

1. A short description of the final project, and what it accomplished.

We created an astrological social media platform database. It allows someone like a database administrator control over user-related entities, such as posts, comments, followers, and events. Admins can manage the database by inserting, deleting, and updating tuples, allowing for dynamic and responsive platform maintenance. We implemented features such as: the ability to find users based on star signs, find which users have attended every event, group users by birth year, and identify popular event locations. This is only a demo of what a full database admin suite could accomplish.

2. A description of how your final schema differed from the schema you turned in.

- *If the final schema differed, explain why. Note that turning in a final schema that's different from what you planned is fine, we just want to know what changed and why.*
- We changed any CLOB type to VARCHAR(255) to simplify things when it came to directly converting between types in Java (Strings) to types in Oracle.
- We added DateTime to attends as it's needed as a foreign key to identify Event
- Removed any ON DELETE SET DEFAULT or SET UPDATE CASCADE as these operations are not supported by Oracle
- Added ON DELETE CASCADE to the adminId foreign key in HelpTickets as we realized it made more sense in the context of removing an Admin
- We changed all CHAR(36) to VARCHAR(36) for ease with Java Strings

3. A copy of the schema and screenshots that show what data is present in each relation after the SQL script from item #2 is run.

- *Do not use DDL statements for this deliverable. List the relational schemas with the primary key attributes underlined and foreign keys bolded. For example, Student(sid, name, dob).*
- *You can complete this deliverable with screenshots from SQL Plus or create a representation of your relational instances through a spreadsheet program. No matter what you use, be sure to clearly label which relation a given instance refers to.*



Users(userName, biography, firstName, **birthDay**, **birthMonth**, birthYear)

| | USERNAME | BIOGRAPHY | FIRSTNAME | BIRTHDAY | BIRTHMONTH | BIRTHYEAR |
|---|---------------|-----------------------|-----------|----------|------------|-----------|
| 1 | dman | Cool Bio Alert | Daven | 12 | January | 2003 |
| 2 | 304ta | im a cool TA! | Joe | 10 | November | 2003 |
| 3 | sevaman | Worlds Best Prof | Seva | 8 | September | 1990 |
| 4 | olti123 | the best group member | Olti | 9 | August | 2003 |
| 5 | rickybangbang | elite engineer | Ricky | 7 | April | 2003 |
| 6 | rickyaa | elite | Rickyaaaa | 7 | April | 2004 |
| 7 | jamesss | isa | jamesor | 7 | April | 1990 |




StarSigns(birthDay, birthMonth, starSign)

| |  BIRTHDAY ↕ |  BIRTHMONTH ↕ |  STARSIGN ↕ |
|---|--|--|--|
| 1 | 12 | January | Capricorn |
| 2 | 10 | November | Scorpio |
| 3 | 9 | August | Leo |
| 4 | 8 | September | Virgo |
| 5 | 7 | April | Aries |

Follows(userName, followsUserName)

| |  USERNAME ↕ |  FOLLOWUSERNAME ↕ |
|---|--|--|
| 1 | 304ta | sevaman |
| 2 | dman | rickybangbang |
| 3 | olti123 | sevaman |
| 4 | rickybangbang | sevaman |
| 5 | sevaman | olti123 |

Attends(userName, eventName)

| |  USERNAME ↕ |  EVENTNAME ↕ |  DATETIME ↕ |
|----|--|---|---|
| 1 | 304ta | Minecraft Thanksgiving Event | 2024-10-09 12:00:00.000000 |
| 2 | dman | Cardio Hating Party | 2024-03-01 14:00:00.000000 |
| 3 | dman | Cardio Loving Party | 2023-06-20 11:00:00.000000 |
| 4 | dman | Christmas Stock Celebration | 2024-12-25 11:00:00.000000 |
| 5 | dman | Minecraft Thanksgiving Event | 2024-10-09 12:00:00.000000 |
| 6 | dman | Pull Day | 2023-06-19 10:00:00.000000 |
| 7 | dman | Push Day | 2023-06-19 10:00:00.000000 |
| 8 | dman | SFU Party | 2023-06-21 11:00:00.000000 |
| 9 | dman | SQL Party | 2024-01-31 13:00:00.000000 |
| 10 | dman | Workout Day | 2024-10-31 10:00:00.000000 |
| 11 | olti123 | Workout Day | 2024-10-31 10:00:00.000000 |
| 12 | rickybangbang | Cardio Hating Party | 2024-03-01 14:00:00.000000 |
| 13 | rickybangbang | Cardio Loving Party | 2023-06-20 11:00:00.000000 |
| 14 | rickybangbang | Christmas Stock Celebration | 2024-12-25 11:00:00.000000 |
| 15 | rickybangbang | Minecraft Thanksgiving Event | 2024-10-09 12:00:00.000000 |
| 16 | rickybangbang | Pull Day | 2023-06-19 10:00:00.000000 |
| 17 | rickybangbang | Push Day | 2023-06-19 10:00:00.000000 |
| 18 | rickybangbang | SFU Party | 2023-06-21 11:00:00.000000 |
| 19 | rickybangbang | SQL Party | 2024-01-31 13:00:00.000000 |
| 20 | rickybangbang | Workout Day | 2024-10-31 10:00:00.000000 |
| 21 | sevaman | SQL Party | 2024-01-31 13:00:00.000000 |

MemberOf(userName, communityName)

| | 🔍 USERNAME ↕ | 🔍 COMMUNITYNAME ↕ |
|---|---------------|-------------------|
| 1 | 304ta | Minecraft |
| 2 | olti123 | Gym |
| 3 | rickybangbang | Gym |
| 4 | rickybangbang | Party |
| 5 | rickybangbang | Stocks |
| 6 | sevaman | Databases |

Posts(postId, title, userName, communityName, dateTime)

| | 🔍 POSTID ↕ | 📄 TITLE ↕ | 🔍 USERNAME ↕ | 🔍 COMMUNITYNAME ↕ | 🕒 DATETIME ↕ |
|----|------------|---|---------------|-------------------|----------------------------|
| 1 | 1 | Hello World | sevaman | Databases | 2023-10-20 23:59:59.000000 |
| 2 | 2 | Investing is Awesome! | rickybangbang | Stocks | 2023-08-01 10:30:12.000000 |
| 3 | 3 | How to get strong | olti123 | Gym | 2023-11-01 14:21:00.000000 |
| 4 | 4 | Minecraft Lets Play | 304ta | Minecraft | 2023-10-08 03:00:00.000000 |
| 5 | 5 | How to get rich | rickybangbang | Gym | 2023-12-31 22:05:24.000000 |
| 6 | 6 | Databases 101 | sevaman | Databases | 2023-10-02 20:49:12.000000 |
| 7 | 7 | Stocks for dummies | rickybangbang | Stocks | 2023-05-01 14:30:20.000000 |
| 8 | 8 | What is the gym | olti123 | Gym | 2023-09-20 07:01:12.000000 |
| 9 | 9 | What is your favourite mob | 304ta | Minecraft | 2023-11-10 05:21:28.000000 |
| 10 | 10 | Working out at the gym for 24 hours challe... | rickybangbang | Gym | 2022-01-01 21:00:21.000000 |
| 11 | 11 | CPSC 304 Is The Best | sevaman | Databases | 2023-04-02 21:30:21.000000 |
| 12 | 12 | S AND P 500 Is Up! | rickybangbang | Stocks | 2023-08-01 10:31:12.000000 |
| 13 | 13 | Bicep Curls are for babies | olti123 | Gym | 2023-09-02 08:32:40.000000 |
| 14 | 14 | My fav block review | 304ta | Minecraft | 2022-08-08 08:08:08.000000 |
| 15 | 15 | My legs are sore | rickybangbang | Gym | 2023-11-30 21:08:01.000000 |

Image(postId, caption)

| | 🔍 POSTID ↕ | 📄 CAPTION ↕ |
|---|------------|--|
| 1 | 1 | This is my first post! Enjoy the photo :D |
| 2 | 2 | Look at this stack of cash I made investing! |
| 3 | 9 | Look at this minecraft pig! |
| 4 | 11 | 3NF is my favourite |
| 5 | 15 | IM HUUUUUGE |

Textpost(postId, text)

| | 🔍 POSTID ↕ | 📄 TEXT ↕ |
|---|------------|--|
| 1 | 3 | Here is a step by step guide on how to get strong. Step 1. Get strong! |
| 2 | 7 | For all you dummies out there, listen up |
| 3 | 8 | Today I am gonna talk about what is the gym. |
| 4 | 12 | Check the market! Invest now! |
| 5 | 13 | If you do bicep curls ur the worst! |

Video(postId, caption, duration)

| | 🔗 POSTID | 📄 CAPTION | 🔗 DURATION |
|---|----------|-------------------------------------|------------|
| 1 | 4 | Welcome back to my Minecraft video! | 120 |
| 2 | 5 | Get rich with these quick tips! | 30 |
| 3 | 6 | Watch to learn all about SQL! | 200 |
| 4 | 10 | I almost fainted! | 600 |
| 5 | 14 | Number one will surprise you! | 1200 |

StorageSizes(duration, size)

| | 🔗 DURATION | 📄 SIZE_TYPE |
|---|------------|-------------|
| 1 | 120 | Medium |
| 2 | 30 | Small |
| 3 | 200 | Medium |
| 4 | 600 | Large |
| 5 | 1200 | Large |

Communities(name, description, genre)

| | 🔗 NAME | 📄 DESCRIPTION | 🔗 GENRE |
|---|-------------|---|------------------|
| 1 | Stocks | The top community for all things stock related. | Finance |
| 2 | Gym | Big gains | Health |
| 3 | Party | Big fun | Life |
| 4 | Minecraft | Minecraft community for building | Gaming |
| 5 | LiverpoolFC | The community for the reds | Sports |
| 6 | Databases | Nerdiest Community in Town | Computer Science |

Genres(genre, capacity, ageRange)

| | 🔗 GENRE | 📄 CAPACITY | 🔗 AGERANGE |
|---|---------|------------|------------|
| 1 | Sports | 1000 | 12-30 |
| 2 | Health | 200 | 19-60 |
| 3 | Gaming | 200 | 11-19 |
| 4 | Finance | 200 | 20-45 |
| 5 | Tech | 200 | 19-30 |

Events(eventName, dateTime, location, communityName)

| | EVENTNAME | DATETIME | LOCATION | COMMUNITYNAME |
|---|------------------------------|----------------------------|----------|---------------|
| 1 | Workout Day | 2024-10-31 10:00:00.000000 | UBC | Gym |
| 2 | Christmas Stock Celebration | 2024-12-25 11:00:00.000000 | UBC | Stocks |
| 3 | Minecraft Thanksgiving Event | 2024-10-09 12:00:00.000000 | UBC | Minecraft |
| 4 | SQL Party | 2024-01-31 13:00:00.000000 | UBC | Databases |
| 5 | Cardio Hating Party | 2024-03-01 14:00:00.000000 | UBC | Gym |

Help Tickets(ticketId, description, type, userName, adminId)

| | TICKET | DESCRIPTION | TYPE | USERNAME | ADMINID |
|----|--------|-------------------------|---------|---------------|---------|
| 1 | 1 | Spammed Craft | Spam | dman | 1 |
| 2 | 2 | Harassed | Harass | olti123 | 1 |
| 3 | 3 | Racist Post | Racism | sevaman | 1 |
| 4 | 4 | Broke a Comment | Bug | sevaman | 1 |
| 5 | 5 | Was rude | Rude | dman | 1 |
| 6 | 6 | Roasted CPSC | Rude | olti123 | 2 |
| 7 | 7 | Cried in Public | Crying | rickybangbang | 3 |
| 8 | 8 | Hacked the Mainframe | Hacking | sevaman | 4 |
| 9 | 9 | Exploited SQL Injection | Bug | rickybangbang | 2 |
| 10 | 10 | Broke his Computer | Broke | olti123 | 5 |

Admins(adminID, name, experienceLevel)

| | ADMINID | NAME | EXPERIENCELEVEL |
|---|---------|---------------|-----------------|
| 1 | 1 | james | King |
| 2 | 2 | elizabeth | Queen |
| 3 | 3 | andjill | Jack |
| 4 | 4 | littlemonkeys | Ten |
| 5 | 5 | tails | Nine |

Comments(commentId, text, userName, postId, dateTime)

| | COMMENTID | USERNAME | POSTID | TEXT | DATETIME |
|---|-----------|---------------|--------|-----------------------|----------------------------|
| 1 | 1 | olti123 | 1 | Daven is smart | 2024-12-24 22:05:24.000000 |
| 2 | 2 | rickybangbang | 1 | Daven is not smart | 2024-12-25 22:05:25.000000 |
| 3 | 3 | olti123 | 1 | Daven is not smart | 2024-12-26 22:05:26.000000 |
| 4 | 4 | sevaman | 1 | Daven is very smart | 2024-12-27 22:05:27.000000 |
| 5 | 5 | olti123 | 1 | Daven is not so smart | 2024-12-28 22:05:28.000000 |

Awards(*type*, *postid*, *cost*)

| | TYPE | POSTID | COST |
|---|----------|--------|------|
| 1 | Gold | 1 | 1000 |
| 2 | Silver | 1 | 500 |
| 3 | Gold | 2 | 1000 |
| 4 | Gold | 3 | 1000 |
| 5 | Platinum | 4 | 5000 |

4. A list of all SQL queries used and where it can be found in the code (i.e., file name and line number(s)). For SQL query requirements, check the rubric listed on Canvas for Milestone 4.

INSERT Operation: in [database.DatabaseConnectionHandler.java line 163](#) within [insertTuple\(\)](#) at line 119. [insertTuple\(\)](#) is called from [ui.UI.java](#) in [insertUser\(\)](#) at line 453 and 458

DELETE Operation: in [database.DatabaseConnectionHandler.java line 217](#) within [deleteTuple\(\)](#) at line 180. [deleteTuple\(\)](#) is called from [ui.UI.java](#) in [testDelete\(\)](#) on line 481

UPDATE Operation: in [database.DatabaseConnectionHandler.java line 400](#) within [updateTuple\(\)](#) at line 323. [updateTuple\(\)](#) is called from [ui.UI.java](#) in [updateUser\(\)](#) at line 443

Selection: in [database.DatabaseConnectionHandler.java line 302](#), within [selectTuple\(\)](#) at line 238. [selectTuple\(\)](#) is called from [ui.UI.java](#) in [selectAll\(\)](#) at line 617

Projection: in [database.DatabaseConnectionHandler.java line 442](#), within [projectionTuple\(\)](#) at line 425. [projectionTuple\(\)](#) is called from [ui.UI.java](#) in [testProjection\(\)](#) at line 632

Join: in [database.DatabaseConnectionHandler.java line 528](#), within [joinTuple\(\)](#) at line 463. [joinTuple\(\)](#) is called from [ui.UI.java](#) in [testJoin\(\)](#) at line 467.

Aggregation with Group By: in [database.DatabaseConnectionHandler.java line 599](#), within [groupByTuple\(\)](#) at line 582. [groupByTuple\(\)](#) is called from [ui.UI.java](#) in [testGroupBy\(\)](#) at line 571

Aggregation with Having: in [database.DatabaseConnectionHandler.java line 561](#), within [havingTuple\(\)](#) at line 542. [havingTuple\(\)](#) is called from [ui.UI.java](#) in [testHaving\(\)](#) at line 557

Nested Aggregation with Group By: in [database.DatabaseConnectionHandler.java line 599](#), within [groupByTuple\(\)](#) at line 582, [groupByTuple\(\)](#) is called from [ui.UI.java](#) in [testNestedGroupBy\(\)](#) at line 586

Division: in [database.DatabaseConnectionHandler.java line 657](#), within [divisionTuple\(\)](#) at line 638. [divisionTuple\(\)](#) is called from [ui.UI.java](#) in [testDivision\(\)](#) at line 602

5. Screenshots demonstrating the functionality of each query using the GUI. We want to see a before/during/after progression of events. For example, the before screenshot would be what data is in the table before you run the query, the during screenshot(s) is how the query is triggered using the GUI, and the after screenshot is what data is in your table afterwards. Please label each set of screenshots with the name of the query it is meant to address (e.g., “Insert Operation”).
- You need only to include screenshots for the required queries – if you implemented more than what was required, screenshots are not needed for those extra queries.

INSERT Operation:

INSERT before:

| | USERNAME | BIOGRAPHY | FIRSTNAME | BIRTHDAY | BIRTHMONTH | BIRTHYEAR |
|---|---------------|-----------------------|-----------|----------|------------|-----------|
| 1 | dman | Cool Bio Alert | Daven | 12 | January | 2003 |
| 2 | 304ta | im a cool TA! | Joe | 10 | November | 2003 |
| 3 | sevaman | Worlds Best Prof | Seva | 8 | September | 1990 |
| 4 | olti123 | the best group member | Olti | 9 | August | 2003 |
| 5 | rickybangbang | elite engineer | Ricky | 7 | April | 2003 |
| 6 | rickyaa | elite | Rickyaaaa | 7 | April | 2004 |
| 7 | jamesss | isa | jamesor | 7 | April | 1990 |

INSERT GUI:

Home

Projection

Search Users

Admin Manager

Finder

Astrology Search

Create User

Update User

Social Media

Create a new user!

username: cheese

biography: wheel

firstName: pepper

birthDay: 01

birthMonth: March

birthYear: 2000

Create User

| USERNAME | BIOGRAPHY | FIRSTNAME | BIRTHDAY | BIRTHMONTH | BIRTHYEAR |
|---------------|-----------------------|-----------|----------|------------|-----------|
| dman | Cool Bio Alert | Daven | 12 | January | 2003 |
| 304ta | im a cool TA! | Joe | 10 | November | 2003 |
| sevaman | Worlds Best Prof | Seva | 8 | September | 1990 |
| olti123 | the best group member | Olti | 9 | August | 2003 |
| rickybangbang | elite engineer | Ricky | 7 | April | 2003 |
| rickyaa | elite | Rickyaaaa | 7 | April | 2004 |
| jamesss | isa | jamesor | 7 | April | 1990 |
| cheese | wheel | pepper | 1 | March | 2000 |

INSERT after:

| | 🔍 USERNAME ↕ | 📄 BIOGRAPHY ↕ | 👤 FIRSTNAME ↕ | 📅 BIRTHDAY ↕ | 📅 BIRTHMONTH ↕ | 📅 BIRTHYEAR ↕ |
|---|---------------|-----------------------|---------------|--------------|----------------|---------------|
| 1 | dman | Cool Bio Alert | Daven | 12 | January | 2003 |
| 2 | 304ta | im a cool TA! | Joe | 10 | November | 2003 |
| 3 | sevaman | Worlds Best Prof | Seva | 8 | September | 1990 |
| 4 | olti123 | the best group member | Olti | 9 | August | 2003 |
| 5 | rickybangbang | elite engineer | Ricky | 7 | April | 2003 |
| 6 | rickyaa | elite | Rickyaaaa | 7 | April | 2004 |
| 7 | jamesss | isa | jamesor | 7 | April | 1990 |
| 8 | cheese | wheel | pepper | 1 | March | 2000 |

DELETE Operation:
DELETE before:

| | ADMINID | NAME | EXPERIENCELEVEL |
|---|---------|---------------|-----------------|
| 1 | 1 | james | King |
| 2 | 2 | elizabeth | Queen |
| 3 | 3 | andjill | Jack |
| 4 | 4 | littlemonkeys | Ten |
| 5 | 5 | tails | Nine |

| | TICKET | DESCRIPTION | TYPE | USERNAME | ADMINID |
|----|--------|-------------------------|---------|---------------|---------|
| 1 | 1 | Spammed Craft | Spam | dman | 1 |
| 2 | 2 | Harassed | Harass | olti123 | 1 |
| 3 | 3 | Racist Post | Racism | sevaman | 1 |
| 4 | 4 | Broke a Comment | Bug | sevaman | 1 |
| 5 | 5 | Was rude | Rude | dman | 1 |
| 6 | 6 | Roasted CPSC | Rude | olti123 | 2 |
| 7 | 7 | Cried in Public | Crying | rickybangbang | 3 |
| 8 | 8 | Hacked the Mainframe | Hacking | sevaman | 4 |
| 9 | 9 | Exploited SQL Injection | Bug | rickybangbang | 2 |
| 10 | 10 | Broke his Computer | Broke | olti123 | 5 |

DELETE GUI:

HomeProjectionSearch UsersAdmin ManagerFinderAstrology SearchCreate UserUpdate User

Enter the id of the admin you would like to delete: 2Delete selected Admin

ADMINID

1
3
4
5

NAME

james
andjill
littlemonkeys
tails

EXPERIENCELEVEL

King
Jack
Ten
Nine

DELETE after:

| | ADMINID | NAME | EXPERIENCELEVEL |
|---|---------|---------------|-----------------|
| 1 | 1 | james | King |
| 2 | 3 | andjill | Jack |
| 3 | 4 | littlemonkeys | Ten |
| 4 | 5 | tails | Nine |

| | TICKET | DESCRIPTION | TYPE | USERNAME | ADMINID |
|---|--------|----------------------|---------|---------------|---------|
| 1 | 1 | Spammed Craft | Spam | dman | 1 |
| 2 | 2 | Harassed | Harass | olti123 | 1 |
| 3 | 3 | Racist Post | Racism | sevaman | 1 |
| 4 | 4 | Broke a Comment | Bug | sevaman | 1 |
| 5 | 5 | Was rude | Rude | dman | 1 |
| 6 | 7 | Cried in Public | Crying | rickybangbang | 3 |
| 7 | 8 | Hacked the Mainframe | Hacking | sevaman | 4 |
| 8 | 10 | Broke his Computer | Broke | olti123 | 5 |

UPDATE Operation:
UPDATE before:

| | USERNAME | BIOGRAPHY | FIRSTNAME | BIRTHDAY | BIRTHMONTH | BIRTHYEAR |
|---|---------------|-----------------------|-----------|----------|------------|-----------|
| 1 | dman | Cool Bio Alert | Daven | 12 | January | 2003 |
| 2 | 304ta | im a cool TA! | Joe | 10 | November | 2003 |
| 3 | sevaman | Worlds Best Prof | Seva | 8 | September | 1990 |
| 4 | olti123 | the best group member | Olti | 9 | August | 2003 |
| 5 | rickybangbang | elite engineer | Ricky | 7 | April | 2003 |
| 6 | rickyaa | elite | Rickyaaaa | 7 | April | 2004 |
| 7 | jamesss | isa | jamesor | 7 | April | 1990 |

UPDATE GUI:

Social Media

HomeProjectionSearch UsersAdmin ManagerFinderAstrology SearchCreate UserUpdate User

Enter the username of the user you would like to update:

rickyaa

Biography:

elite student

First Name:

Rickyaa

Birth Day (Integer):

7

Birth Month:

March

Birth Year (Integer):

2003

Submit Update

| USERNAME | BIOGRAPHY | FIRSTNAME | BIRTHDAY | BIRTHMONTH | BIRTHYEAR |
|---------------|-----------------------|-----------|----------|------------|-----------|
| dman | Cool Bio Alert | Daven | 12 | January | 2003 |
| 304ta | im a cool TA! | Joe | 10 | November | 2003 |
| sevaman | Worlds Best Prof | Seva | 8 | September | 1990 |
| olti123 | the best group member | Olti | 9 | August | 2003 |
| rickybangbang | elite engineer | Ricky | 7 | April | 2003 |
| rickyaa | elite student | Rickyaa | 7 | March | 2003 |
| jamesss | isa | jamesor | 7 | April | 1990 |
| cheese | wheel | pepper | 1 | March | 2000 |

UPDATE after:

| | USERNAME | BIOGRAPHY | FIRSTNAME | BIRTHDAY | BIRTHMONTH | BIRTHYEAR |
|---|---------------|-----------------------|-----------|----------|------------|-----------|
| 1 | dman | Cool Bio Alert | Daven | 12 | January | 2003 |
| 2 | 304ta | im a cool TA! | Joe | 10 | November | 2003 |
| 3 | sevaman | Worlds Best Prof | Seva | 8 | September | 1990 |
| 4 | olti123 | the best group member | Olti | 9 | August | 2003 |
| 5 | rickybangbang | elite engineer | Ricky | 7 | April | 2003 |
| 6 | rickyaa | elite student | Rickyaa | 7 | March | 2003 |
| 7 | jamesss | isa | jamesor | 7 | April | 1990 |
| 8 | cheese | wheel | pepper | 1 | March | 2000 |

Selection:
SELECTION before:

| | TICKET | DESCRIPTION | TYPE | USERNAME | ADMINID |
|----|--------|-------------------------|---------|---------------|---------|
| 1 | 1 | Spammed Craft | Spam | dman | 1 |
| 2 | 2 | Harassed | Harass | olti123 | 1 |
| 3 | 3 | Racist Post | Racism | sevaman | 1 |
| 4 | 4 | Broke a Comment | Bug | sevaman | 1 |
| 5 | 5 | Was rude | Rude | dman | 1 |
| 6 | 6 | Roasted CPSC | Rude | olti123 | 2 |
| 7 | 7 | Cried in Public | Crying | rickybangbang | 3 |
| 8 | 8 | Hacked the Mainframe | Hacking | sevaman | 4 |
| 9 | 9 | Exploited SQL Injection | Bug | rickybangbang | 2 |
| 10 | 10 | Broke his Computer | Broke | olti123 | 5 |

SELECTION GUI:

HomeProjectionSearch UsersAdmin ManagerFinderAstrology SearchCreate UserUpdate User

Select users where

birthDay7AND

birthMonthMarchAND

AND

Add Condition +

Submit Selection

USERNAMErickyaa

BIOGRAPHYelite student

FIRSTNAMERickyaa

BIRTHDAY7

BIRTHMONTHMarch

BIRTHYEAR2003

Projection:
PROJECTION before:

| | USERNAME | BIOGRAPHY | FIRSTNAME | BIRTHDAY | BIRTHMONTH | BIRTHYEAR |
|---|---------------|-----------------------|-----------|----------|------------|-----------|
| 1 | dman | Cool Bio Alert | Daven | 12 | January | 2003 |
| 2 | 304ta | im a cool TA! | Joe | 10 | November | 2003 |
| 3 | sevaman | Worlds Best Prof | Seva | 8 | September | 1990 |
| 4 | olti123 | the best group member | Olti | 9 | August | 2003 |
| 5 | rickybangbang | elite engineer | Ricky | 7 | April | 2003 |
| 6 | rickyaa | elite student | Rickyaa | 7 | March | 2003 |
| 7 | jamesss | isa | jamesor | 7 | April | 1990 |
| 8 | cheese | wheel | pepper | 1 | March | 2000 |

PROJECTION GUI:

Social Media

HomeProjectionSearch UsersAdmin ManagerFinderAstrology SearchCreate UserUpdate User

Select the relation and its attributes you would like to project from

Users

☒ userName☐ biography☒ firstName☒ birthDay☒ birthMonth☒ birthYear

Submit

| USERNAME | FIRSTNAME | BIRTHDAY | BIRTHMONTH | BIRTHYEAR |
|---------------|-----------|----------|------------|-----------|
| dman | Daven | 12 | January | 2003 |
| 304ta | Joe | 10 | November | 2003 |
| sevaman | Seva | 8 | September | 1990 |
| olti123 | Olti | 9 | August | 2003 |
| rickybangbang | Ricky | 7 | April | 2003 |
| rickyaa | Rickyaaaa | 7 | April | 2004 |
| jamesss | jamesor | 7 | April | 1990 |

Join:
JOIN before:

| | 👤 USERNAME ⚙ | 📄 BIOGRAPHY ⚙ | 👤 FIRSTNAME ⚙ | 📅 BIRTHDAY ⚙ | 📅 BIRTHMONTH ⚙ | 📅 BIRTHYEAR ⚙ |
|---|---------------|-----------------------|---------------|--------------|----------------|---------------|
| 1 | dman | Cool Bio Alert | Daven | 12 | January | 2003 |
| 2 | 304ta | im a cool TA! | Joe | 10 | November | 2003 |
| 3 | sevaman | Worlds Best Prof | Seva | 8 | September | 1990 |
| 4 | olti123 | the best group member | Olti | 9 | August | 2003 |
| 5 | rickybangbang | elite engineer | Ricky | 7 | April | 2003 |
| 6 | rickyaa | elite student | Rickyaa | 7 | March | 2003 |
| 7 | jamesss | isa | jamesor | 7 | April | 1990 |
| 8 | cheese | wheel | pepper | 1 | March | 2000 |

| | 📅 BIRTHDAY ⚙ | 📅 BIRTHMONTH ⚙ | 👤 STARSIGN ⚙ |
|---|--------------|----------------|--------------|
| 1 | 12 | January | Capricorn |
| 2 | 10 | November | Scorpio |
| 3 | 9 | August | Leo |
| 4 | 8 | September | Virgo |
| 5 | 7 | April | Aries |
| 6 | 1 | March | Aries |
| 7 | 7 | March | Aries |

JOIN GUI:

Social Media

HomeProjectionSearch UsersAdmin ManagerFinderAstrology SearchCreate UserUpdate User

Find users with starsignAriesSubmit

| USERNAME | BIOGRAPHY | FIRSTNAME | BIRTHDAY | BIRTHMONTH | BIRTHYEAR | STARSIGN |
|---------------|----------------|-----------|----------|------------|-----------|----------|
| rickybangbang | elite engineer | Ricky | 7 | April | 2003 | Aries |
| rickyaa | elite student | Rickyaa | 7 | March | 2003 | Aries |
| jamesss | isa | jamesor | 7 | April | 1990 | Aries |
| cheese | wheel | pepper | 1 | March | 2000 | Aries |

Aggregation with Group By:
AGGREGATION with group by before:

| | 👤 USERNAME ⌵ | 📄 BIOGRAPHY ⌵ | 👤 FIRSTNAME ⌵ | 👤 BIRTHDAY ⌵ | 👤 BIRTHMONTH ⌵ | 👤 BIRTHYEAR ⌵ |
|---|---------------|-----------------------|---------------|--------------|----------------|---------------|
| 1 | dman | Cool Bio Alert | Daven | 12 | January | 2003 |
| 2 | 304ta | im a cool TA! | Joe | 10 | November | 2003 |
| 3 | sevaman | Worlds Best Prof | Seva | 8 | September | 1990 |
| 4 | olti123 | the best group member | Olti | 9 | August | 2003 |
| 5 | rickybangbang | elite engineer | Ricky | 7 | April | 2003 |
| 6 | rickyaa | elite student | Rickyaa | 7 | March | 2003 |
| 7 | jamesss | isa | jamesor | 7 | April | 1990 |
| 8 | cheese | wheel | pepper | 1 | March | 2000 |

AGGREGATION with group by GUI:

Social Media

HomeProjectionSearch UsersAdmin ManagerFinderAstrology SearchCreate UserUpdate User

Find the number of users per birth yearFind

Find the popular event locations > 2Find

Find the number of users per starsignFind

Find the users who find attended all eventsFind

Find users with starsign

Aries

Submit

BIRTHYEAR

1990

2003

2000

NUM

2

5

1

Aggregation with Having:
AGGREGATION with having before:

| | EVENTNAME | DATETIME | LOCATION | COMMUNITYNAME |
|---|------------------------------|----------------------------|----------|---------------|
| 1 | Workout Day | 2024-10-31 10:00:00.000000 | UBC | Gym |
| 2 | Christmas Stock Celebration | 2024-12-25 11:00:00.000000 | UBC | Stocks |
| 3 | Minecraft Thanksgiving Event | 2024-10-09 12:00:00.000000 | UBC | Minecraft |
| 4 | SQL Party | 2024-01-31 13:00:00.000000 | UBC | Databases |
| 5 | Cardio Hating Party | 2024-03-01 14:00:00.000000 | UBC | Gym |
| 6 | SFU Party | 2023-06-21 11:00:00.000000 | SFU | Party |
| 7 | Cardio Loving Party | 2023-06-20 11:00:00.000000 | SFU | Gym |
| 8 | Push Day | 2023-06-19 10:00:00.000000 | SFU | Gym |
| 9 | Pull Day | 2023-06-19 10:00:00.000000 | BCIT | Gym |

AGGREGATION with having GUI:

Social Media

HomeProjectionSearch UsersAdmin ManagerFinderAstrology SearchCreate UserUpdate User

Find the number of users per birth yearFind

Find the popular event locations > 2Find

Find the number of users per starsignFind

Find the users who find attended all eventsFind

Find users with starsignAriesSubmit

LOCATION

SFU

UBC

NUMEROFEVENTS

3

5

Nested Aggregation with Group By:
NESTED AGGREGATION with group by before:

| | 👤 USERNAME ⚙ | 📄 BIOGRAPHY ⚙ | 👤 FIRSTNAME ⚙ | 📅 BIRTHDAY ⚙ | 📅 BIRTHMONTH ⚙ | 📅 BIRTHYEAR ⚙ |
|---|---------------|-----------------------|---------------|--------------|----------------|---------------|
| 1 | dman | Cool Bio Alert | Daven | 12 | January | 2003 |
| 2 | 304ta | im a cool TA! | Joe | 10 | November | 2003 |
| 3 | sevaman | Worlds Best Prof | Seva | 8 | September | 1990 |
| 4 | olti123 | the best group member | Olti | 9 | August | 2003 |
| 5 | rickybangbang | elite engineer | Ricky | 7 | April | 2003 |
| 6 | rickyaa | elite | Rickyaaaa | 7 | April | 2004 |
| 7 | jameess | isa | jamesor | 7 | April | 1990 |

| | 📅 BIRTHDAY ⚙ | 📅 BIRTHMONTH ⚙ | 📄 STARSIGN ⚙ |
|---|--------------|----------------|--------------|
| 1 | 12 | January | Capricorn |
| 2 | 10 | November | Scorpio |
| 3 | 9 | August | Leo |
| 4 | 8 | September | Virgo |
| 5 | 7 | April | Aries |

NESTED AGGREGATION with group by GUI:

Social Media

HomeProjectionSearch UsersAdmin ManagerFinderAstrology SearchCreate UserUpdate User

Find the number of users per birth yearFind

Find the popular event locations > 2Find

Find the number of users per starsignFind

Find the users who find attended all eventsFind

Find users with starsignAriesSubmit

STARSIGNNUM

Scorpio1

Leo1

Virgo1

Aries4

Capricorn1

Division:
DIVISION before:

| | EVENTNAME | DATETIME | LOCATION | COMMUNITYNAME |
|---|------------------------------|----------------------------|----------|---------------|
| 1 | Workout Day | 2024-10-31 10:00:00.000000 | UBC | Gym |
| 2 | Christmas Stock Celebration | 2024-12-25 11:00:00.000000 | UBC | Stocks |
| 3 | Minecraft Thanksgiving Event | 2024-10-09 12:00:00.000000 | UBC | Minecraft |
| 4 | SQL Party | 2024-01-31 13:00:00.000000 | UBC | Databases |
| 5 | Cardio Hating Party | 2024-03-01 14:00:00.000000 | UBC | Gym |
| 6 | SFU Party | 2023-06-21 11:00:00.000000 | SFU | Party |
| 7 | Cardio Loving Party | 2023-06-20 11:00:00.000000 | SFU | Gym |
| 8 | Push Day | 2023-06-19 10:00:00.000000 | SFU | Gym |
| 9 | Pull Day | 2023-06-19 10:00:00.000000 | BCIT | Gym |

| | USERNAME | EVENTNAME | DATETIME |
|----|---------------|------------------------------|----------------------------|
| 1 | 304ta | Minecraft Thanksgiving Event | 2024-10-09 12:00:00.000000 |
| 2 | dman | Cardio Hating Party | 2024-03-01 14:00:00.000000 |
| 3 | dman | Cardio Loving Party | 2023-06-20 11:00:00.000000 |
| 4 | dman | Christmas Stock Celebration | 2024-12-25 11:00:00.000000 |
| 5 | dman | Minecraft Thanksgiving Event | 2024-10-09 12:00:00.000000 |
| 6 | dman | Pull Day | 2023-06-19 10:00:00.000000 |
| 7 | dman | Push Day | 2023-06-19 10:00:00.000000 |
| 8 | dman | SFU Party | 2023-06-21 11:00:00.000000 |
| 9 | dman | SQL Party | 2024-01-31 13:00:00.000000 |
| 10 | dman | Workout Day | 2024-10-31 10:00:00.000000 |
| 11 | olti123 | Workout Day | 2024-10-31 10:00:00.000000 |
| 12 | rickybangbang | Cardio Hating Party | 2024-03-01 14:00:00.000000 |
| 13 | rickybangbang | Cardio Loving Party | 2023-06-20 11:00:00.000000 |
| 14 | rickybangbang | Christmas Stock Celebration | 2024-12-25 11:00:00.000000 |
| 15 | rickybangbang | Minecraft Thanksgiving Event | 2024-10-09 12:00:00.000000 |
| 16 | rickybangbang | Pull Day | 2023-06-19 10:00:00.000000 |
| 17 | rickybangbang | Push Day | 2023-06-19 10:00:00.000000 |
| 18 | rickybangbang | SFU Party | 2023-06-21 11:00:00.000000 |
| 19 | rickybangbang | SQL Party | 2024-01-31 13:00:00.000000 |
| 20 | rickybangbang | Workout Day | 2024-10-31 10:00:00.000000 |
| 21 | sevaman | SQL Party | 2024-01-31 13:00:00.000000 |

DIVISION GUI:

Social Media

HomeProjectionSearch UsersAdmin ManagerFinderAstrology SearchCreate UserUpdate User

Find the number of users per birth yearFind

Find the popular event locations > 2Find

Find the number of users per starsignFind

Find the users who find attended all eventsFind

Find users with starsignAriesSubmit

USERNAME

dman

rickybangbang