CPSC 304 Garden App

Milestone #: <u>4</u>

Date: <u>August 5, 2024</u>

Group Number: <u>36</u>

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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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Project Description

Our project is a gardening app that provides users within a household the ability to maintain, manage, monitor, and harvest crops effectively and effectively by providing a centralized UI that displays garden and plant data. Additionally, our app will provide users the ability to view and update data accordingly on the application.

Schema Description

HousePeople

- Added CHECK on yearsOfExp because yearsOfExp should not be a negative year
- Added CHECK on gender to ensure that the only available options are: M, F, and Other

Garden

- Added CHECK on gardenSize because gardenSize should not be a negative measurement

WorksOn

- Assertion/Trigger required on the WorksOn relation since on our ER diagram, there is total participation between HousePeople, WorksOn, and Garden

Plants

- Added CHECK on plantId to ensure plantId provided by the user is a positive integer

Flower

- Added CHECK on plantId to ensure plantId provided by the user is a positive integer

Vegetable

- Added CHECK on plantId to ensure plantId provided by the user is a positive integer

Herb

- Added CHECK on plantId to ensure plantId provided by the user is a positive integer

ToolsR1

- N/A

ToolsR3

- N/A

ToolsR4

- Added CHECK on serialNumber to ensure the provided serialNumber is a positive integer when provided by the user

Supply

- Added CHECK on plantId to ensure plantId provided by the user is a positive integer
- Added CHECK on serialNumber to ensure the provided serialNumber is a positive integer when provided by the user

WateringR1

- Added CHECK on temperature so the temperatures are between -50 and 50
- Added CHECK on pH so the pH's are between 0 and 14
- Added CHECK on amount to ensure the amount of water provided is a non-negative integer

WateringR2

- Added CHECK on wateringId to ensure wateringId provided by the user is a positive integer
- Added CHECK on temperature so the temperatures are between -50 and 50
- Added CHECK on pH so the pH's are between 0 and 14
- Added CHECK on amount to ensure the amount of water provided is a non-negative integer
- Added CHECK on plantId to ensure plantId provided by the user is a positive integer

Fertilizer

- Added CHECK on price to ensure price provided by the user is a positive integer

PlantFertilized

- Assertion/Trigger required on the PlantFertilized relation since on our ER diagram, there is total participation between Fertilizer and PlantFertilized relation, need to ensure that Fertilizer PK exists in the PlantFertilized relation
- Added CHECK on plantId to ensure plantId provided by the user is a positive integer
- Added CHECK on qty to ensure qty provided by the user is a non-negative integer

PestR1

- N/A

PestR3

- N/A

PestR4

- Added CHECK on pestId to ensure pestId provided by the user is a positive integer
- Added CHECK on plantId to ensure plantId provided by the user is a positive integer

Harvest

- Added CHECK on harvestId to ensure harvestId provided by the user is a positive integer
- Added CHECK on plantId to ensure plantId provided by the user is a positive integer
- Added CHECK on qty to ensure qty provided by the user is a non-negative integer

Schema Data

HousePeople(<u>username</u>, password, name, gender, role, yearsOfExp);

```
USERNAME            PASS            FULLNAME        GENDER  GARDENROLE      YEARSOFEXP
-----------------   -------------   -----------     ------  -----------     ----------
user1               password1       Alice           F       Grandma                  5
user2               password2       Bob             M       Grandpa                  3
user3               password3       Charlie         M       Father                   2
user4               password4       Diana           F       Mother                   4
user5               password5       Eve             F       Daughter                 1
user6               password6       Trevor          M       Son                     10
```

Garden(<u>gardenName</u>, <u>loc</u>, soilType, size);

```
GARDENNAME          LOC             SOILTYPE        GARDENSIZE
-----------------   ------------    -----------     ----------
Rose Garden         Southeast       Loamy                  100
Vegetable Garden    Southwest       Sandy                  150
Herb Garden         Northwest       Clay                   200
Flower Garden       Northeast       Silty                  250
Tropical Garden     Center          Peaty                  300
Tree Garden         East            Silty                  500
Tree Garden         Center          Silty                  600
```

WorksOn(**<u>username</u>**, **<u>gardenName</u>**, **<u>loc</u>**);

```
USERNAME            GARDENNAME      LOC
----------------    -----------     --------------------
user1               Flower Garden   Northeast
user1               Rose Garden     Southeast
user2               Vegetable Garden Southwest
user3               Herb Garden     Northwest
user3               Tree Garden     East
user3               Vegetable Garden Southwest
user4               Flower Garden   Northeast
user5               Tropical Garden Center
user6               Tree Garden     East
```

Plants(<u>plantId</u>, plantName, wateringSchedule, species, **gardenName**, **loc**);

```
PLANTID PLANTNAME       WATERING SPECIES          GARDENNAME          LOC
------- ------------    -------- ------------      ---------------     --------------------
      1 Rose            Daily    Rosa             Rose Garden         Southeast
      2 Tomato          Weekly   Solanum          Vegetable Garden    Southwest
      3 Basil           Monthly  Ocimum           Herb Garden         Northwest
      4 Tulip           Daily    Tulipa           Flower Garden       Northeast
      5 Mango           Weekly   Mangifera        Tropical Garden     Center
      6 Daisy           Daily    Bellis           Flower Garden       Northeast
      7 Cucumber        Weekly   Cucumis          Vegetable Garden    Southwest
      8 Rosemary        Monthly  Rosmarinus       Herb Garden         Northwest
      9 Lily            Daily    Lilium           Flower Garden       Northeast
     10 Peach           Weekly   Prunus           Tropical Garden     Center
     11 Sunflower       Daily    Helianthus       Flower Garden       Northeast

PLANTID PLANTNAME       WATERING SPECIES          GARDENNAME          LOC
------- ------------    -------- ------------      ---------------     --------------------
     12 Carrot          Weekly   Daucus           Vegetable Garden    Southwest
     13 Thyme           Monthly  Thymus           Herb Garden         Northwest
     14 Orchid          Daily    Orchidaceae      Flower Garden       Northeast
     15 Papaya          Weekly   Carica           Tropical Garden     Center
     16 Ostrich Fern    Daily    Polypodiophyta   Tree Garden         East
     17 Oak             Monthly  Quercus          Tree Garden         East
```

Flower(**plantId**, color, typeOfPlant);

```
  PLANTID COLOR                     TYPEOFPLANT
--------- --------------------     --------------------------
        1 Red                       Rose
        4 Yellow                    Tulip
        6 White                     Daisy
        9 Pink                      Lily
       11 Yellow                    Sunflower
```

Vegetable(**plantId**, vitaminType);

```
  PLANTID V
--------- -
        2 A
        7 B
       12 C
        3 D
       13 E
```

Herb(**plantId**, medicalUse);

```
  PLANTID MEDICALUSE
--------- --------------------
        3 Medicinal
        8 Culinary
       13 Aromatic
       15 Medicinal
       10 Medicinal
       11 Aromatic
```

ToolsR1(purchaseDate, material, condition);

```
PURCHASED MATERIAL              CONDITION
--------- --------------------  --------------------------
01-JAN-20 Metal                 New
15-JUN-21 Plastic               Used
20-AUG-22 Wood                  Good
05-DEC-20 Iron                  Worn
12-NOV-19 Steel                 Excellent
```

ToolsR3(toolName, material);

```
TOOLNAME                MATERIAL
--------------------    --------------------
Shovel                  Metal
Watering Can            Plastic
Hoe                     Wood
Rake                    Iron
Pruning Shears          Steel
```

ToolsR4(serialNumber, **toolName**, purchaseDate, **username**);

```
SERIALNUMBER TOOLNAME                   PURCHASED USERNAME
------------ ----------------------     --------- -----------------
           1 Shovel                     01-JAN-20 user1
           2 Watering Can               15-JUN-21 user2
           3 Hoe                        20-AUG-22 user3
           4 Rake                       05-DEC-20 user4
           5 Pruning Shears             12-NOV-19 user5
```

Supply(**plantId**, **serialNumber**);

```
    PLANTID SERIALNUMBER
----------- ------------
          1            1
          2            2
          3            3
          4            4
          5            5
```

WateringR1(date, temperature, pH, amount);

```
WATERINGD TEMPERATURE        PH     AMOUNT
--------- -----------   -------- ----------
01-APR-23        20.5        6.5        500
01-MAY-23          18        6.8        300
01-JUN-23          21          7        400
01-JUL-23        19.5        6.7        350
01-AUG-23          22        6.9        450
01-SEP-23          21        6.5        500
01-OCT-23        21.1          7        200
01-NOV-23        18.5        6.9        450
01-DEC-23          20        6.7        200
01-JAN-24          18          7        180
```

WateringR2(**date**, **temperature**, **pH**, wateringId, **plantId**);

```
WATERINGID WATERINGD TEMPERATURE        PH     PLANTID
---------- --------- -----------   -------- ----------
         1 01-APR-23        20.5        6.5           1
         2 01-MAY-23          18        6.8           2
         3 01-JUN-23          21          7           3
         4 01-JUL-23        19.5        6.7           4
         5 01-AUG-23          22        6.9           5
         6 01-SEP-23          21        6.5           1
         7 01-OCT-23        21.1          7           3
         8 01-NOV-23        18.5        6.9           2
         9 01-DEC-23          20        6.7           4
        10 01-JAN-24          18          7           2
```

Fertilizer(fertilizerName, manufacturer, fertilizerType, price);

```
FERTILIZERNAME          MANUFACTURER          FERTILIZERTYPE               PRICE
----------------------  --------------------  -------------------------  ----------
Compost                 GreenGrow             Organic                        20
Nitrogen                FarmBest              Synthetic                      15
Phosphate               PlantMagic            Chemical                       25
Potassium               GrowthMax             Natural                        30
Ammonium                BioBoost              Organic                        18
```

PlantFertilized(**fertilizerName**, **manufacturer**, **plantId**, qty, applicationDate);

```
FERTILIZERNAME          MANUFACTURER           PLANTID       QTY APPLICATI
----------------------  --------------------  ----------  ---------- ----------
Compost                 GreenGrow                   1          2 15-APR-23
Nitrogen                FarmBest                    2          3 20-MAY-23
Phosphate               PlantMagic                  3          4 25-JUN-23
Potassium               GrowthMax                   4          1 30-JUL-23
Ammonium                BioBoost                    5          2 10-AUG-23
```

PestR1(pestType, controlMethod);

```
PESTTYPE                CONTROLMETHOD
----------------------  ---------------------------------------------------------
Caterpillars            BT
Aphids                  Neem Oil
Whiteflies              Insecticidal Soap
Mites                   Miticide
Beetles                 Pyrethrin
```

PestR3(pestName, **pestType**);

```
PESTNAME                PESTTYPE
----------------------  ----------------------
Cabbage Worm            Caterpillars
Greenfly                Aphids
Greenhouse Whitefly     Whiteflies
Spider Mite             Mites
Cucumber Beetle         Beetles
```

PestR4(pestId, **plantId**, **pestName**);

```
    PESTID    PLANTID PESTNAME
---------- ---------- ----------------------
         1          2 Cabbage Worm
         2          2 Greenfly
         3          3 Greenhouse Whitefly
         4          4 Spider Mite
         5          5 Cucumber Beetle
```

Harvest(harvestId, **plantId**, qty, harvestDate);

```
 HARVESTID    PLANTID        QTY HARVESTDA
---------- ---------- ---------- ----------
         1          2         10 01-JUN-23
         2          3          5 01-JUL-23
         3          1          7 01-AUG-23
         4          4          8 01-SEP-23
         5          5         12 01-OCT-23
         6          4         10 01-FEB-24
         7          5         10 01-MAY-24
         8          2         15 01-JUN-24
         9          1          8 01-AUG-24
```

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SQL Queries

`insert into WateringR1 (pH, temperature, wateringDate, amount) values (:pH, :temperature, TO_DATE(:wateringDate, 'YYYY-MM-DD'), :amount)`

- Found in appService.js on lines [273 - 302]

`insert into WateringR2 (wateringId, wateringDate, temperature, pH, plantId) values (:wateringId, TO_DATE(:wateringDate, 'YYYY-MM-DD'), :pH, :temperature, :plantId)`

- Found in appService.js on lines [273 - 302]

`delete from WateringR1 where wateringDate=TO_DATE(:wateringDate, 'YYYY-MM-DD') and temperature=:temperature and pH=:pH`

- Found in appService.js on lines [304 - 316]

`update WateringR2 set plantId=:plantId, pH=:pH, temperature=:temperature, wateringDate=TO_DATE(:wateringDate, 'YYYY-MM-DD') where wateringId=:wateringId`

- Found in appService.js on lines [318 - 388]

`select * from Harvest where plantId=:plantid and harvestId=:harvestid and qty=:qty and harvestDate < TO_DATE(:harvestDate, 'YYYY-MM-DD')`

- Found in appService.js on lines [107 - 152]

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Projection:

`select gardenName, loc, soilType, size from Garden`

- Found in appService.js on lines [173 - 183]

Join:

`select r2.wateringId, r2.pH, r2.temperature, r1.amount, r2.plantId from WateringR2 r2, WateringR1 r1 where r2.wateringDate = r1.wateringDate and r2.temperature = r1.temperature and r2.pH = r1.pH`

- Found in appService.js on lines [240 - 249]

Aggregation with Group By:

`select count(wateringId), plantId from WateringR2 group by plantId order by counter(wateringId) desc`

- Found in appService.js on lines [390 - 411]

Aggregation with Having:

`select count(wateringId), plantId from WateringR2 group by plantId having count(wateringId) = :numEntries`

- Found in appService.js on lines [413 - 437]

Nested Aggregation with Group By:

`create view temp(plantId, totalAmount) as select r2.plantId, sum(r1.amount) as totalAmount from WateringR2 r2, WateringR1 r1 where r2.wateringDate =

r1.wateringDate and r2.temperature = r1.temperature and r2.pH = r1.pH group by r2.plantId`

`select plantId, totalAmount from temp where totalAmount=(select min(totalAmount) from temp)`

- Found in appService.js on lines [439 - 469]

Division:

`SELECT g.gardenName, g.loc FROM Garden g WHERE NOT EXISTS ((SELECT hp.username FROM HousePeople hp WHERE hp.username=:username) MINUS (SELECT wo.username FROM WorksOn wo WHERE wo.gardenName = g.gardenName AND wo.loc = g.loc))
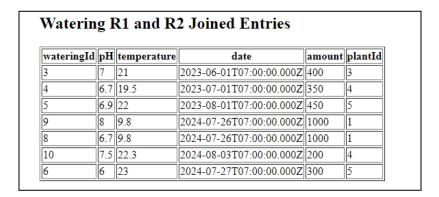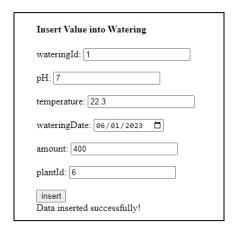
- Found in appService.js on lines [201 - 233]

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App Functionality

Insert Operation

Before

Watering R1 and R2 Joined Entries

wateringId	pH	temperature	date	amount	plantId
3	7	21	2023-06-01T07:00:00.000Z	400	3
4	6.7	19.5	2023-07-01T07:00:00.000Z	350	4
5	6.9	22	2023-08-01T07:00:00.000Z	450	5
9	8	9.8	2024-07-26T07:00:00.000Z	1000	1
8	6.7	9.8	2024-07-26T07:00:00.000Z	1000	1
10	7.5	22.3	2024-08-03T07:00:00.000Z	200	4
6	6	23	2024-07-27T07:00:00.000Z	300	5

During

Insert Value into Watering

wateringId: 1

pH: 7

temperature: 22.3

wateringDate: 06/01/2023

amount: 400

plantId: 6

[insert]
Data inserted successfully!

After

Watering R1 and R2 Joined Entries

wateringId	pH	temperature	date	amount	plantId
1	7	22.3	2023-06-01T07:00:00.000Z	400	6
3	7	21	2023-06-01T07:00:00.000Z	400	3
4	6.7	19.5	2023-07-01T07:00:00.000Z	350	4
5	6.9	22	2023-08-01T07:00:00.000Z	450	5
9	8	9.8	2024-07-26T07:00:00.000Z	1000	1
8	6.7	9.8	2024-07-26T07:00:00.000Z	1000	1
10	7.5	22.3	2024-08-03T07:00:00.000Z	200	4
6	6	23	2024-07-27T07:00:00.000Z	300	5

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Update Operation

Before

Watering R2 Entries

wateringId	wateringDate	temperature	pH	plantId
1	2023-06-01T07:00:00.000Z	22.3	7	6
3	2023-06-01T07:00:00.000Z	21	7	3
4	2023-07-01T07:00:00.000Z	19.5	6.7	4
5	2023-08-01T07:00:00.000Z	22	6.9	5
8	2024-07-26T07:00:00.000Z	9.8	6.7	1
9	2024-07-26T07:00:00.000Z	9.8	8	1
10	2024-08-03T07:00:00.000Z	22.3	7.5	4
6	2024-07-27T07:00:00.000Z	23	6	5

During

Update Tuple in WateringR2

wateringId: 1

wateringDate: 06/01/2023

temperature: 22.3

pH: 7

plantId: 5

update
Data updated successfully!

After

Watering R2 Entries

wateringId	wateringDate	temperature	pH	plantId
1	2024-07-26T07:00:00.000Z	9.8	8	5
3	2023-06-01T07:00:00.000Z	21	7	3
4	2023-07-01T07:00:00.000Z	19.5	6.7	4
5	2023-08-01T07:00:00.000Z	22	6.9	5
8	2024-07-26T07:00:00.000Z	9.8	6.7	1
9	2024-07-26T07:00:00.000Z	9.8	8	1
10	2024-08-03T07:00:00.000Z	22.3	7.5	4
6	2024-07-27T07:00:00.000Z	23	6	5

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Delete Operation

Before

Watering R1 Entries

wateringDate	temperature	pH	amount
2024-08-02T07:00:00.000Z	29.3	6.5	1000
2024-07-20T07:00:00.000Z	20	7.3	200
2023-06-01T07:00:00.000Z	22.3	7	400
2023-06-01T07:00:00.000Z	21	7	400
2023-07-01T07:00:00.000Z	19.5	6.7	350
2023-08-01T07:00:00.000Z	22	6.9	450
2023-04-01T07:00:00.000Z	22.400000000000002	6.5	500
2024-07-26T07:00:00.000Z	9.8	8	1000
2024-07-26T07:00:00.000Z	9.8	6.7	1000
2024-08-03T07:00:00.000Z	22.3	7.5	200
2024-07-27T07:00:00.000Z	23	6	300

During

Delete Value from Watering R1

wateringDate: 08 / 02 / 2024

temperature: 29.3

pH: 6.5

delete
Data deleted successfully!

After

Watering R1 Entries

wateringDate	temperature	pH	amount
2024-07-20T07:00:00.000Z	20	7.3	200
2023-06-01T07:00:00.000Z	22.3	7	400
2023-06-01T07:00:00.000Z	21	7	400
2023-07-01T07:00:00.000Z	19.5	6.7	350
2023-08-01T07:00:00.000Z	22	6.9	450
2023-04-01T07:00:00.000Z	22.400000000000002	6.5	500
2024-07-26T07:00:00.000Z	9.8	8	1000
2024-07-26T07:00:00.000Z	9.8	6.7	1000
2024-08-03T07:00:00.000Z	22.3	7.5	200
2024-07-27T07:00:00.000Z	23	6	300

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Before

Show Harvest

Harvest ID	Plant ID	Quantity	Date Harvested
1	2	10	2023-06-01T07:00:00.000Z
2	3	5	2023-07-01T07:00:00.000Z
3	1	7	2023-08-01T07:00:00.000Z
4	4	8	2023-09-01T07:00:00.000Z
5	5	12	2023-10-01T07:00:00.000Z
6	5	10	2024-05-01T07:00:00.000Z

During

Filter

Plant ID: 2

Harvest ID: 1

Quantity: 10

Before/After: Before
Harvest Date: 06/02/2023

Submit
Found Record!

After

Filter Result

Harvest ID	Plant ID	Quantity	Date Harvested
1	2	10	2023-06-01T07:00:00.000Z

Division Operation

Before

Show WorksOn

Username	Garden Name	Location
user1	Flower Garden	Northeast
user1	Rose Garden	Southeast
user2	Vegetable Garden	Southwest
user3	Herb Garden	Northwest
user3	Tree Garden	East
user3	Vegetable Garden	Southwest
user4	Flower Garden	Northeast
user5	Tropical Garden	Center
user6	Tree Garden	East

During

Select a User (Division)

Username: user3

search
Found User!

After

Garden Working On

Garden Name	Location
Herb Garden	Northwest
Tree Garden	East
Vegetable Garden	Southwest

Projection Operation

Before

Projection

gardenName: ☑ Location: ☑ soilType: ☑ gardenSize: ☑ [project]

During

gardenName: ☑ Location: ☐ soilType: ☑ gardenSize: ☐ [project]

After

gardenName: ☑ Location: ☐ soilType: ☑ gardenSize: ☐ [project]

Garden Name	Soil Type
Rose Garden	Loamy
Vegetable Garden	Sandy
Herb Garden	Clay
Flower Garden	Silty
Tropical Garden	Peaty
Tree Garden	Silty
Tree Garden	Silty

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Join Operation

Before

Watering R1 Entries

wateringDate	temperature	pH	amount
2024-07-20T07:00:00.000Z	20	7.3	200
2023-06-01T07:00:00.000Z	22.3	7	400
2023-06-01T07:00:00.000Z	21	7	400
2023-07-01T07:00:00.000Z	19.5	6.7	350
2023-08-01T07:00:00.000Z	22	6.9	450
2023-04-01T07:00:00.000Z	22.400000000000002	6.5	500
2024-07-26T07:00:00.000Z	9.8	8	1000
2024-07-26T07:00:00.000Z	9.8	6.7	1000
2024-08-03T07:00:00.000Z	22.3	7.5	200
2024-07-27T07:00:00.000Z	23	6	300

Watering R2 Entries

wateringId	wateringDate	temperature	pH	plantId
1	2024-07-20T07:00:00.000Z	20	7.3	6
3	2023-06-01T07:00:00.000Z	21	7	3
4	2023-07-01T07:00:00.000Z	19.5	6.7	4
5	2023-08-01T07:00:00.000Z	22	6.9	5
8	2024-07-26T07:00:00.000Z	9.8	6.7	1
9	2024-07-26T07:00:00.000Z	9.8	8	1
10	2024-08-03T07:00:00.000Z	22.3	7.5	4
6	2024-07-27T07:00:00.000Z	23	6	5

During

Watering R1 and R2 Joined Entries

wateringId	pH	temperature	date	amount	plantId
1	7.3	20	2024-07-20T07:00:00.000Z	200	6
3	7	21	2023-06-01T07:00:00.000Z	400	3
4	6.7	19.5	2023-07-01T07:00:00.000Z	350	4
5	6.9	22	2023-08-01T07:00:00.000Z	450	5
9	8	9.8	2024-07-26T07:00:00.000Z	1000	1
8	6.7	9.8	2024-07-26T07:00:00.000Z	1000	1
10	7.5	22.3	2024-08-03T07:00:00.000Z	200	4
6	6	23	2024-07-27T07:00:00.000Z	300	5

After

Watering R1 and R2 Joined Entries

wateringId	pH	temperature	date	amount	plantId
1	7.3	20	2024-07-20T07:00:00.000Z	200	6
3	7	21	2023-06-01T07:00:00.000Z	400	3
4	6.7	19.5	2023-07-01T07:00:00.000Z	350	4
5	6.9	22	2023-08-01T07:00:00.000Z	450	5
9	8	9.8	2024-07-26T07:00:00.000Z	1000	1
8	6.7	9.8	2024-07-26T07:00:00.000Z	1000	1
10	7.5	22.3	2024-08-03T07:00:00.000Z	200	4
6	6	23	2024-07-27T07:00:00.000Z	300	5

Aggregation with Group By Operation

Before

Watering R2 Aggregation GroupBy using COUNT()

order by: NO ORDER ⌄ | group

| # of watering entries | plantId |

During

order by | ✓ NO ORDER | group
DESCENDING
ASCENDING

# of wa | tId

After

order by: DESCENDING ⌄ | group

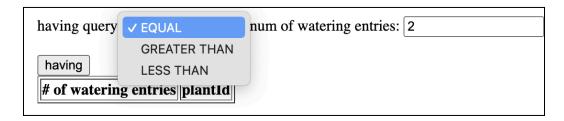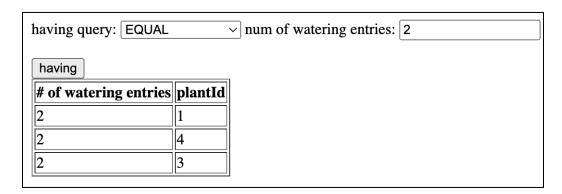| # of watering entries	plantId
3	2
2	3
2	1
2	4
1	5

Aggregation with Having Operation

Before

Watering R2 Aggregation Having using COUNT()

having query: [EQUAL ▾] num of watering entries: [Enter # of entries]

[having]

# of watering entries	plantId

During

having query [✓ EQUAL] num of watering entries: [2]
              [GREATER THAN]
[having]   [LESS THAN]

# of watering entries	plantId

After

having query: [EQUAL ▾] num of watering entries: [2]

[having]

# of watering entries	plantId
2	1
2	4
2	3

Nested Aggregation with Group By Operation

Before

Watering R1 and R2 Nested Aggregation

choose: [MINIMUM ∨] [nested aggregation]

| plantId | totalAmount |

During

choose [✓ MINIMUM / MAXIMUM] nested aggregation

plantI

After

choose: [MAXIMUM ∨] [nested aggregation]
Successful data aggregation!

plantId	totalAmount
1	1000