QUERYING TWITTER (X)

FREE COPY

50 SQL PROJECTS ON X (FORMERLY TWITTER) DATABASES

(WITH SOLUTIONS)

Dr. Eyo Eyo

www.eyowhite.com

SQL PROJECTS ON X (FORMERLY TWITTER) DATABASES

Dr. Eyo Eyo

Website: eyowhite.com

Twitter: twitter.com/Eyowhite3

www.eyowhite.com

Table of Contents

About the Author....4
Important information....5
Database Access....5
SQL Server installation and database restoration....6
Who This Book Is For....6
Feedback....7
Business Scenarios....8
Analysis of most active users....8
Find Users with Most Followers....8
Identify Users with Unread Notifications....8
Identify Most Liked Tweets....8
Determine User Growth Over Time....9
Analyse Notification Engagement....9
Identify Influential Users and Their Impact on User Engagement....9
Track User Retention and Platform Engagement Over Time....10
Analyse the Most Common Type of User Notifications....10
Discover Users with High Engagement but Low Follower Count....11
Identify Users Who Have Not Engaged Recently....11
Find Most Popular Tweets Based on User Interaction....11
Find Users Who Have Never Been Mentioned....12
Analyse the Average Number of Followers per User....12
Identify Users with the Most Diverse Engagement....13
Identify Most Active Users in Direct Messaging....13
Identify Users Who Have Not Retweeted Any Tweets....13
Analyse Engagement Metrics of Mentioned Users....14
Find Users with High Engagement but Low Tweet Visibility....14
Find Users Who Have Received the Most Direct Messages....15
Identify Active Users Not Following Back....15

Identify Potential Brand Ambassadors 15
Identify Users Who Like Their Own Tweets 16
Identify Users Who Retweet but Don't Tweet 16
Identify Inactive Followers 16
Identify Users Who Only Like Tweets from a Single User 17
Identify Users Who Received Likes from Users They Don't Follow 17
Identify Users Who Are Frequently Retweeted but Don't Retweet Others 18
Identify Users Who Have the Most Followers but Follow the Fewest Users 18
Identify Users Who Have Liked but Never Been Liked 18
Identify Most Engaged Users Across Multiple Interaction Types 19
Identify Users with Highest Difference Between Following and Followers 19
Identify Users Who Like and Retweet Each Other's Content the Most 20
Identify Users Most Frequently Engaged in Conversations via Direct Messages 20
Identify Users Mentioned by the Most Diverse User Base 21
Identify Top Tweets with the Highest Engagement to Follower Ratio 21
Identify Users Who Have Received the Most Likes from Non-Followers 21
Find Users Who Have Sent the Most Direct Messages Containing a Specific Keyword 22
Find Users Who Have Interacted the Most with Each Other 22
Identify the Most Active Users in Different Time Periods 22
Identify Users Mentioned in Tweets but Not Following the Tweeter 23
Identify the Most Retweeted Original Tweets 23
Identify Tweets that Generated the Most User Engagement Across Various Types 23
Find Users Who Received the Most Mentions in Tweets from Diverse Users 24
Identify Users Who Are Highly Active but Receive Low Engagement 24
Identify the Most Liked Tweets that Have Not Been Retweeted 25
Identify Most Engaged Followers 25
Identify Users with High Follower to Following Ratio 25
Identify Most Frequently Mentioned Keywords in Tweets 26
Identify Users Who Haven't Tweeted in the Last 6 months. 26
Appendix 27

SQL Server Installation Guide.....27

About the Author

Dr. Eyo Eyo (PhD) is a University Lecturer and accomplished researcher in the fields of machine learning, data/business analysis, and engineering.

Eyo holds a Doctor of Philosophy (PhD) degree, which stands as a testament to his dedication to advancing knowledge in data science and engineering. His academic journey has been marked by a relentless pursuit of excellence, resulting in numerous scholarly achievements and contributions that have enriched his discipline.

Eyo's commitment to education goes beyond the classroom, as he continually seeks innovative ways to engage students and foster a deeper understanding of complex subjects.

In the realm of research, Eyo has made significant strides. His work in machine learning and data analysis has led to groundbreaking insights and practical applications, contributing to the advancement of knowledge through numerous published works.

As you delve into the pages of Eyo's book, "50 SQL Projects on X (formerly Twitter) Databases", you will discover the depth of his expertise and the invaluable insights he brings to the world of Structured Query Language and data analysis in general.

Important information

Welcome to "**50 SQL Projects on X (formerly Twitter) Databases**." This book is designed to be your comprehensive guide to mastering the art of SQL using practical Scenarios. Whether you're a beginner looking to build a strong foundation or an experienced practitioner aiming to sharpen your skills.

SQL (Structured Query Language) is the backbone of managing and manipulating data in modern databases, making it an essential skill for anyone working with data-driven applications.

This book covers the commands used in Data Query language (DQL) in most parts. Other categories of SQL commands namely, Data Manipulation Language (DML), Data Definition Language (DDL) and Data Control Language (DCL) will be covered in a separate book.

NOTE: The commands employed in the "sample" solutions primarily align with Microsoft SQL Server conventions, although suggestions are provided on how the syntax might be adapted to suit other frequently used SQL platforms such as MySQL, Oracle, PostgreSQL, etc.

Database Access

Access to the database used in the “50 SQL Projects on X (formerly Twitter) Databases” can be acquired from this link.

SQL Server installation and database restoration

In the Appendix, you'll find comprehensive instructions for installing SQL Server 2019 on Windows 10, as well as the step-by-step process on how to restore a database using the Microsoft AdventureWorks database as an example.

Who This Book Is For

This " **50 SQL Projects on X (formerly Twitter) Databases**" assumes some fundamental knowledge of SQL at the least. Nevertheless, it is intended for a wide audience, including:

- **SQL Beginners**: If you're new to SQL, don't worry. We've also provided some basic queries that will aid in building your understanding in your SQL journey.
- **Students and Educators**: Whether you're a student studying database management or an educator looking for resources to teach SQL, this book provides a rich set of exercises that can be used for learning or teaching purposes.
- **Database Professionals**: Experienced database administrators, analysts, and developers can benefit from this book by using it as a reference and for honing their SQL skills with challenging exercises.

Feedback

We value your feedback and suggestions. If you have any comments, questions, or ideas for improvement, please don't hesitate to reach out on any of the following platforms:

- Twitter: https://twitter.com/Eyowhite3
- Website: https://eyowhite.com/contact/

Your input will help us enhance future editions of this book.

Thank you for choosing "50 SQL Projects on X (formerly Twitter) Databases" We hope this book serves as a valuable resource in your journey to become a proficient SQL practitioner.

Happy querying!

[Eyo Eyo]

Business Scenarios

1. Scenario Q1

Analysis of most active users

You are a Data Analyst at Twitter and are tasked with analysing user engagement. You need to find out which users have the highest engagement on the platform. For this analysis, consider a user to be engaged if they have sent messages, liked tweets, been mentioned, received notifications, and retweeted tweets.

2. Scenario Q2

Find Users with Most Followers

Retrieve the top 5 users with the most followers, including their UserID, Username, FullName, and FollowerCount.

3. Scenario Q3

Identify Users with Unread Notifications

Identify all users who have unread notifications. Display their UserID, Username, FullName, and the count of UnreadNotifications.

4. Scenario Q4

Identify Most Liked Tweets

Find the top 5 tweets that have received the most likes, including their TweetID and LikeCount. Also, retrieve the UserID, Username, and FullName of the users who posted these tweets.

5. Scenario Q5

Determine User Growth Over Time

Analyse the growth of users joining the platform over time. Retrieve the count of users who joined each month and year.

6. Scenario Q6

Analyse Notification Engagement

Evaluate how users are engaging with notifications. Find the number of notifications sent to users, the number of notifications read, and the read rate (percentage of notifications read) for each NotificationType.

7. Scenario Q7

Identify Influential Users and Their Impact on User Engagement

Twitter is interested in identifying influential users on its platform to understand their impact on user engagement. Influential users are characterized by a high number of followers and frequent interactions (e.g., messages, likes, mentions, retweets). By identifying these users, Twitter can analyze their content, engagement patterns, and potentially leverage their influence for marketing and promotional activities.

Specific Tasks:

a. Identify Influential Users: Find the top 5 users with the most followers and list their UserID, Username, FullName, and the number of followers.

b. Analyze User Engagement: For each of the identified influential users, calculate their engagement on the platform by counting the number of messages sent, tweets liked, mentions received, notifications received, and tweets retweeted.

8. Scenario Q8

Track User Retention and Platform Engagement Over Time

Twitter aims to enhance user experience and engagement on its platform to ensure user retention. The company wants to analyse the activities of users who joined the platform within the last year and assess their engagement levels to identify patterns and areas for improvement.

Specific Tasks:

a. User Retention Analysis: Determine the number of users who joined in the last year and are still active on the platform, based on their engagement in various activities (messages, likes, mentions, retweets) in the last month.

b. Engagement Analysis: For the retained users, analyse the frequency of their engagement in different activities on the platform.

9. Scenario Q9

Analyse the Most Common Type of User Notifications

Twitter wants to understand which type of notifications users receive most frequently to optimize user engagement and notification relevance. By analysing the most common notification types, Twitter can tailor its notification system to enhance user experience.

The task is to Identify the most common notification type received by users. Display the NotificationType and the count of notifications for each type, ordered by the count in descending order.

10. Scenario Q10

Discover Users with High Engagement but Low Follower Count

Twitter is interested in identifying users who are highly engaged on the platform but have relatively few followers. Recognizing and promoting such users could potentially diversify the content on the platform and improve overall user engagement.

Specific Task:

Find the top 5 users who have sent the most messages but have fewer than 100 followers. Display their UserID, Username, FullName, MessageCount, and FollowerCount.

11. Scenario Q11

Identify Users Who Have Not Engaged Recently

Twitter aims to maintain high user engagement levels on its platform. Identifying users who have not engaged in any activities recently can help Twitter develop targeted strategies to re-engage these users and improve overall platform activity.

Specific Task:

List the UserID, Username, and FullName of users who have not sent messages, or tweets in the last 30 days.

12. Scenario Q12

Find Most Popular Tweets Based on User Interaction

Twitter wants to identify and promote the most popular tweets on its platform. A tweet's popularity can be assessed by the number of likes, retweets, and mentions it receives.

Highlighting popular tweets can enhance user engagement and attract more users to the platform.

The task is to Identify the top 3 tweets that have received the most combined user interactions (likes, retweets, mentions). Display the TweetID, UserID (of the user who posted the tweet), Username, FullName, and the total count of interactions.

13. Scenario Q13

Find Users Who Have Never Been Mentioned

Twitter is interested in increasing interactions among users. The company wants to identify users who have never been mentioned by others so that it can encourage more interactions involving these users.

The task is to retrieve a list of UserID, Username, and FullName of users who have never been mentioned in any tweets.

14. Scenario Q14

Analyse the Average Number of Followers per User

Twitter wants to analyse the average number of followers that users on the platform have. This will help Twitter understand the distribution of followers and identify whether the platform has a balanced user interaction or is dominated by a few users with a large number of followers. The task is to calculate the average number of followers that users on the platform have.

15. Scenario Q15

Identify Users with the Most Diverse Engagement

Twitter is looking to recognise and possibly reward users who engage diversely on the platform, participating in various activities like sending messages, liking tweets, retweeting, and being mentioned. Identifying such users can help Twitter promote diverse engagement across the platform.

The task requires finding the top 3 users who have participated in the most diverse activities (sending messages, liking tweets, retweeting, being mentioned). Display their UserID, Username, FullName, and the count of different activities they have engaged in.

16. Scenario Q16

Identify Most Active Users in Direct Messaging

Twitter wants to understand user interaction through direct messaging. Identifying the most active users in sending direct messages can provide insights into communication patterns and help in optimizing features related to messaging.

The task is to find the top 3 users who have sent the most direct messages. Display their UserID, Username, FullName, and the total number of messages sent.

17. Scenario Q17

Identify Users Who Have Not Retweeted Any Tweets

Twitter is keen on promoting content sharing across its platform. Identifying users who have not retweeted any tweets can help Twitter formulate strategies to encourage these users to share more content, thus increasing overall platform engagement.

The task is to retrieve a list of UserID, Username, and FullName of users who have not retweeted any tweets.

18. Scenario Q18

Analyse Engagement Metrics of Mentioned Users

Twitter wants to analyse the engagement metrics of users who are frequently mentioned in tweets. Understanding the engagement patterns of these users can help Twitter optimize its algorithms for content recommendation and user interaction.

The task is to fine the top 5 most mentioned users, calculate the average number of likes and retweets their tweets receive. Display their UserID, Username, FullName, MentionCount, AverageLikes, and AverageRetweets.

19. Scenario Q19

Find Users with High Engagement but Low Tweet Visibility

Twitter is interested in promoting users who actively engage with the platform through various activities but whose tweets have lower visibility, measured by fewer likes and retweets. Identifying such users can help Twitter improve content diversity and user satisfaction by promoting undervalued content.

Identify the top 5 users who have high engagement (sending messages, liking tweets, retweeting, being mentioned) but whose tweets, on average, receive fewer likes and retweets. Display their UserID, Username, FullName, EngagementScore, AverageLikes, and AverageRetweets.

20. Scenario Q20

Find Users Who Have Received the Most Direct Messages

Twitter wants to identify which users receive the most direct messages, as this can be an indicator of user popularity and engagement on the platform. This insight can help Twitter in community management and user engagement analysis.

Retrieve the top 3 users who have received the most direct messages, displaying their UserID, Username, FullName, and the total number of messages received.

21. Scenario Q21

Identify Active Users Not Following Back

Twitter is interested in fostering mutual interactions among users. Identifying users who are active but do not follow back their followers can help Twitter suggest these users to follow back, thereby promoting mutual connections and increasing overall platform engagement. The task is to find the top 3 active users (based on the number of tweets posted) who have the highest count of followers that they are not following back. Display UserID, Username, FullName, TweetCount, and NonFollowBackCount.

22. Scenario Q22

Identify Potential Brand Ambassadors

Twitter is planning a marketing campaign and wants to identify potential brand ambassadors. They are looking for active users who frequently mention Twitter in their tweets and have a substantial follower base, indicating their influence and reach on the platform. The task is to find the top 3 users who have mentioned "Twitter" the most

in their tweets and have the highest number of followers. Display UserID, Username, FullName, MentionCount, and FollowerCount.

23.Scenario Q23

Identify Users Who Like Their Own Tweets

Twitter is curious about user behaviours, particularly those who like their own tweets. Identifying such users can provide interesting insights into user engagement patterns, which can be used for user studies and enhancing platform features.

The task is to find all users who have liked their own tweets. Display UserID, Username, and FullName.

24. Scenario Q24

Identify Users Who Retweet but Don't Tweet

Twitter aims to understand diverse user behaviours on the platform. Identifying users who only retweet content but do not post original tweets can provide insights into user engagement and content dissemination patterns.

The task requires finding users who have retweeted content but have never posted their own tweets. Display UserID, Username, and FullName.

25. Scenario Q25

Identify Inactive Followers

Twitter is interested in maintaining an active user base. Identifying followers who themselves have not posted any tweets can help Twitter develop strategies to encourage content creation and participation among these users.

The task is to retrieve a list of users who are following other users but have never posted any tweets themselves. Display their UserID, Username, and FullName.

26. Scenario Q26

Identify Users Who Only Like Tweets from a Single User

Twitter is interested in studying user interactions and relationships on the platform. Identifying users who only like tweets from a single user can provide insights into user preferences and potentially highlight strong connections or relationships between users.

The task is to find users who have only liked tweets from a single other user and display the UserID, Username, FullName of both the liker and the likee, along with the total number of likes.

27.Scenario Q27

Identify Users Who Received Likes from Users They Don't Follow

Twitter wants to explore user interaction patterns, especially the dynamics between users who give likes and whether there is a mutual following relationship. Understanding such interactions can help Twitter promote community building and user engagement.

The task is to find the top 5 users who have received the most likes from users they don't follow back. Display the UserID, Username, FullName, and the number of LikesReceived.

28. Scenario Q28

Identify Users Who Are Frequently Retweeted but Don't Retweet Others

Twitter aims to foster reciprocal interactions among users. Understanding which users are frequently retweeted but do not retweet others can help Twitter develop strategies to encourage more balanced interactions.

The task is to find the top 5 users who have been retweeted the most but have never retweeted other users' tweets. Display UserID, Username, FullName, and RetweetCount.

29. Scenario Q29

Identify Users Who Have the Most Followers but Follow the Fewest Users

Twitter is interested in studying the follower-following dynamics among users. Identifying users who have a high number of followers but follow relatively few users can offer insights into user influence and engagement on the platform.

The task is to retrieve the top 5 users who have the most followers but follow the fewest number of users. Display UserID, Username, FullName, FollowerCount, and FollowingCount.

30. Scenario Q30

Identify Users Who Have Liked but Never Been Liked

Twitter aims to understand various user engagement patterns. Identifying users who have liked tweets but have never received likes can help Twitter in recognizing users

who are active but not getting much attention. This could be helpful in enhancing user experience and engagement.

The task is to find all users who have liked at least one tweet but have never received a like on their own tweets. Display their UserID, Username, and FullName.

31. Scenario Q31

Identify Most Engaged Users Across Multiple Interaction Types

Twitter is interested in identifying its most engaged users based on various types of interactions such as sending messages, liking tweets, being mentioned, and retweeting. Recognizing such users can help Twitter in user engagement analysis and in developing features to further boost interaction on the platform.

The task is to find the top 3 users who are most engaged on the platform considering the number of direct messages sent, tweets liked, mentions received, and tweets retweeted. Display UserID, Username, FullName, and the total EngagementScore (sum of the different interaction types.

32.Scenario Q32

Identify Users with Highest Difference Between Following and Followers

Twitter is interested in analysing the social dynamics of its user base. Identifying users who have a significant difference between the number of accounts they follow and the number of followers they have can provide insights into user behaviour and network structures on the platform.

You are required to find the top 5 users with the highest difference between the number of accounts they are following and the number of followers they have. Display UserID, Username, FullName, FollowingCount, FollowerCount, and Difference.

33.Scenario Q33

Identify Users Who Like and Retweet Each Other's Content the Most

Twitter is keen on fostering mutual interactions and relationships among its users. Identifying pairs of users who frequently like and retweet each other's content can offer insights into strong connections and active interactions on the platform.

Find the top 3 pairs of users who have the highest combined count of liking and retweeting each other's content. Display UserID1, Username1, FullName1, UserID2, Username2, FullName2, and MutualInteractionCount.

34. Scenario Q34

Identify Users Most Frequently Engaged in Conversations via Direct Messages

Twitter aims to foster user communication and engagement on the platform. By identifying users who are most frequently engaged in conversations via direct messages, Twitter can gain insights into user communication patterns and potentially develop features to enhance private conversations.

Find the top 3 users who have been engaged in the most conversations via direct messages. A conversation is defined as an exchange of direct messages between two users. Display UserID, Username, FullName, and ConversationCount.

35.Scenario Q35

Identify Users Mentioned by the Most Diverse User Base

Twitter wants to understand which users are attracting a diverse audience on the platform. Identifying users who are mentioned by a wide variety of other users can help Twitter recognize influential users and understand the dynamics of user interactions.

Find the top 5 users who have been mentioned by the most diverse user base. Display their UserID, Username, FullName, and the number of UniqueMentioningUsers.

36. Scenario Q36

Identify Top Tweets with the Highest Engagement to Follower Ratio

Twitter aims to spotlight tweets that punch above their weight in terms of engagement compared to the number of followers of the tweeting user. This can highlight content that has resonated well beyond the immediate follower base of a user, providing insights into the nature of viral content.

Find the top 3 tweets with the highest engagement to follower ratio. Engagement is measured by the sum of likes and retweets a tweet has received. Display TweetID, UserID, Username, FullName, TweetText, EngagementCount, FollowerCount, and EngagementToFollowerRatio.

37.Scenario Q37

Identify Users Who Have Received the Most Likes from Non-Followers

Twitter is interested in discovering content that appeals beyond a user's immediate follower circle. Identifying users who receive many likes from non-followers can provide

insights into the widespread appeal of their tweets and help Twitter understand the dynamics of content sharing and discovery.

Find the top 3 users who have received the most likes on their tweets from non-followers. Display UserID, Username, FullName, and LikesFromNonFollowersCount.

38.Scenario Q38

Find Users Who Have Sent the Most Direct Messages Containing a Specific Keyword

Identify users who have sent the most direct messages containing the word "offer".

39. Scenario Q39

Find Users Who Have Interacted the Most with Each Other

Twitter is interested in identifying pairs of users who have the most interactions with each other. Interactions can be defined as one user mentioning the other, sending direct messages, or liking and retweeting each other's tweets. Identifying such pairs can provide insights into user relationships and communities within Twitter.

The task tis to find the top 3 pairs of users who have interacted the most with each other. Display UserID1, Username1, FullName1, UserID2, Username2, FullName2, and TotalInteractions.

40. Scenario Q40

Identify the Most Active Users in Different Time Periods

Twitter wants to analyse user activity during different times of the day to understand user behaviour patterns and potentially optimize the timing of platform features or advertisements.

Find the most active user in terms of tweets sent during the morning (6 AM - 12 PM), afternoon (12 PM - 6 PM), evening (6 PM - 12 AM), and night (12 AM - 6 AM). Display the TimePeriod, UserID, Username, FullName, and TweetCount.

41. Scenario Q41

Identify Users Mentioned in Tweets but Not Following the Tweeter

Twitter is interested in identifying instances where users are mentioned in tweets by individuals they do not follow. This can help understand user interactions and discover potential relationships or networks on the platform.

Find the top 5 users who have been mentioned the most in tweets by people they do not follow. Display MentionedUserID, Username, FullName, and MentionCount.

42. Scenario Q42

Identify the Most Retweeted Original Tweets

Twitter aims to identify which original tweets have been retweeted the most to gauge the popularity and impact of content on the platform.

Find the top 3 original tweets (not retweets) that have been retweeted the most. Display OriginalTweetID, UserID, Username, FullName, TweetText, and RetweetCount.

43. Scenario Q43

Identify Tweets that Generated the Most User Engagement Across Various Types

Twitter aims to measure the level of engagement that each tweet receives. Engagement can be in the form of likes, retweets, and mentions.

The task is to find the top 3 tweets that have generated the most total engagement (likes + retweets + mentions). Display TweetID, UserID, Username, FullName, TweetText, and TotalEngagement.

44. Scenario Q44

Find Users Who Received the Most Mentions in Tweets from Diverse Users

Twitter wants to identify users who are mentioned by a diverse set of users to understand their reach and influence across different user communities on the platform.

Find the top 5 users who have been mentioned in tweets by the highest number of different users. Display MentionedUserID, Username, FullName, and DiverseMentionCount.

45. Scenario Q45

Identify Users Who Are Highly Active but Receive Low Engagement

Twitter is interested in finding users who are highly active (frequent tweeters) but receive relatively low engagement on their tweets. Identifying such users can help Twitter in understanding user behaviour and potentially enhancing user experience.

Your task is to find the top 3 users who have tweeted the most but have the lowest average engagement (likes and retweets) per tweet. Display UserID, Username, FullName, TotalTweets, AverageEngagementPerTweet.

46. Scenario Q46

Identify the Most Liked Tweets that Have Not Been Retweeted

Twitter wants to identify tweets that have received a high number of likes but have not been retweeted. This can help understand user engagement patterns and the types of content that are liked but not shared.

Find the top 3 tweets that have received the most likes but have zero retweets. Display TweetID, UserID, Username, FullName, TweetText, and LikeCount.

47. Scenario Q47

Identify Most Engaged Followers

Twitter wants to identify the most engaged followers of a user to understand user interaction patterns and to potentially offer new features or promotions.

Find the top 3 followers of each user who have engaged the most with the user's tweets, in terms of likes and retweets. Display FollowedUserID, FollowerUserID, FollowerUsername, FollowerFullName, and TotalEngagement.

48. Scenario Q48

Identify Users with High Follower to Following Ratio

Twitter is interested in identifying users who have a significantly higher number of followers compared to the number of users they are following. These users might be influencers or individuals with high public interest.

Find the top 5 users with the highest follower to following ratio. Display UserID, Username, FullName, FollowerCount, FollowingCount, and FollowerToFollowingRatio.

49. Scenario Q49

Identify Most Frequently Mentioned Keywords in Tweets

Twitter is interested in identifying the most frequently mentioned keywords in tweets to gain insights into trending topics and user interests.

Find the top 5 most frequently mentioned keywords in the TweetText column across all tweets. Display Keyword and MentionCount.

50. Scenario Q50

Identify Users Who Haven't Tweeted in the Last 6 months.

Twitter aims to identify users who have been inactive in terms of tweeting for the last 30 days. This information can be useful for engagement strategies to re-activate dormant users.

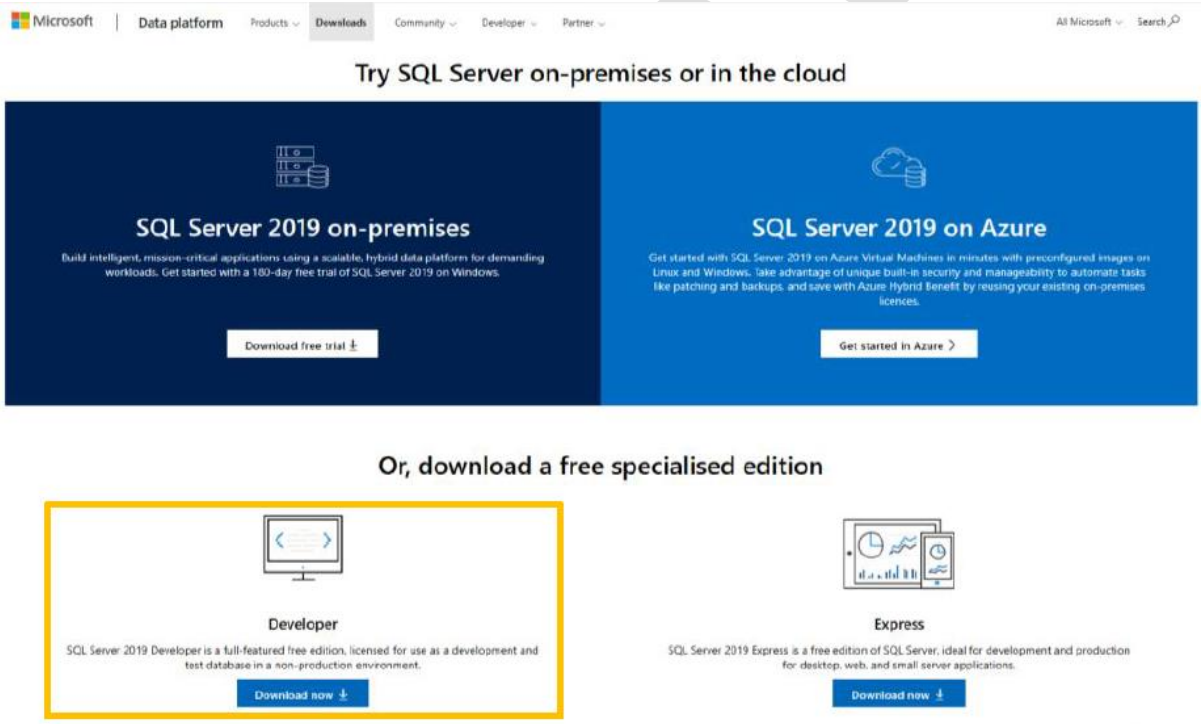
Find all users who haven't tweeted in the last 30 days. Display UserID, Username, FullName, and LastTweetDate.

Appendix

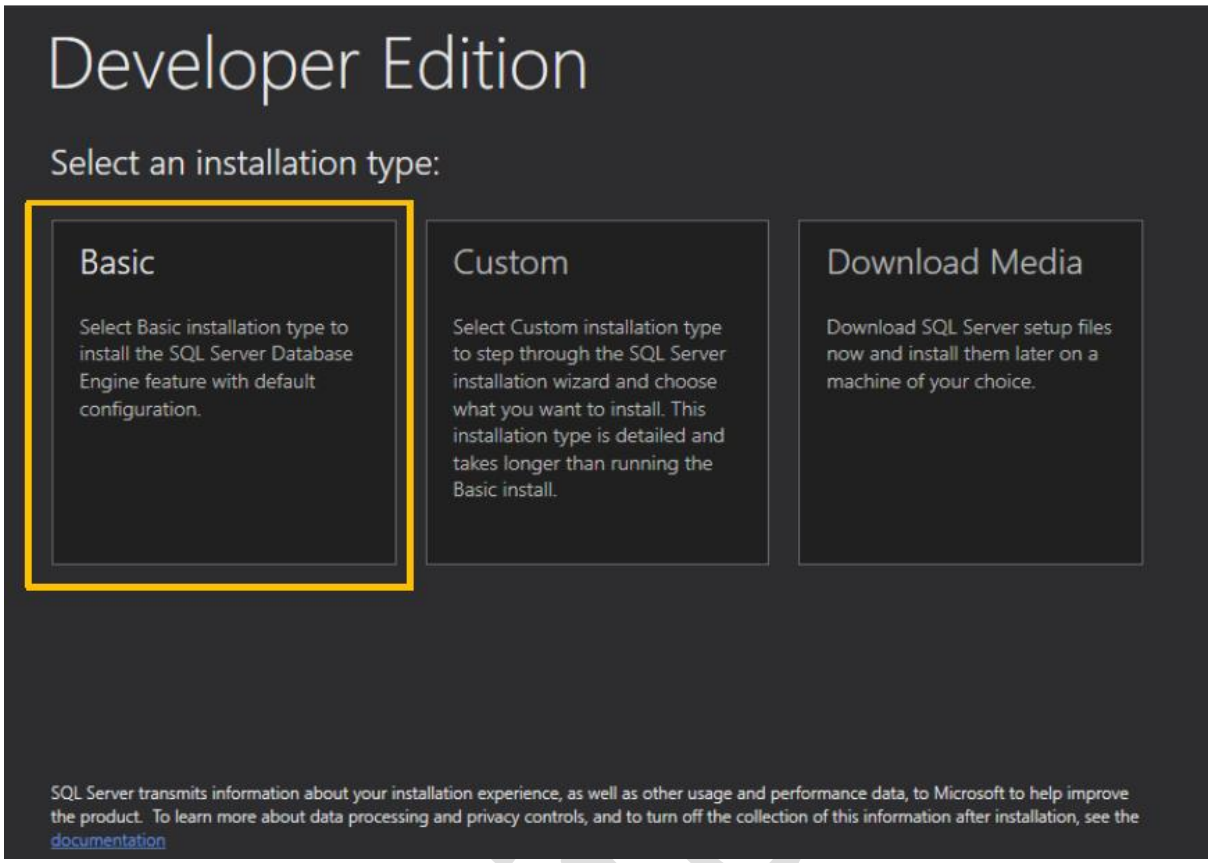
SQL Server Installation Guide

Phase 1: Installing SQL Server 2019 on a Windows 10 operating system.

1. To set up SQL Server 2019, obtain the necessary files by clicking the provided link: https://www.microsoft.com/en-gb/sql-server/sql-server-downloads
2. Select "Download Now" for the developer edition.



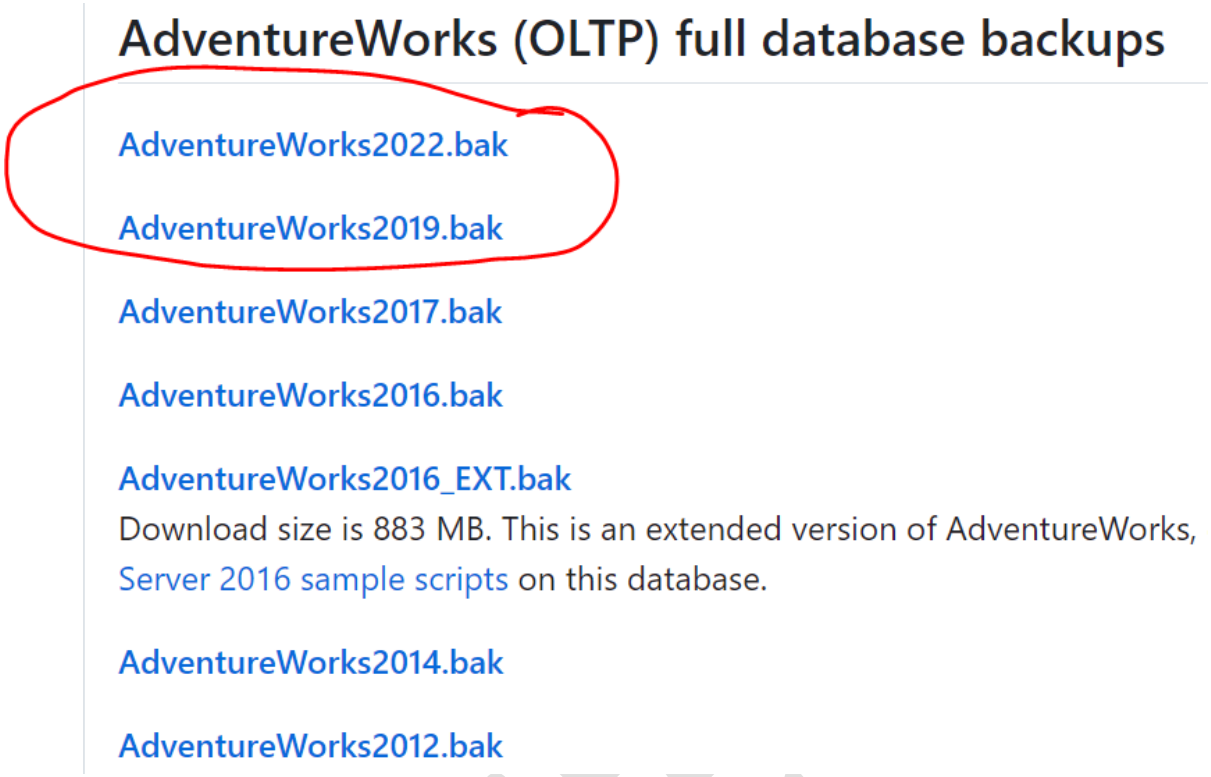
3. After the file has finished downloading, double-click on it to initiate the installation.
4. In the window that appears, choose the "Basic" installation type.



5. Press "Next," agree to the Terms and Conditions, and then click "Install."
6. After the installation is finished, you will receive a link to download SQL Server Management Studio. If you don't spot the link, please click on this provided link: https://aka.ms/ssmsfullsetup
7. Download SQL Server Management Studio and proceed to install it.

Phase 2: AdventureWorks (2019 or 2022) Database

1. Upon the successful installation of SQL Server 2019, you'll require a database for practice. Please follow the link below to download the AdventureWorks2019 or 2022 Database: https://github.com/Microsoft/sql-server-samples/releases/tag/adventureworks
2. On the webpage, locate and select the highlighted option to download the AdventureWorks2019.bak file or AdventureWorks2022.bak file.



3. Navigate to the folder where the AdventureWorks2012.bak file has been downloaded and proceed to make a copy of the file.
4. Paste the file into the Backup folder within your freshly installed SQL system, which should be situated in a location resembling the one described below:

   C:\Program Files\Microsoft SQL Server\MSSQL11.SQLSERVERBI\MSSQL\Backup
5. Next, open SQL Server Management Studio from either the Programs Menu or the Applications Desktop (Windows 8).
6. Now click on the following link to restore the database on SQL Server: https://learn.microsoft.com/en-us/sql/samples/adventureworks-install-configure?view=sql-server-ver16&tabs=ssms

Phase 3: AdventureWorks Data Warehouse Version (2019 or 2022) Database

1. The following link allows you to download the AdventureWorksDW2019.bak or AdventureWorksDW2022.bak versions: https://learn.microsoft.com/en-us/sql/samples/adventureworks-install-configure?view=sql-server-ver16&tabs=ssms
2. After downloading the file, following similar steps as in **Phase 2** to restore the database.

OLTP	Data Warehouse	Lightweight
AdventureWorks2022.bak	AdventureWorksDW2022.bak	AdventureWorksLT2(
AdventureWorks2019.bak	AdventureWorksDW2019.bak	AdventureWorksLT2(
AdventureWorks2017.bak	AdventureWorksDW2017.bak	AdventureWorksLT2(
AdventureWorks2016.bak	AdventureWorksDW2016.bak	AdventureWorksLT2(
AdventureWorks2016_EXT.bak	AdventureWorksDW2016_EXT.bak	N/A
AdventureWorks2014.bak	AdventureWorksDW2014.bak	AdventureWorksLT2(
AdventureWorks2012.bak	AdventureWorksDW2012.bak	AdventureWorksLT2(
AdventureWorks2008R2.bak	AdventureWorksDW2008R2.bak	N/A

Phase 4: WideWorldImporters Database:

1. The link to download the WideWorldImporters database is: https://github.com/Microsoft/sql-server-samples/releases/tag/wide-world-importers-v1.0
2. Ensure to following the steps as outlined in Phase 2 to restore the database.

▾ Assets 17

Daily.ETL.ispac	61.2 KB	Aug 12, 2016
sample-scripts.zip	23.1 KB	Jun 8, 2016
WideWorldImporters-Full.bacpac	58.5 MB	Oct 7, 2022
WideWorldImporters-Full.bak	121 MB	Oct 7, 2022
WideWorldImporters-Full_old.bacpac	59.1 MB	Nov 16, 2016
WideWorldImporters-Full_old.bak	121 MB	Aug 13, 2016
WideWorldImporters-Standard.bacpac	58.2 MB	Oct 7, 2022
WideWorldImporters-Standard.bak	121 MB	Oct 7, 2022
WideWorldImporters-Standard_old.bacpac	58.5 MB	Jun 8, 2016
WideWorldImporters-Standard_old.bak	121 MB	Aug 15, 2016
WideWorldImportersDW-Full.bacpac	19.6 MB	Nov 16, 2016
WideWorldImportersDW-Full.bak	47.7 MB	Jun 8, 2016
WideWorldImportersDW-Standard.bacpac	21.4 MB	Jun 8, 2016
WideWorldImportersDW-Standard.bak	51.4 MB	Jun 8, 2016