University of British Columbia, Vancouver
Department of Computer Science

CPSC 304 Project Cover Page

Milestone #: 4

Date: April 5, 2024

Group Number: 103

Name	Student Number	CS Alias (Userid)	Preferred E-mail Address
Junsu An	63647879	anjjunsu	anjjunsu@gmail.com
John Do	56442833	djw0626	djw0626123@gmail.com
Paul Tiberghien	10887602	r1e6f	paultiberghien1@gmail.com

By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and student IDs are included above. (In the case of Project Milestone 0, the main purpose of this page is for you to let us know your e-mail address, and then let us assign you to a TA for your project supervisor.)

In addition, we indicate that we are fully aware of the rules and consequences of plagiarism, as set forth by the Department of Computer Science and the University of British Columbia

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Final project description and accomplishments

Our project allows users to filter, search for, and compare computers/parts from various retailers that meet particular specifications. Stored computer information includes CPU, GPU, storage, and monitor details as well as the location at which it is sold. Our database also allows users to share their experiences regarding the performance, design, and satisfaction of each component to help other users make informed purchases.

Final schema difference

We have no changes to the final schema.

Schema and screenshots of data

- User(Id, Name, Email, FirstLoginDate)

```
mysql> select * from User;
+----+-------------+-------------------------+---------------------+
| Id | Name        | Email                   | FirstLoginDate      |
+----+-------------+-------------------------+---------------------+
|  1 | John Doe    | john.doe@example.com    | 2024-03-01 09:00:00 |
|  2 | Jane Smith  | jane.smith@example.com  | 2024-02-28 09:00:00 |
|  3 | Alex Johnson| alex.johnson@example.com| 2024-01-15 09:00:00 |
|  4 | Maria Garcia| maria.garcia@example.com| 2023-12-10 09:00:00 |
|  5 | Paul Maximus| paul.maximus@example.com| 2023-12-15 09:00:00 |
|  6 | testman     | test@test.com           | 2024-04-05 03:22:20 |
+----+-------------+-------------------------+---------------------+
6 rows in set (0.09 sec)
```

- PremiumUser(**UserId**, ExpiryDate)

```
mysql> select * from PremiumUser;
+--------+---------------------+
| UserId | ExpiryDate          |
+--------+---------------------+
|      1 | 2025-03-01 00:00:00 |
|      2 | 2025-02-28 00:00:00 |
|      3 | 2025-01-15 00:00:00 |
|      4 | 2025-12-10 00:00:00 |
|      5 | 2025-12-15 00:00:00 |
+--------+---------------------+
5 rows in set (0.01 sec)
```

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- Computer(Id, Brand, Price, AssembledIn, **CpuId**, **GpuId**, **StrorageId**, **MonitorId**)

```
mysql> SELECT * FROM Computer;
+----+--------+---------+-------------+-------+-------+-----------+-----------+
| Id | Brand  | Price   | AssembledIn | CpuId | GpuId | StorageId | MonitorId |
+----+--------+---------+-------------+-------+-------+-----------+-----------+
|  1 | Dell   | 3200.00 | China       |     1 |     2 |         2 |         3 |
|  2 | Razor  | 2100.00 | Singapore   |     3 |     3 |         3 |         1 |
|  3 | Apple  | 3499.99 | USA         |     2 |     1 |         1 |         3 |
|  4 | HP     | 1500.00 | Japan       |     4 |     4 |         4 |         4 |
|  5 | Lenovo | 1800.00 | Taiwan      |     5 |     5 |         5 |         5 |
+----+--------+---------+-------------+-------+-------+-----------+-----------+
5 rows in set (0.10 sec)
```

- Cpu(Id, Model, ClockSpeed, CoreCount, Generation)

```
mysql> SELECT * FROM Cpu;
+----+---------+------------+-----------+------------+
| Id | Model   | ClockSpeed | CoreCount | Generation |
+----+---------+------------+-----------+------------+
|  1 | Core i7 |       3.80 |         8 |         10 |
|  2 | Core i5 |       2.90 |         4 |         10 |
|  3 | Ryzen 7 |       3.60 |         8 |          4 |
|  4 | Ryzen 5 |       3.40 |         6 |          4 |
|  5 | Core i9 |       4.00 |         8 |         11 |
+----+---------+------------+-----------+------------+
5 rows in set (0.03 sec)
```

- CpuBrand(Model, Brand)

```
mysql> select * from CpuBrand;
+---------+-------+
| Model   | Brand |
+---------+-------+
| Core i5 | Intel |
| Core i7 | Intel |
| Core i9 | Intel |
| Ryzen 5 | AMD   |
| Ryzen 7 | AMD   |
+---------+-------+
5 rows in set (0.03 sec)
```

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- Gpu(Id, Brand, Model, Memory, ClockSpeed)

```
mysql> select * from Gpu;
+----+--------+------------------+--------+------------+
| Id | Brand  | Model            | Memory | ClockSpeed |
+----+--------+------------------+--------+------------+
|  1 | Nvidia | RTX 3080         |     10 |       1.70 |
|  2 | Nvidia | RTX 3070         |      8 |       1.50 |
|  3 | AMD    | Radeon RX 6800   |     16 |       1.80 |
|  4 | AMD    | Radeon RX 6700 XT |     12 |       1.60 |
|  5 | Nvidia | RTX 3060         |     12 |       1.40 |
+----+--------+------------------+--------+------------+
5 rows in set (0.00 sec)
```

- Storage(Id, Brand, Model, Capacity, Type)

```
mysql> select * from Storage;
+----+--------+---------+----------+------+
| Id | Brand  | Model   | Capacity | Type |
+----+--------+---------+----------+------+
|  1 | BrandX | ModelX1 |      256 | SSD  |
|  2 | BrandX | ModelX2 |      512 | SSD  |
|  3 | BrandY | ModelY1 |     1024 | HDD  |
|  4 | BrandY | ModelY2 |     2048 | HDD  |
|  5 | BrandZ | ModelZ  |      512 | SSD  |
+----+--------+---------+----------+------+
5 rows in set (0.00 sec)
```

- Monitor(Id, Brand, Model, RefreshRate, Size, Resolution)

```
mysql> select * from Monitor;
+----+--------+--------+-------------+------+------------+
| Id | Brand  | Model  | RefreshRate | Size | Resolution |
+----+--------+--------+-------------+------+------------+
|  1 | BrandM | ModelM |         144 | 27.0 | 2560x1440  |
|  2 | BrandM | ModelN |          60 | 24.0 | 1920x1080  |
|  3 | BrandO | ModelO |          75 | 21.5 | 1920x1080  |
|  4 | BrandP | ModelP |         120 | 24.0 | 2560x1440  |
|  5 | BrandQ | ModelQ |         240 | 27.0 | 1920x1080  |
+----+--------+--------+-------------+------+------------+
5 rows in set (0.00 sec)
```

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- ComputerStore(Address, Name)

```
mysql> select * from ComputerStore;
+--------------------+--------------+
| Address            | Name         |
+--------------------+--------------+
| 101 Data Dr        | Tech Store D |
| 123 Tech Road      | Tech Store A |
| 202 Info Way       | Tech Store E |
| 456 Innovation Ave | Tech Store B |
| 789 Computing Blvd | Tech Store C |
+--------------------+--------------+
5 rows in set (0.00 sec)
```

- Sells(**StoreAddress**, **ComputerId**)

```
mysql> select * from Sells;
+----------------------+-------------+
| StoreAddress         | ComputerId  |
+----------------------+-------------+
| 123 Tech Road        |           1 |
| 456 Innovation Ave   |           2 |
| 789 Computing Blvd   |           3 |
| 101 Data Dr          |           4 |
| 202 Info Way         |           5 |
+----------------------+-------------+
5 rows in set (0.00 sec)
```

- DesignReview(Id, Rating, Description, **UserId**, **ComputerId**, Date)

```
mysql> select * from DesignReview;
+----+--------+-----------------------------------------+--------+------------+---------------------+
| Id | Rating | Description                             | UserId | ComputerId | Date                |
+----+--------+-----------------------------------------+--------+------------+---------------------+
|  1 |      4 | Sleek and modern design.                |      1 |          2 | 2024-03-06 10:00:00 |
|  2 |      5 | Outstanding design and aesthetics.      |      2 |          3 | 2024-03-07 11:00:00 |
|  3 |      3 | Functional design, but nothing special. |      3 |          4 | 2024-03-08 12:00:00 |
|  4 |      2 | Design is a bit outdated.               |      4 |          1 | 2024-03-09 13:00:00 |
|  5 |      1 | Unappealing design and poor ergonomics. |      5 |          2 | 2024-03-10 14:00:00 |
+----+--------+-----------------------------------------+--------+------------+---------------------+
5 rows in set (0.00 sec)
```

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- PerformanceReview(Id, Rating, Description, BenchMark, **UserId**, **ComputerId**, Date)

```
mysql> select * from PerformanceReview;
+----+--------+-----------------------------------------------------+-----------+--------+------------+---------------------+
| Id | Rating | Description                                         | BenchMark | UserId | ComputerId | Date                |
+----+--------+-----------------------------------------------------+-----------+--------+------------+---------------------+
|  1 |      5 | Excellent performance and value.                    |  10000.00 |      1 |          1 | 2024-03-01 09:00:00 |
|  2 |      4 | Good performance for the price.                     |   8500.00 |      2 |          2 | 2024-03-01 22:00:00 |
|  3 |      4 | Good performance for the price.                     |   8500.00 |      2 |          2 | 2024-03-02 09:30:00 |
|  4 |      3 | Average performance, decent for everyday tasks.     |   7000.00 |      3 |          3 | 2024-03-03 10:00:00 |
|  5 |      2 | Below average performance, struggles with heavy tasks. |   5500.00 |      4 |          4 | 2024-03-04 10:30:00 |
|  6 |      1 | Poor performance, not recommended for modern applications. |   4000.00 |      5 |          5 | 2024-03-05 11:00:00 |
+----+--------+-----------------------------------------------------+-----------+--------+------------+---------------------+
6 rows in set (0.00 sec)
```

- SatisfactionReview(Id, Rating, Description, **UserId**, **ComputerId**, Date)

```
mysql> select * from SatisfactionReview;
+----+--------+-----------------------------------------+--------+------------+---------------------+
| Id | Rating | Description                             | UserId | ComputerId | Date                |
+----+--------+-----------------------------------------+--------+------------+---------------------+
|  1 |      4 | Quite satisfied with the purchase overall. |      1 |          1 | 2024-03-11 15:00:00 |
|  2 |      3 | Satisfied, but there are some issues.   |      2 |          2 | 2024-03-12 16:00:00 |
|  3 |      5 | Extremely satisfied, exceeded expectations. |      3 |          3 | 2024-03-13 17:00:00 |
|  4 |      2 | Not satisfied, many problems encountered. |      4 |          4 | 2024-03-14 18:00:00 |
|  5 |      1 | Very unsatisfied, would not recommend.  |      5 |          5 | 2024-03-15 19:00:00 |
+----+--------+-----------------------------------------+--------+------------+---------------------+
5 rows in set (0.00 sec)
```

- AssembledIn(Brand, AssembledIn)

```
mysql> select * from AssembledIn;
+---------+---------------+
| Brand   | AssembledIn   |
+---------+---------------+
| Apple   | United States |
| Dell    | China         |
| Lenovo  | China         |
| Samsung | South Korea   |
| Sony    | Japan         |
+---------+---------------+
5 rows in set (0.00 sec)
```

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- Compares(**UserId**, **ComputerIdOne**, **ComputerIdTwo**)

```
mysql> select * from Compares;
+--------+---------------+---------------+
| UserId | ComputerIdOne | ComputerIdTwo |
+--------+---------------+---------------+
|      1 |             3 |             2 |
|      2 |             4 |             3 |
|      3 |             5 |             4 |
|      4 |             1 |             5 |
|      5 |             2 |             1 |
+--------+---------------+---------------+
5 rows in set (0.01 sec)
```

- Endorses(**StoreAddress**, **ReviewID**)

```
mysql> select * from Endorses;
+--------------------+----------+
| StoreAddress       | ReviewId |
+--------------------+----------+
| 123 Tech Road      |        1 |
| 456 Innovation Ave |        2 |
| 789 Computing Blvd |        3 |
| 101 Data Dr        |        4 |
| 202 Info Way       |        5 |
+--------------------+----------+
5 rows in set (0.00 sec)
```

- Searches(**UserId**, **ComputerId**)

```
mysql> select * from Searches;
+--------+------------+
| UserId | ComputerId |
+--------+------------+
|      1 |          2 |
|      2 |          3 |
|      3 |          4 |
|      4 |          5 |
|      5 |          1 |
+--------+------------+
5 rows in set (0.00 sec)
```

List of all SQL queries used and where they can be found in the code

All of our SQL queries can be found under “src/backend/main.py”.

Insert

The add computer feature utilizes the INSERT statement. This can be found under line 304 (see addComputer()).

Multiple queries are used to check for duplicates and insert values when necessary. Multiple tables are affected to accomplish foreign key constraints.

Delete

The delete user feature utilizes the DELETE statement. This can be found under line 170. See

- Delete the user button from the frontend: /src/frontend/app.tsx - handleDeleteUser()
- Deletion handling logic: /src/backend/main.py - delete_user()

User deletion will trigger cascade-on-deletion for tables:

1. PremiumUser
2. Performance Review

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3. Design Review
4. Satisfaction Review
5. Searches
6. Compares

Update

The update review feature utilizes the UPDATE statement. This can be found under line 457 (see update_review())

Selection

The search computers feature satisfies the SELECTION query. This can be found under line 191 (see filter_computers())

Users can manipulate values to select on, it also incorporates multiple tables and attributes to select on.

Projection

The “projection” button/page feature satisfies the PROJECTION query. This can be found under line 266 (see get_tuples_by_attributes()).
One may also see line 251 (getAllTables) as this is used to provide users with all of the tables existing. Both are used to provide a level of flexibility to project on different data.

Join

The CPU by computer feature (when the user clicks on one of the resulting computers from the search) satisfies the JOIN query. This can be found under line 234 (see get_cpu_by_computer()).

The Cpu table is joined with the Computer table to provide more detailed information about the computer and the associated CPU.

Aggregation with Group By

The count by brand button satisfies the “Aggregation with Group By” query. This can be found under line 118 (see get_aggregation()).

Group the computers by brand.

Aggregation with Having

The expensive brands button satisfies the “Aggregation with Having” query. This can be found under line 133 (see get_aggregation_having()).

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Group the computer by brands, and only select those that have an average price higher than 2000.

Nested Aggregation with Group By

The best brands button satisfies the “Aggregation with Group By” query. This can be found under line 151 (see get_aggregation_nested()).

The best brands are those with a higher average rating than the aggregated average rating among all brands.

Division

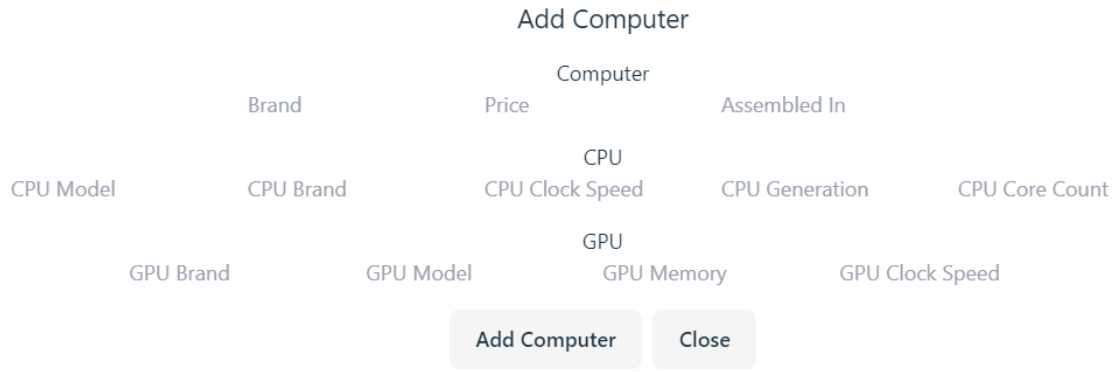
The “you wrote every type of review?” button satisfied the DIVISION query. This can be found under line 481 (see get_user_wrote_all_reviews()).

Shows whether a user wrote every type of review or not.

4. Screenshots of all queries in GUI

Insert

- Before



- during

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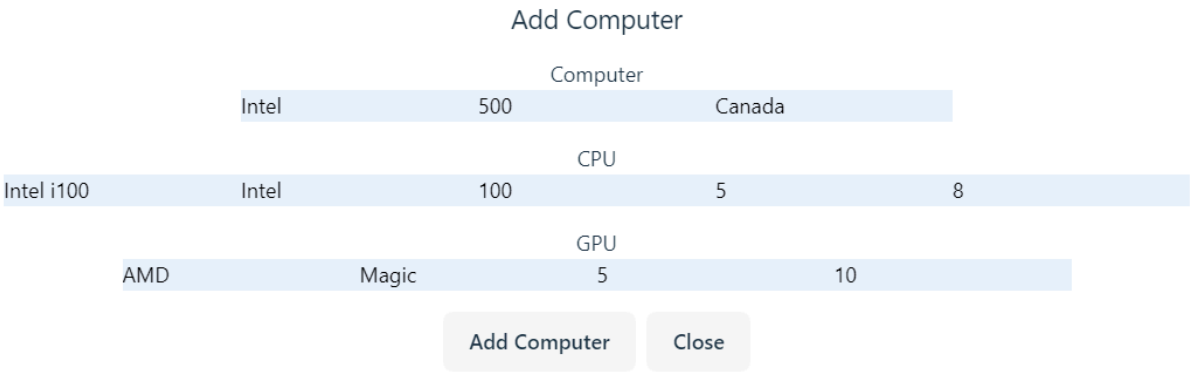


- after
  - Entry in Computer

```
mysql> select * from Computer
    -> ;
+----+--------+---------+-------------+-------+-------+-----------+-----------+
| Id | Brand  | Price   | AssembledIn | CpuId | GpuId | StorageId | MonitorId |
+----+--------+---------+-------------+-------+-------+-----------+-----------+
|  1 | Dell   | 3200.00 | China       |     1 |     2 |         2 |         3 |
|  2 | Razor  | 2100.00 | Singapore   |     3 |     3 |         3 |         1 |
|  3 | Apple  | 3499.99 | USA         |     2 |     1 |         1 |         3 |
|  4 | HP     | 1500.00 | Japan       |     4 |     4 |         4 |         4 |
|  5 | Lenovo | 1800.00 | Taiwan      |     5 |     5 |         5 |         5 |
|  6 | Intel  |  300.00 | Canada      |     6 |     6 |         1 |         1 |
|  7 | Intel  |  500.00 | Canada      |     7 |     7 |         1 |         1 |
+----+--------+---------+-------------+-------+-------+-----------+-----------+
```

  - Entry in Cpu

```
mysql> select * from Cpu
    -> ;
+----+-----------+------------+-----------+------------+
| Id | Model     | ClockSpeed | CoreCount | Generation |
+----+-----------+------------+-----------+------------+
|  1 | Core i7   |       3.80 |         8 |         10 |
|  2 | Core i5   |       2.90 |         4 |         10 |
|  3 | Ryzen 7   |       3.60 |         8 |          4 |
|  4 | Ryzen 5   |       3.40 |         6 |          4 |
|  5 | Core i9   |       4.00 |         8 |         11 |
|  6 | Core i99  |       5.00 |         5 |          5 |
|  7 | Intel i100|     100.00 |         8 |          5 |
+----+-----------+------------+-----------+------------+
```

  - Entry in CpuBrand

```
mysql> select * from CpuBrand;
+------------+-------+
| Model      | Brand |
+------------+-------+
| Core i5    | Intel |
| Core i7    | Intel |
| Core i9    | Intel |
| Core i99   | Intel |
| Intel i100 | Intel |
| Ryzen 5    | AMD   |
| Ryzen 7    | AMD   |
+------------+-------+
7 rows in set (0.00 sec)
```

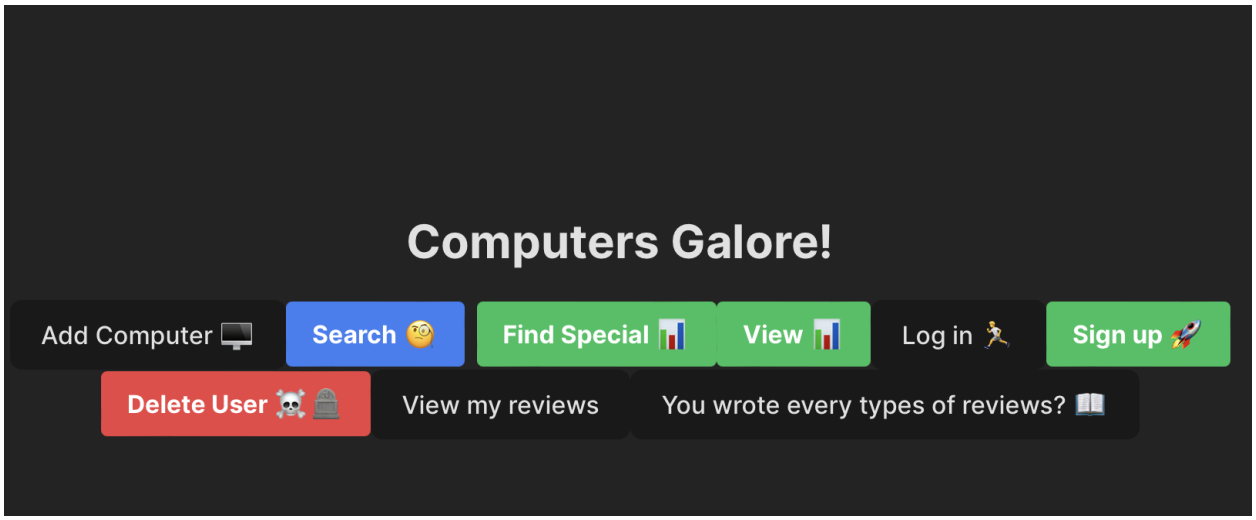
- Entry in Gpu

```
mysql> select * from Gpu
    -> ;
+----+--------+------------------+--------+------------+
| Id | Brand  | Model            | Memory | ClockSpeed |
+----+--------+------------------+--------+------------+
|  1 | Nvidia | RTX 3080         |     10 |       1.70 |
|  2 | Nvidia | RTX 3070         |      8 |       1.50 |
|  3 | AMD    | Radeon RX 6800   |     16 |       1.80 |
|  4 | AMD    | Radeon RX 6700 XT |     12 |       1.60 |
|  5 | Nvidia | RTX 3060         |     12 |       1.40 |
|  6 | NVIDIA | Magic            |      5 |       9.90 |
|  7 | AMD    | Magic            |      5 |       5.00 |
+----+--------+------------------+--------+------------+
7 rows in set (0.01 sec)
```

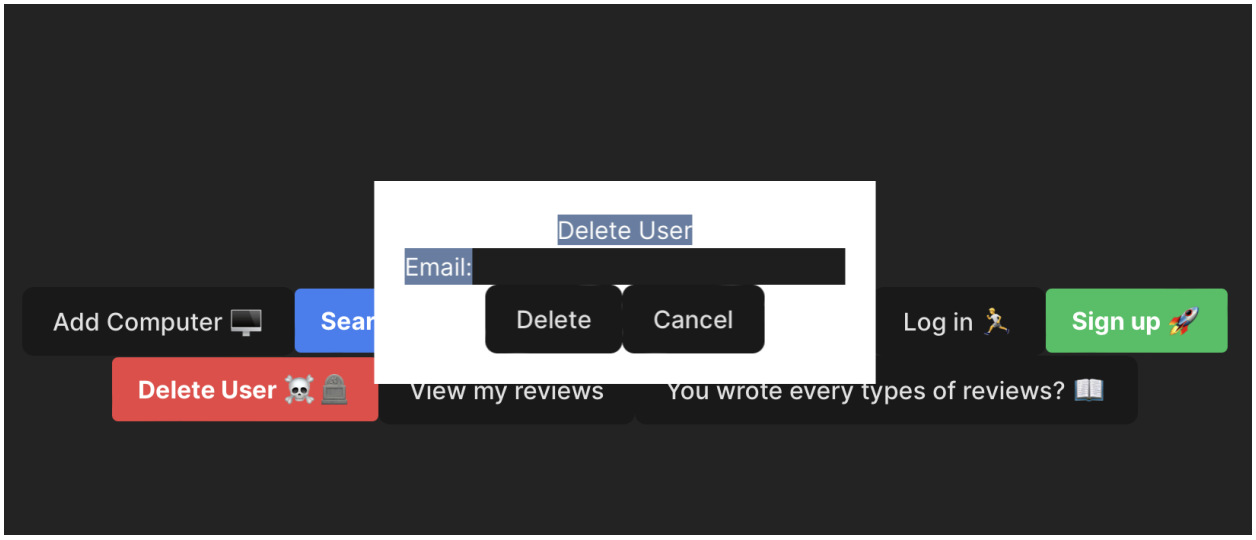
Delete

Deleting user

1. Press “Delete user” button



2. Enter user email to be deleted



3. Entries of Performance Review, Design Review, Satisfaction Review, User table before deletion

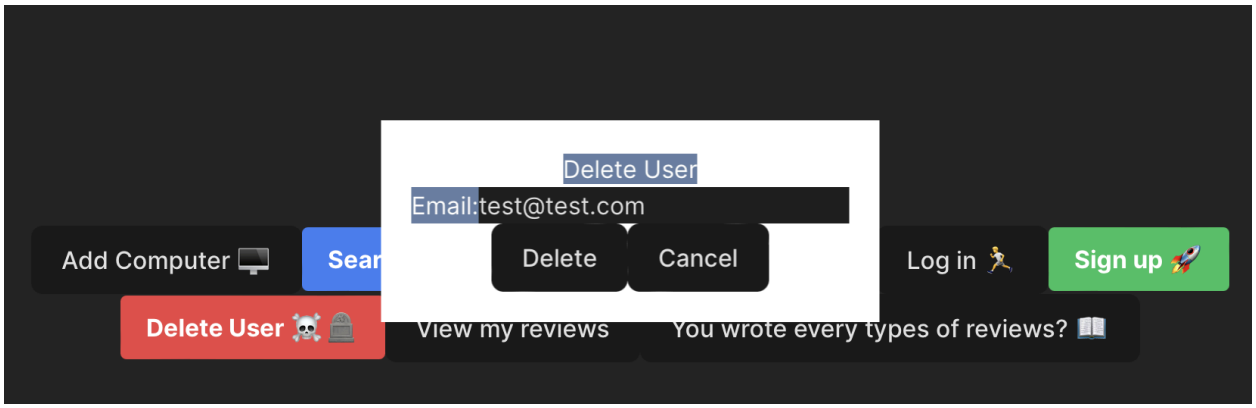
```
mysql> select * from User;
+----+--------------+--------------------------+---------------------+
| Id | Name         | Email                    | FirstLoginDate      |
+----+--------------+--------------------------+---------------------+
|  1 | John Doe     | john.doe@example.com     | 2024-03-01 09:00:00 |
|  2 | Jane Smith   | jane.smith@example.com   | 2024-02-28 09:00:00 |
|  3 | Alex Johnson | alex.johnson@example.com | 2024-01-15 09:00:00 |
|  4 | Maria Garcia | maria.garcia@example.com | 2023-12-10 09:00:00 |
|  5 | Paul Maximus | paul.maximus@example.com | 2023-12-15 09:00:00 |
|  6 | test-user    | test@test.com            | 2023-12-15 09:00:00 |
+----+--------------+--------------------------+---------------------+
6 rows in set (0.06 sec)
```

```
mysql> Select * from SatisfactionReview;
+----+--------+-----------------------------------------------+--------+------------+---------------------+
| Id | Rating | Description                                   | UserId | ComputerId | Date                |
+----+--------+-----------------------------------------------+--------+------------+---------------------+
|  1 |      3 | TEST SATISFACTION REVIEW                      |      6 |          1 | 2024-03-09 13:00:00 |
|  2 |      4 | Quite satisfied with the purchase overall.    |      1 |          1 | 2024-03-11 15:00:00 |
|  3 |      3 | Satisfied, but there are some issues.         |      1 |          2 | 2024-03-12 16:00:00 |
|  4 |      5 | Extremely satisfied, exceeded expectations.   |      3 |          3 | 2024-03-13 17:00:00 |
|  5 |      2 | Not satisfied, many problems encountered.     |      4 |          4 | 2024-03-14 18:00:00 |
|  6 |      1 | Very unsatisfied, would not recommend.        |      5 |          5 | 2024-03-15 19:00:00 |
+----+--------+-----------------------------------------------+--------+------------+---------------------+
6 rows in set (0.00 sec)
```

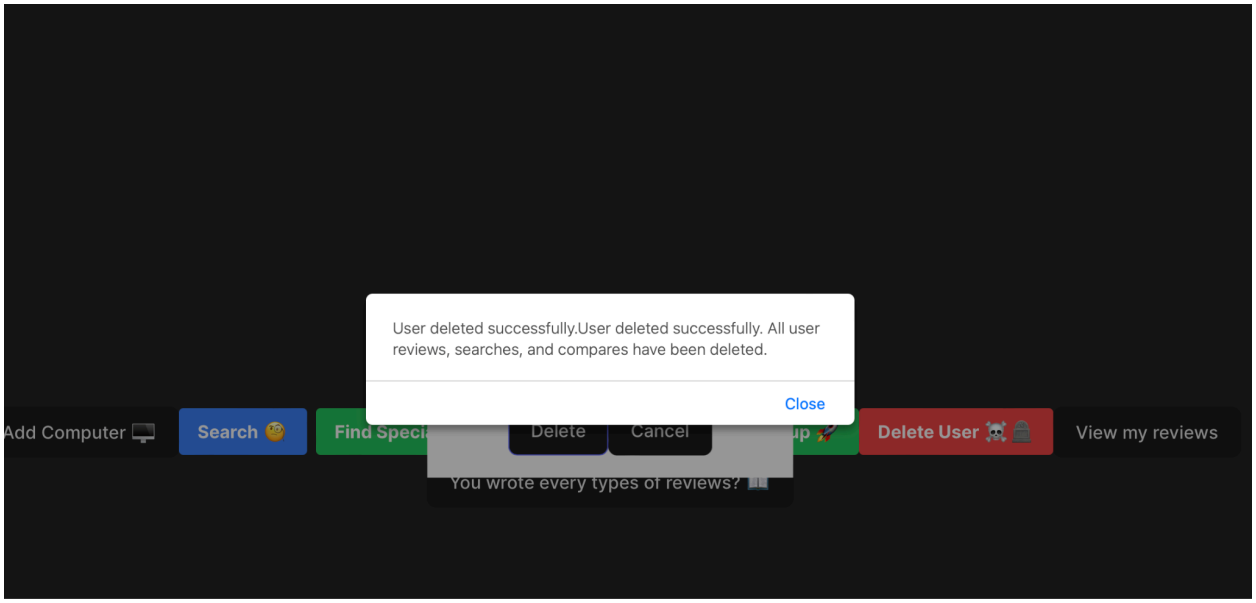
```
mysql> select * from PerformanceReview;
+----+--------+-------------------------------------------------------------+-----------+--------+------------+---------------------+
| Id | Rating | Description                                                 | BenchMark | UserId | ComputerId | Date                |
+----+--------+-------------------------------------------------------------+-----------+--------+------------+---------------------+
|  1 |      5 | Excellent performance and value.                            |  10000.00 |      1 |          1 | 2024-03-01 09:00:00 |
|  2 |      4 | Good performance for the price.                             |   8500.00 |      2 |          2 | 2024-03-01 22:00:00 |
|  3 |      4 | Good performance for the price.                             |   8500.00 |      2 |          2 | 2024-03-02 09:30:00 |
|  4 |      3 | Average performance, decent for everyday tasks.             |   7000.00 |      3 |          3 | 2024-03-03 10:00:00 |
|  5 |      2 | Below average performance, struggles with heavy tasks.      |   5500.00 |      4 |          4 | 2024-03-04 10:30:00 |
|  6 |      3 | TEST PERFORMANCE REVIEW22                                   |   5500.00 |      6 |          4 | 2024-03-04 10:30:00 |
|  7 |      1 | Poor performance, not recommended for modern applications.  |   4000.00 |      5 |          5 | 2024-03-05 11:00:00 |
+----+--------+-------------------------------------------------------------+-----------+--------+------------+---------------------+
7 rows in set (0.02 sec)
```

```
mysql> select * from DesignReview;
+----+--------+-----------------------------------------+--------+------------+---------------------+
| Id | Rating | Description                             | UserId | ComputerId | Date                |
+----+--------+-----------------------------------------+--------+------------+---------------------+
|  1 |      4 | Sleek and modern design.                |      1 |          2 | 2024-03-06 10:00:00 |
|  2 |      5 | Outstanding design and aesthetics.      |      2 |          3 | 2024-03-07 11:00:00 |
|  3 |      3 | Functional design, but nothing special. |      3 |          4 | 2024-03-08 12:00:00 |
|  4 |      2 | Design is a bit outdated.               |      4 |          1 | 2024-03-09 13:00:00 |
|  5 |      3 | TEST DESIGN REVIEW                      |      6 |          1 | 2024-03-09 13:00:00 |
|  6 |      1 | Unappealing design and poor ergonomics. |      5 |          2 | 2024-03-10 14:00:00 |
+----+--------+-----------------------------------------+--------+------------+---------------------+
6 rows in set (0.00 sec)
```

4. Delete test user with email 'test@test.com'



5. User entry and any review written by that user are deleted.



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```
mysql> select * from User;
+----+--------------+---------------------------+---------------------+
| Id | Name         | Email                     | FirstLoginDate      |
+----+--------------+---------------------------+---------------------+
|  1 | John Doe     | john.doe@example.com      | 2024-03-01 09:00:00 |
|  2 | Jane Smith   | jane.smith@example.com    | 2024-02-28 09:00:00 |
|  3 | Alex Johnson | alex.johnson@example.com  | 2024-01-15 09:00:00 |
|  4 | Maria Garcia | maria.garcia@example.com  | 2023-12-10 09:00:00 |
|  5 | Paul Maximus | paul.maximus@example.com  | 2023-12-15 09:00:00 |
+----+--------------+---------------------------+---------------------+
5 rows in set (0.00 sec)
```

```
mysql> select * from SatisfactionReview;
+----+--------+-----------------------------------------------+--------+------------+---------------------+
| Id | Rating | Description                                   | UserId | ComputerId | Date                |
+----+--------+-----------------------------------------------+--------+------------+---------------------+
|  2 |      4 | Quite satisfied with the purchase overall.    |      1 |          1 | 2024-03-11 15:00:00 |
|  3 |      3 | Satisfied, but there are some issues.         |      1 |          2 | 2024-03-12 16:00:00 |
|  4 |      5 | Extremely satisfied, exceeded expectations.   |      3 |          3 | 2024-03-13 17:00:00 |
|  5 |      2 | Not satisfied, many problems encountered.     |      4 |          4 | 2024-03-14 18:00:00 |
|  6 |      1 | Very unsatisfied, would not recommend.        |      5 |          5 | 2024-03-15 19:00:00 |
+----+--------+-----------------------------------------------+--------+------------+---------------------+
5 rows in set (0.00 sec)
```

```
mysql> select * from DesignReview
    -> ;
+----+--------+---------------------------------------+--------+------------+---------------------+
| Id | Rating | Description                           | UserId | ComputerId | Date                |
+----+--------+---------------------------------------+--------+------------+---------------------+
|  1 |      4 | Sleek and modern design.              |      1 |          2 | 2024-03-06 10:00:00 |
|  2 |      5 | Outstanding design and aesthetics.    |      2 |          3 | 2024-03-07 11:00:00 |
|  3 |      3 | Functional design, but nothing special. |      3 |          4 | 2024-03-08 12:00:00 |
|  4 |      2 | Design is a bit outdated.             |      4 |          1 | 2024-03-09 13:00:00 |
|  6 |      1 | Unappealing design and poor ergonomics. |      5 |          2 | 2024-03-10 14:00:00 |
+----+--------+---------------------------------------+--------+------------+---------------------+
5 rows in set (0.00 sec)
```

```
mysql> select * from PerformanceReview;
+----+--------+-------------------------------------------------------+-----------+--------+------------+---------------------+
| Id | Rating | Description                                           | BenchMark | UserId | ComputerId | Date                |
+----+--------+-------------------------------------------------------+-----------+--------+------------+---------------------+
|  1 |      5 | Excellent performance and value.                      |  10000.00 |      1 |          1 | 2024-03-01 09:00:00 |
|  2 |      4 | Good performance for the price.                       |   8500.00 |      2 |          2 | 2024-03-01 22:00:00 |
|  3 |      4 | Good performance for the price.                       |   8500.00 |      2 |          2 | 2024-03-02 09:30:00 |
|  4 |      3 | Average performance, decent for everyday tasks.       |   7000.00 |      3 |          3 | 2024-03-03 10:00:00 |
|  5 |      2 | Below average performance, struggles with heavy tasks. |   5500.00 |      4 |          4 | 2024-03-04 10:30:00 |
|  7 |      1 | Poor performance, not recommended for modern applications. |   4000.00 |      5 |          5 | 2024-03-05 11:00:00 |
+----+--------+-------------------------------------------------------+-----------+--------+------------+---------------------+
6 rows in set (0.00 sec)
```

Update

Update review written by logged-in user.
It will update the review description and rating

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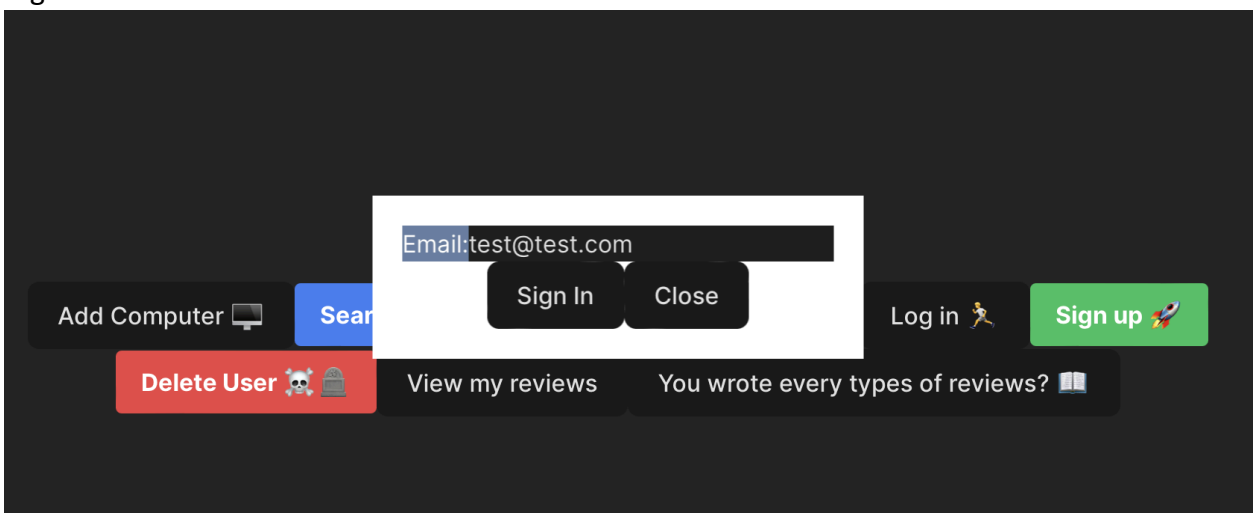
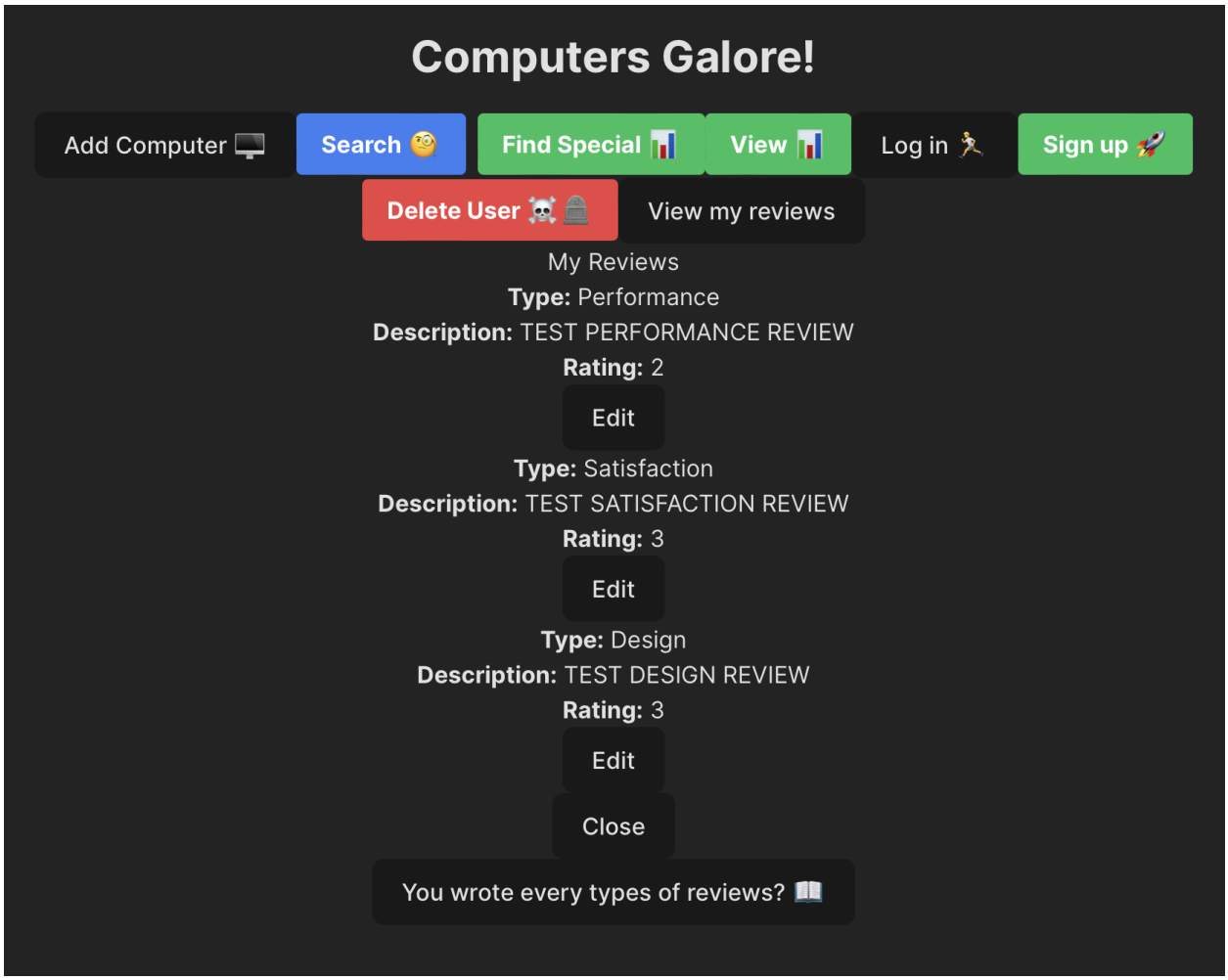
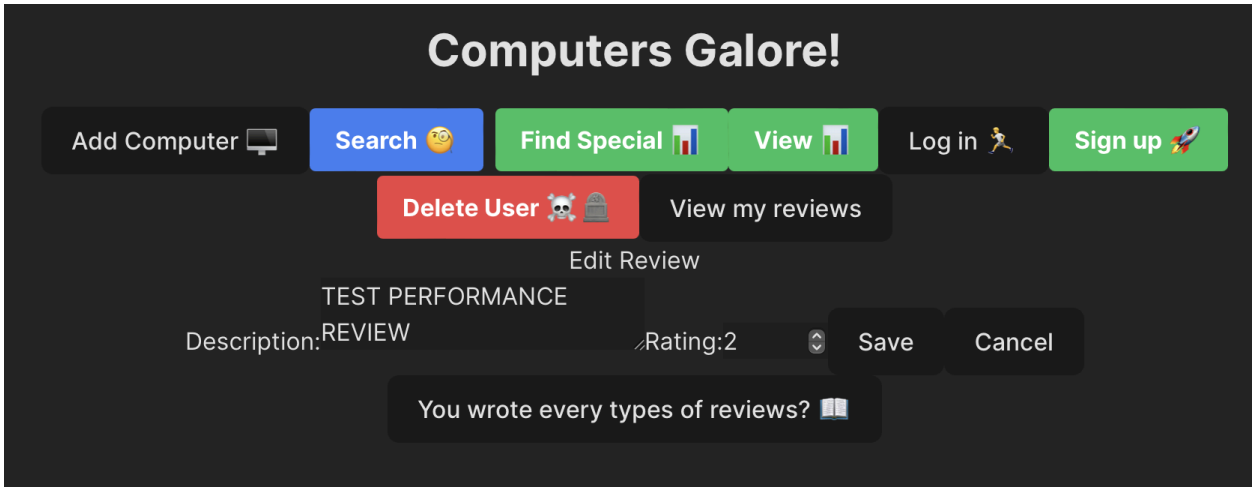
1. Log in



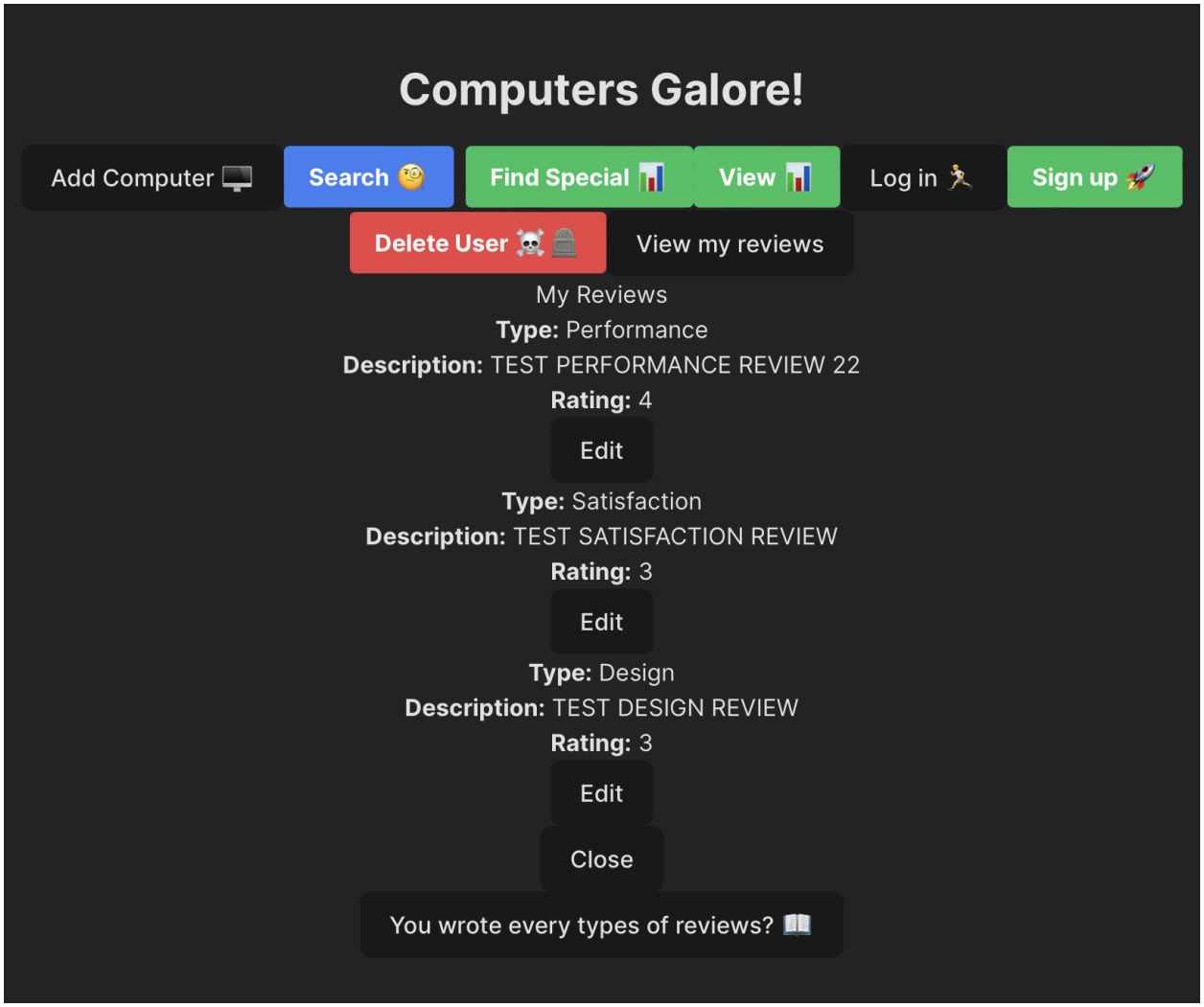
2. Select “View my reviews”



3. Press Edit and update the description and rating



4. After “Save”, press “View my reviews” again and confirm updated review



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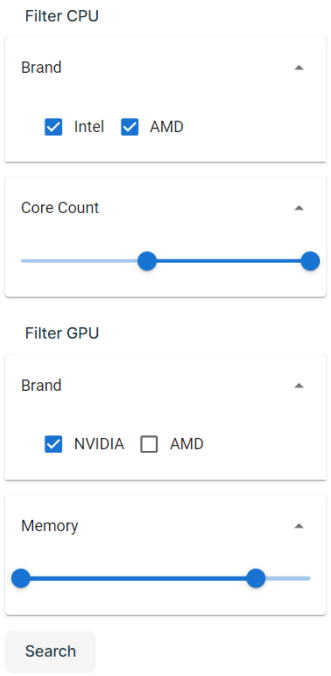
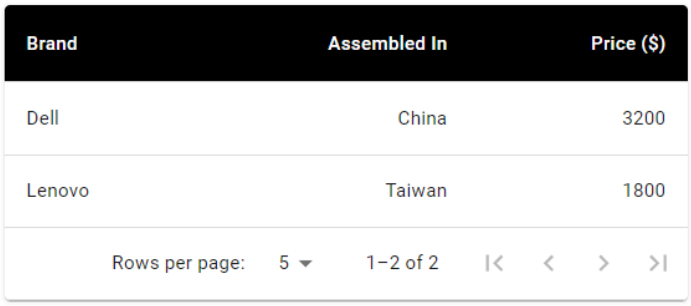
Selection

1. Click search to go to the search page
2. Select the wanted filters for CPU and GPU to find the corresponding computers



3. Click search! You will be navigated to a new page with the results



Projection

1. Click View. Dropdown for table and attribute selection appears.

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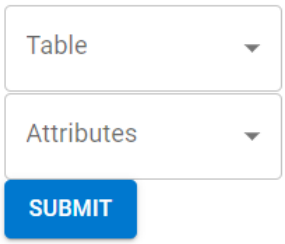
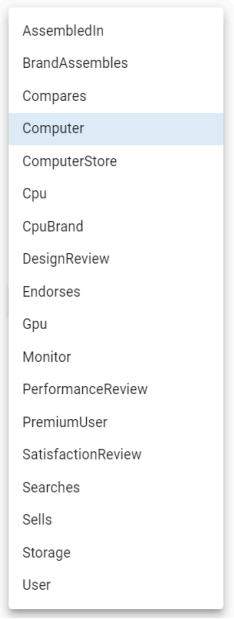
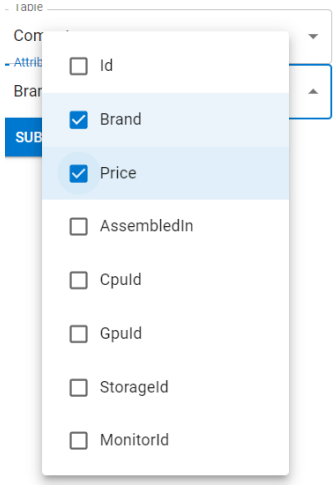


2. Select table



3. Select Attributes



4. Click submit! Results are displayed in table

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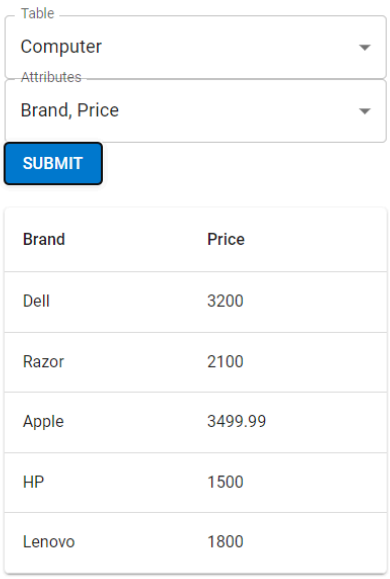
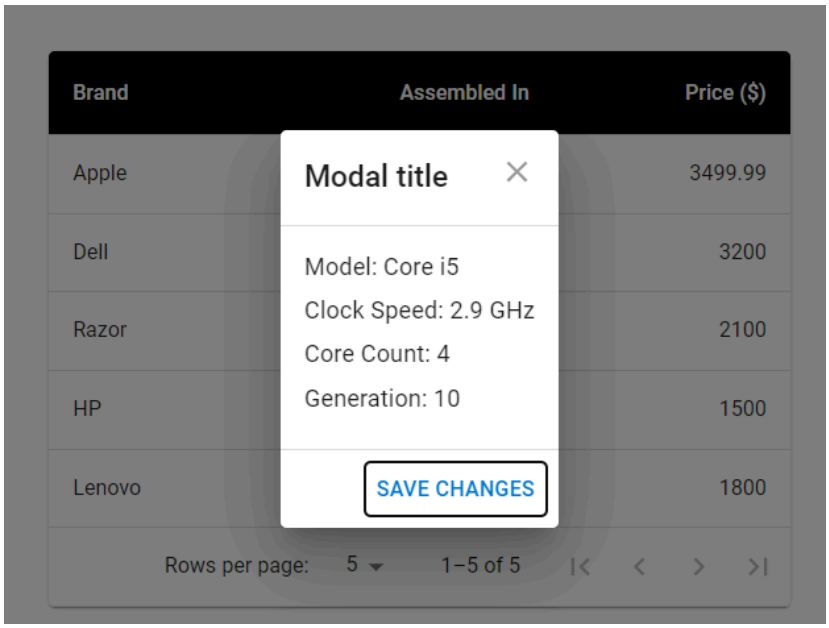


Join

1. Click filtering criteria like described in Projection, then click on any row.



Aggregation with Group By

1. Click Find Special

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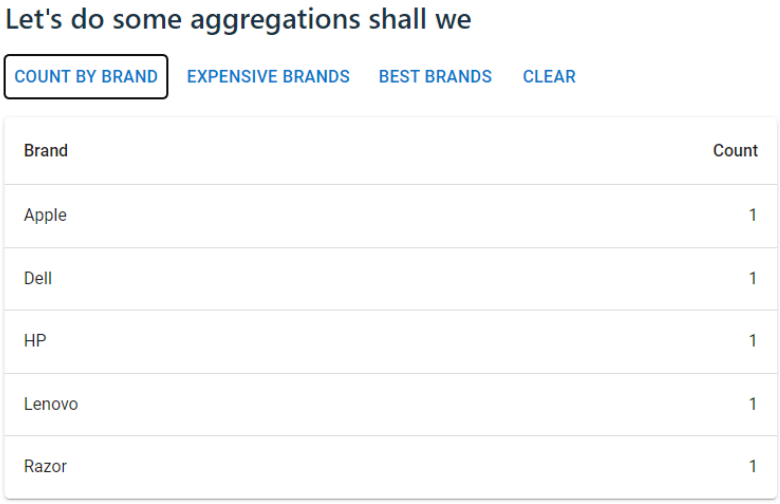
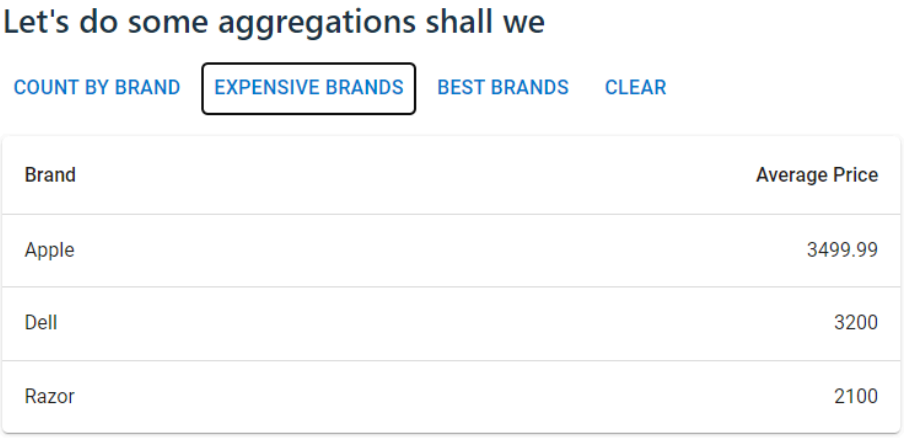
2. Click Count By Brand



Aggregation with Having

1. After clicking Find Special, click Expensive Brands



Nested Aggregation with Group By

1. After clicking Find Special, click Best Brands

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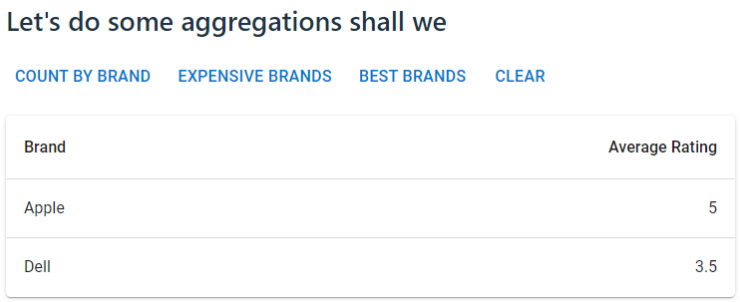
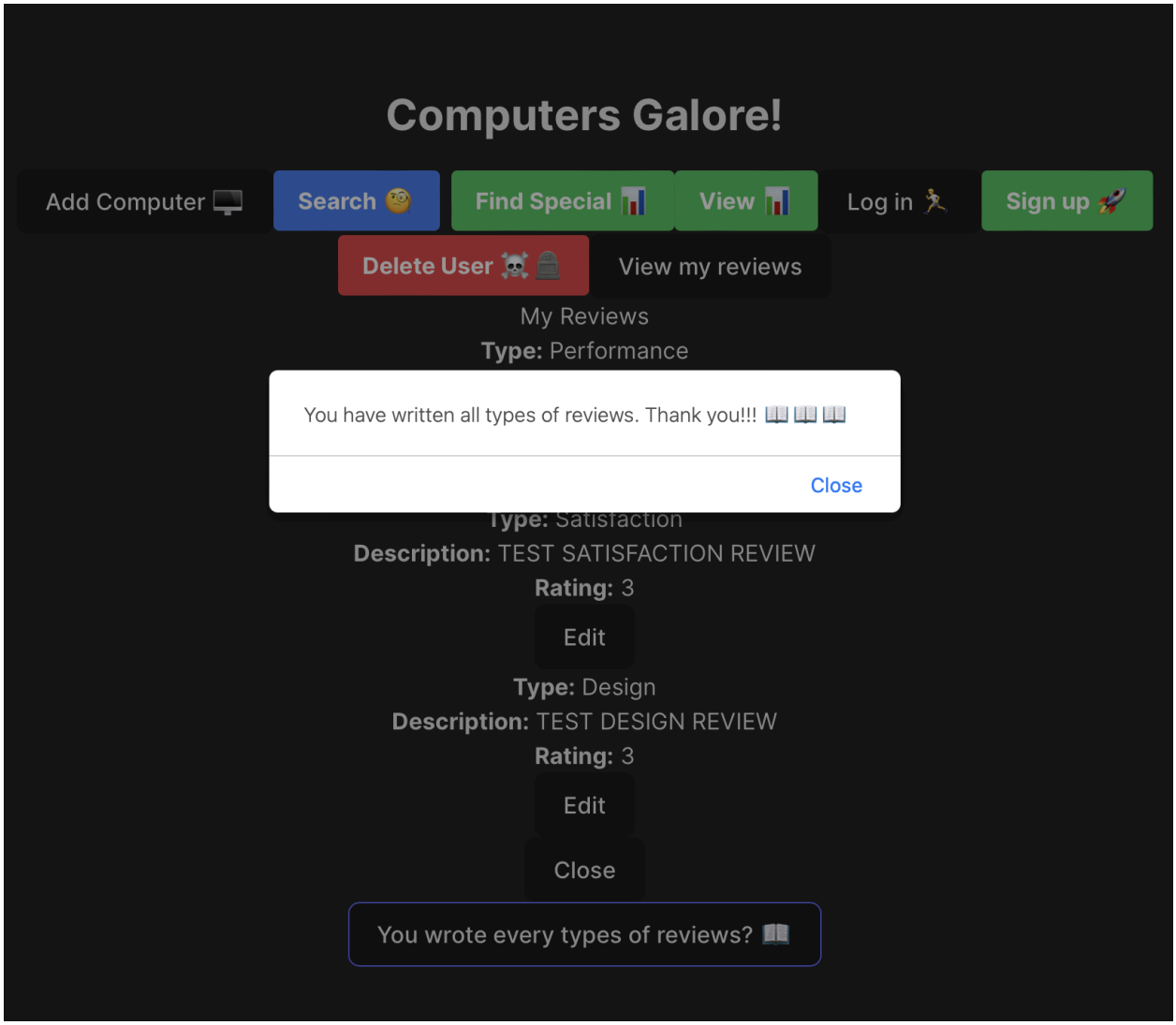


Division

Check if the logged-in user wrote every type of review (Performance, Satisfaction, Design)

1. Log in and press “You wrote every types of reviews?” button and check the pop-up message



2. If the user didn't write every type of review, pop-up will say user didn't write every kind of review