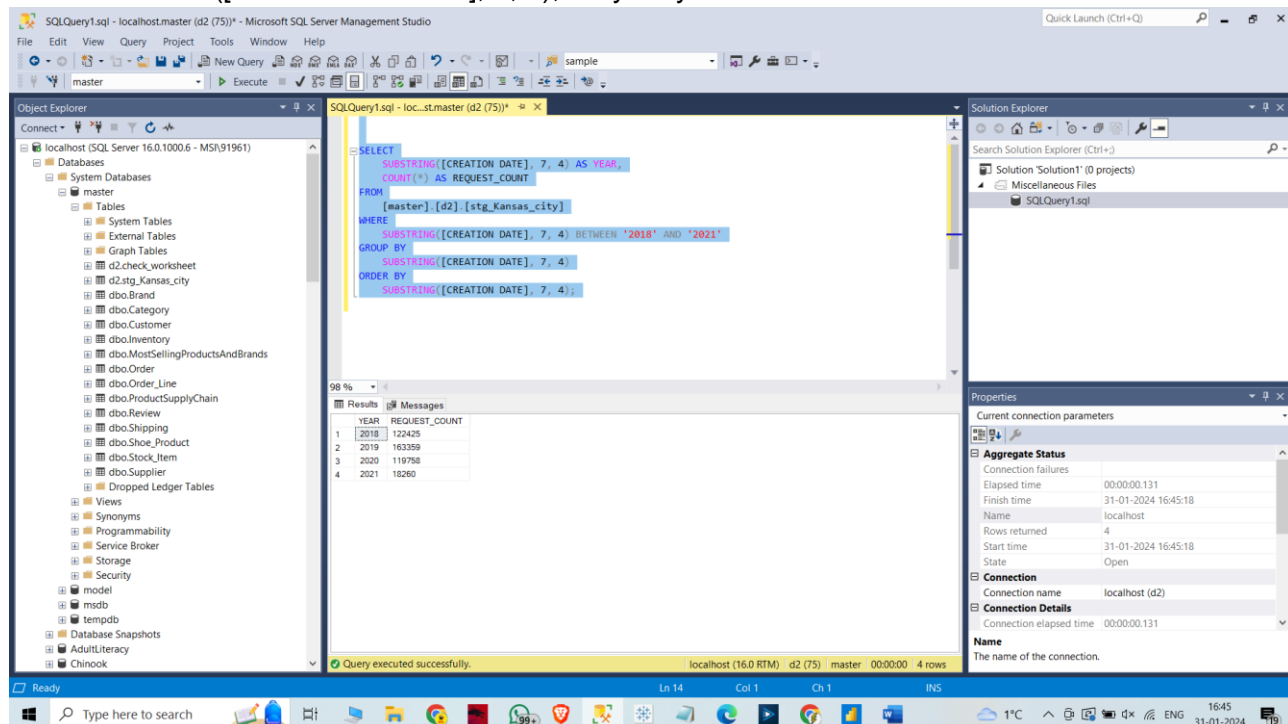
SUBSTRING([CREATION DATE], 7, 4) BETWEEN '2018' AND '2021'

GROUP BY

SUBSTRING([CREATION DATE], 7, 4)

ORDER BY

SUBSTRING([CREATION DATE], 7, 4);For yearly basis from 2018-2021



For monthly basis from 2018-2021

Query:

SELECT

SUBSTRING([CREATION DATE], 1, 2) AS MONTH,
SUBSTRING([CREATION DATE], 7, 4) AS YEAR,
COUNT(*) AS REQUEST_COUNT

FROM

damg7370_demo.stg_sfo_KansasCity_Assg1_prj

WHERE

SUBSTRING([CREATION DATE], 7, 4) BETWEEN '2018' AND '2021'

GROUP BY

SUBSTRING([CREATION DATE], 1, 2), SUBSTRING([CREATION DATE], 7, 4)

ORDER BY

SUBSTRING([CREATION DATE], 7, 4), SUBSTRING([CREATION DATE], 1, 2);

SQLQuery1.sql - localhost.master (d2 (75)) - Microsoft SQL Server Management Studio

Object Explorer: localhost (SQL Server 16.0.1000.6 - MS191961) > Databases > System Databases > master > Tables > [master].[d2].[stg_Kansas_city]

```

SELECT
    SUBSTRING([CREATION DATE], 1, 2) AS MONTH,
    SUBSTRING([CREATION DATE], 7, 4) AS YEAR,
    COUNT(*) AS REQUEST_COUNT
FROM
    [master].[d2].[stg_Kansas_city]
WHERE
    SUBSTRING([CREATION DATE], 7, 4) BETWEEN '2018' AND '2021'
GROUP BY
    SUBSTRING([CREATION DATE], 1, 2), SUBSTRING([CREATION DATE], 7, 4)
ORDER BY
    SUBSTRING([CREATION DATE], 7, 4), SUBSTRING([CREATION DATE], 1, 2)

```

Results: 98 %

	MONTH	YEAR	REQUEST_COUNT
1	01	2018	10713
2	02	2018	7837
3	03	2018	9457
4	04	2018	9403
5	05	2018	12096
6	06	2018	11488
7	07	2018	12182
8	08	2018	10804
9	09	2018	9566
10	10	2018	9967
11	11	2018	11274
12	12	2018	7838
13	01	2019	20506
14	02	2019	15481
15	03	2019	14997
16	04	2019	15882
17	05	2019	16686

Query executed successfully. localhost (16.0 RTM) d2 (75) master 00:00:00 46 rows

Properties: Current connection parameters

Aggregate Status

Connection failures	
Elapsed time	00:00:00.212
Finish time	31-01-2024 16:47:45
Name	localhost
Rows returned	46
Start time	31-01-2024 16:47:45
State	Open

Connection

Connection name	localhost (d2)
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Connection Details

Connection elapsed time	00:00:00.212
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Name

The name of the connection.

Q2.

Query :

SELECT

[SOURCE],

COUNT(*) AS REQUEST_COUNT

FROM

[master].[d2].[stg_Kansas_city]

GROUP BY

[SOURCE]

ORDER BY

REQUEST_COUNT DESC;

SQLQuery1.sql - localhost.master (d2 (75)) - Microsoft SQL Server Management Studio

Object Explorer: localhost (SQL Server 16.0.1000.6 - MS191961) > Databases > System Databases > master > Tables > [master].[d2].[stg_Kansas_city]

```

SELECT
    [SOURCE],
    COUNT(*) AS REQUEST_COUNT
FROM
    [master].[d2].[stg_Kansas_city]
GROUP BY
    [SOURCE]
ORDER BY
    REQUEST_COUNT DESC;

```

Results: 98 %

	SOURCE	REQUEST_COUNT
1	PHONE	1184555
2	WEB	208263
3	EMAIL	79098
4	SYS	18869
5	INSPE	13664
6	BOT	13133
7	TWIR	8207
8	VOICE	5961
9	WALK	1757
10	FAX	1490
11	KCEPD	584
12	EP	337
13	MAIL	319
14	EDC	226
15	NULL	66
16	CNO	59
17	SFNH	24

Query executed successfully. localhost (16.0 RTM) d2 (75) master 00:00:00 22 rows

Properties: Current connection parameters

Aggregate Status

Connection failures	
Elapsed time	00:00:00.112
Finish time	31-01-2024 16:48:32
Name	localhost
Rows returned	22
Start time	31-01-2024 16:48:32
State	Open

Connection

Connection name	localhost (d2)
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Connection Details

Connection elapsed time	00:00:00.112
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Name

The name of the connection.

Q3.

Query:

```
SELECT
    [DEPARTMENT],
    COUNT(*) AS REQUEST_COUNT_Dept
FROM
    [master].[d2].[stg_Kansas_city]
GROUP BY
    [DEPARTMENT]
ORDER BY
    REQUEST_COUNT_Dept DESC;
```

The screenshot displays the Microsoft SQL Server Enterprise Manager interface. The central pane shows the execution results of a query. The query is as follows:

```
SELECT
    [DEPARTMENT],
    COUNT(*) AS REQUEST_COUNT_Dept
FROM
    [master].[d2].[stg_Kansas_city]
GROUP BY
    [DEPARTMENT]
ORDER BY
    REQUEST_COUNT_Dept DESC;
```

The results pane shows a table with two columns: DEPARTMENT and REQUEST_COUNT_Dept. The data is sorted in descending order of REQUEST_COUNT_Dept.

DEPARTMENT	REQUEST_COUNT_Dept
NHS	762712
Public Works	352890
Water Services	212958
Parks and Rec	87800
Health	39356
KCPD	36345
City Managers Office	12815
City Planning and Development	12023
Northland	8445
NCS	6383
Finance	1615
Parks & Rec	861
Fire	610
General Service	513
Municipal Court	379
Housing Community Dev	342
South	304

The bottom status bar indicates that the query was executed successfully, returning 27 rows in 0.00000 seconds.

Q4.

```
SELECT TOP 10
    CATEGORY1,
    [CASE ID],
    [TYPE],
    MIN([DAYS TO CLOSE]) AS minimum_count_of_Days
FROM
    [master].[d2].[stg_Kansas_city]
```

```
GROUP BY
    [Type],CATEGORY1 ,[CASE ID],[DAYS TO CLOSE]
```

```
ORDER BY
    minimum_count_of_Days ASC,CATEGORY1 ASC,[CASE ID] ASC
```

The screenshot shows the Microsoft SQL Server Management Studio interface. The query editor contains the following SQL code:

```
SELECT TOP 10
    CATEGORY1,
    [CASE ID],
    [TYPE],
    MIN([DAYS TO CLOSE]) AS minimum_count_of_Days
FROM
    [master].[d2].[stg_Kansas_city]

GROUP BY
    [Type],CATEGORY1 ,[CASE ID],[DAYS TO CLOSE]

ORDER BY
    minimum_count_of_Days ASC,CATEGORY1 ASC,[CASE ID] ASC
```

The Results pane shows the following data:

	CATEGORY1	CASE ID	TYPE	minimum_count_of_Days
1	Air Quality	2010026653	Pollutants	0
2	Air Quality	201003275	Pollutants	0
3	Air Quality	2010042411	Pollutants	0
4	Air Quality	2010043242	Pollutants	0
5	Air Quality	2010043314	Pollutants	0
6	Air Quality	2010046566	Pollutants	0
7	Air Quality	2010057418	Pollutants	0
8	Air Quality	2010069691	Pollutants	0
9	Air Quality	2010069770	Pollutants	0
10	Air Quality	2010069820	Pollutants	0

The status bar at the bottom indicates: Query executed successfully. localhost (16.0 RTM) d2 (75) master 00:00:00 10 rows

Q5.

SELECT TOP 10

[ZIP CODE],

COUNT(*) AS REQUEST_COUNT

FROM

[master].[d2].[stg_Kansas_city]

GROUP BY

[ZIP CODE]

ORDER BY

REQUEST_COUNT DESC;

The screenshot displays the Microsoft SQL Server Management Studio (SSMS) interface. The central pane shows a SQL query executed against the 'master' database. The query is as follows:

```
SELECT TOP 10
  [ZIP CODE],
  COUNT(*) AS REQUEST_COUNT
FROM
  [master].[d2].[stg_Kansas_city]
GROUP BY
  [ZIP CODE]
ORDER BY
  REQUEST_COUNT DESC;
```

The 'Results' pane below the query shows the output of the query, which is a table with two columns: 'ZIP CODE' and 'REQUEST_COUNT'. The table contains 10 rows of data, sorted by 'REQUEST_COUNT' in descending order.

ZIP CODE	REQUEST_COUNT
64130	129145
64127	88800
64114	81942
64134	75810
64131	75067
64132	74207
64128	71395
64110	63847
64119	56706
64111	49566

The 'Object Explorer' on the left shows the database structure, including the 'master' database and its tables. The 'Solution Explorer' on the right shows the project structure, including the 'SQLQuery1.sql' file. The 'Properties' pane on the right shows the connection parameters for the 'localhost (d2)' connection.

Q6.

SELECT

DEPARTMENT,

[WORK GROUP],

COUNT(*) AS REQUEST_COUNT

FROM

[master].[d2].[stg_Kansas_city]

GROUP BY

[WORK GROUP],DEPARTMENT

ORDER BY

REQUEST_COUNT DESC;

The screenshot displays the Microsoft SQL Server Enterprise Manager interface. The central pane shows a SQL query executed successfully, returning 145 rows. The query is as follows:

```
SELECT
    DEPARTMENT,
    [WORK GROUP],
    COUNT(*) AS REQUEST_COUNT
FROM
    [master].[d2].[stg_Kansas_city]
GROUP BY
    [WORK GROUP],DEPARTMENT
ORDER BY
    REQUEST_COUNT DESC;
```

The Results pane shows the following data:

DEPARTMENT	WORK GROUP	REQUEST_COUNT
NHS	NHS-Neighborhood Preservation-	270111
NHS	NHS-Solid Waste-	237517
NHS	NHS-Animal Health and Safety-	136364
Public Works	Public Works-Solid Waste-	99309
Water Services	Water Services-Meter and Field Services-	85715
Parks and Rec	Parks and Rec-Landscape Services-Forestry-	65566
NHS	NHS-Solid Waste-Administration	44346
Public Works	Public Works-Street and Traffic-District 3	40671
Water Services	Water Services-Line Maintenance-Wastewater	39463
Public Works	Public Works-Street and Traffic-Streetlights	38066
KCPD	KCPD-Parking Control-	36345
Public Works	Public Works-Street and Traffic-Snow	30155
Public Works	Public Works-Capital Projects-Signs	29536
Water Services	Water Services-Line Maintenance-Pipeline	25290
Water Services	Water Services-Line Maintenance-Stormwater	24566
Public Works	Public Works-Street and Traffic-District 2	24283
NHS	NHS-Neighborhood Preservation-Open Entry	20387

The Properties pane on the right shows the current connection parameters for the 'localhost (d2)' connection, including connection status, elapsed time, and connection details.

Q7.

SELECT

DEPARTMENT,

/*SUM([DAYS TO CLOSE]) AS AVERAGE_RESPONSE_TIME,*/

MIN([DAYS TO CLOSE]) AS MIN_RESPONSE_TIME,

MAX([DAYS TO CLOSE]) AS MAX_RESPONSE_TIME

/*COUNT(*) AS TOTAL_REQUESTS*/

FROM

[master].[d2].[stg_Kansas_city]

GROUP BY

DEPARTMENT

ORDER BY

MAX([DAYS TO CLOSE]) DESC;

The screenshot displays the Microsoft SQL Server Management Studio interface. The central query editor contains the following SQL code:

```
SELECT
    DEPARTMENT,
    /*SUM([DAYS TO CLOSE]) AS AVERAGE_RESPONSE_TIME,*/
    MIN([DAYS TO CLOSE]) AS MIN_RESPONSE_TIME,
    MAX([DAYS TO CLOSE]) AS MAX_RESPONSE_TIME
    /*COUNT(*) AS TOTAL_REQUESTS*/
FROM
    [master].[d2].[stg_Kansas_city]
GROUP BY
    DEPARTMENT
ORDER BY
    MAX([DAYS TO CLOSE]) DESC;
```

The Object Explorer on the left shows the database structure, including the 'master' database and the 'd2' schema. The Results pane at the bottom displays the query output as a table with 17 rows and 3 columns: DEPARTMENT, MIN_RESPONSE_TIME, and MAX_RESPONSE_TIME.

DEPARTMENT	MIN_RESPONSE_TIME	MAX_RESPONSE_TIME
NHS	0	4525
City Planning and Development	0	3595
Health	0	3170
City Managers Office	0	2996
NCS	0	1839
Water Services	0	1476
Public Works	0	1319
Northland	0	1182
Parks & Rec	0	912
Parks and Rec	0	744
General Service	0	621
Convention and Entertainment Center	0	432
Finance	0	429
KCPD	0	412
South	0	386
Mayors Office	1	301
Northeast	1	295

The Properties pane on the right shows the current connection parameters for 'localhost (d2)', including the connection name, connection details, and the name of the connection.

Q8.

SELECT

```
YEAR(CONVERT(DATE, [CREATION DATE], 101)) AS REQUEST_YEAR,  
STATUS,  
COUNT(*) AS STATUS_COUNT
```

FROM

```
[master].[d2].[stg_Kansas_city]
```

WHERE

```
YEAR(CONVERT(DATE, [CREATION DATE], 101)) BETWEEN 2018 AND 2021
```

GROUP BY

```
YEAR(CONVERT(DATE, [CREATION DATE], 101)),  
STATUS
```

ORDER BY

```
REQUEST_YEAR, STATUS;
```

SQLQuery1.sql - localhost.master (d2 (75))* - Microsoft SQL Server Management Studio

Object Explorer

- localhost (SQL Server 16.0.1000.6 - MS191961)
 - Databases
 - System Databases
 - master
 - Tables
 - System Tables
 - External Tables
 - Graph Tables
 - d2.check_worksheet
 - d2.stg_Kansas_city
 - dbo.Brand
 - dbo.Category
 - dbo.Customer
 - dbo.Inventory
 - dbo.MostSellingProductsAndBrands
 - dbo.Order
 - dbo.Order_Line
 - dbo.ProductSupplyChain
 - dbo.Review
 - dbo.Shipping
 - dbo.Shoe_Product
 - dbo.Stock_Item
 - dbo.Supplier
 - Dropped Ledger Tables
 - Views
 - Synonyms
 - Programmability
 - Service Broker
 - Storage
 - Security
 - model
 - msdb
 - tempdb
 - Database Snapshots
 - FullText Catalogs
 - Chinook

SQLQuery1.sql - loc_st-master (d2 (75))*

```
SELECT  
YEAR(CONVERT(DATE, [CREATION DATE], 101)) AS REQUEST_YEAR,  
STATUS,  
COUNT(*) AS STATUS_COUNT  
FROM  
[master].[d2].[stg_Kansas_city]  
WHERE  
YEAR(CONVERT(DATE, [CREATION DATE], 101)) BETWEEN 2018 AND 2021  
GROUP BY  
YEAR(CONVERT(DATE, [CREATION DATE], 101)),  
STATUS  
ORDER BY  
REQUEST_YEAR, STATUS;
```

Results

	REQUEST_YEAR	STATUS	STATUS_COUNT
1	2018	DUP	650
2	2018	FAIL	1
3	2018	RESOL	121774
4	2019	DUP	171
5	2019	FAIL	1
6	2019	RESOL	163187
7	2020	DUP	278
8	2020	RESOL	119480
9	2021	DUP	1
10	2021	RESOL	18259

Query executed successfully. localhost (16.0 RTM) d2 (75) master 00:00:00 10 rows

Properties

Current connection parameters

Aggregate Status

Connection failures	
Elapsed time	00:00:00.232
Finish time	31-01-2024 16:53:47
Name	localhost
Rows returned	10
Start time	31-01-2024 16:53:47
State	Open

Connection

Connection name	
localhost (d2)	

Connection Details

Connection elapsed time	
00:00:00.232	

Name

The name of the connection.

Q9.

SELECT TOP 10

 CATEGORY1,

 AVG([DAYS TO CLOSE]) AS AVERAGE_DAYS_TO_CLOSE

FROM

 [master].[d2].[stg_Kansas_city]

GROUP BY

 CATEGORY1

ORDER BY

 AVERAGE_DAYS_TO_CLOSE DESC;

SQLQuery1.sql - localhost.master (d2 (75)) - Microsoft SQL Server Management Studio

Object Explorer

- localhost (SQL Server 16.0.1000.6 - MSN/91961)
 - Databases
 - System Databases
 - master
 - Tables
 - System Tables
 - External Tables
 - Graph Tables
 - d2.check_worksheet
 - d2.stg_Kansas_city
 - dbo.Brand
 - dbo.Category
 - dbo.Customer
 - dbo.Inventory
 - dbo.MostSellingProductsAndBrands
 - dbo.Order
 - dbo.Order_Line
 - dbo.ProductSupplyChain
 - dbo.Review
 - dbo.Shipping
 - dbo.Shoe_Product
 - dbo.Stock_Item
 - dbo.Supplier
 - Dropped Ledger Tables
 - Views
 - Synonyms
 - Programmability
 - Service Broker
 - Storage
 - Security
 - model
 - msdb
 - tempdb
 - Database Snapshots
 - Adwaiter
 - Chinook

SQLQuery1.sql - localhost.master (d2 (75))

```
SELECT TOP 10
    CATEGORY1
    , AVG([DAYS TO CLOSE]) AS AVERAGE_DAYS_TO_CLOSE
FROM
    [master].[d2].[stg_Kansas_city]
GROUP BY
    CATEGORY1
ORDER BY
    AVERAGE_DAYS_TO_CLOSE DESC;
```

Results

	CATEGORY1	AVERAGE_DAYS_TO_CLOSE
1	Data Not Available	1189.01602136182
2	Weeds	420.305371834167
3	Property & Nuisance Violations	187.382354379616
4	Property Violations	180.22246766999
5	Water Main Break	172.50505050505
6	Property	171.236130826501
7	Mowing	162.946076542258
8	Information Request	103.5
9	Water Services	99.108044429485
10	Nuisance Violations	93.2279541362019

Properties

Current connection parameters

Aggregate Status

Connection failures

Elapsed time 00:00:00.125

Finish time 31-01-2024 16:54:11

Name localhost

Rows returned 10

Start time 31-01-2024 16:54:11

State Open

Connection

Connection name localhost (d2)

Connection Details

Connection elapsed time 00:00:00.125

Name

The name of the connection.

Query executed successfully. localhost (16.0 RTM) d2 (75) master 00:00:00 10 rows

Q10.

SELECT

DEPARTMENT,

COUNT(*) AS WORKLOAD,

AVG([DAYS TO CLOSE]) AS AVERAGE_EFFICIENCY

FROM

[master].[d2].[stg_Kansas_city]

GROUP BY

DEPARTMENT

ORDER BY

WORKLOAD DESC;

The screenshot displays the Microsoft SQL Server Management Studio interface. The central query editor contains the following SQL query:

```
SELECT
    DEPARTMENT,
    COUNT(*) AS WORKLOAD,
    AVG([DAYS TO CLOSE]) AS AVERAGE_EFFICIENCY
FROM
    [master].[d2].[stg_Kansas_city]
GROUP BY
    DEPARTMENT
ORDER BY
    WORKLOAD DESC;
```

The Results pane shows the output of the query, which is a table with three columns: DEPARTMENT, WORKLOAD, and AVERAGE_EFFICIENCY. The data is sorted by WORKLOAD in descending order. The status bar at the bottom indicates that the query was executed successfully, returning 27 rows in 0.00:00.27 seconds.

DEPARTMENT	WORKLOAD	AVERAGE_EFFICIENCY
1 MIS	762712	77.7277830706217
2 Public Works	352890	10.9771571877922
3 Water Services	212958	32.4879225011505
4 Parks and Rec	87800	19.9493849658314
5 Health	39356	11.1741284683403
6 KCPD	36345	3.62778924198652
7 City Managers Office	12315	22.1766593853349
8 City Planning and Development	12023	105.12525901849
9 Northland	8445	27.5583185316765
10 NCS	6383	767.128779570735
11 Finance	1615	10.4402476780186
12 Parks & Rec	861	43.9059233449477
13 Fire	610	7.63034426229506
14 General Service	513	57.5438596491228
15 Municipal Court	379	4.2295514518734
16 Housing Community Dev	342	1.73391812865497
17 South	304	44.5988842105263