University of British Columbia, Vancouver
Department of Computer Science

CPSC 304 Project Cover Page

Milestone #: ___4___

Date: ____August 5 2024_____

Group Number: ____21____

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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

Final Project Description

   This application is for owners/managers of cafes and coffee shops, focusing specifically on inventory management and recipe directions for drinks. In particular, the user is able to view the items in their inventory, filter them by type, and add, remove, or update each item. Additionally, the user may view, add, remove, and update recipes. The application also allows users to "order" items, adding them to a shopping list, and making the purchase. Shopping lists are available to view based on an inputted date. The available funds and employee pay are also displayed and new sales data may be added. The user can also see their past purchases, the average amount they've spent at each supplier, and the number of items that have been purchased at a below-average price.

Difference in Final Schema

Since previous milestones, the following changes were made to the schema:
   - Foreign key in purchase changed from 'supName' to 'trackingNum' because it's more reasonable for a purchase to be directly connected to a delivery than a supplier
   - Removed 'beanType' attribute from Decaf and Caffeinated tables
   - Changed '___Inv' attributes to integers instead of char

Schema

Delivery(<u>trackingNum</u>, expectedDate)

Supplier(<u>supName</u>, address)

Deliver(**<u>supName</u>**, **<u>trackingNum</u>**)

Purchase(**<u>trackingNum</u>**, **<u>listDate</u>**, price)

ShoppingList(<u>listDate</u>, funds)

Fund(**<u>listDate</u>**, **<u>salesDate</u>**)

Sales(<u>salesDate</u>, employeePay, cafeFunds)

Coffee(<u>coffeeName</u>, <u>coffeeSize</u>)

ListToppings(**<u>listDate</u>**, **<u>toppingName</u>**, toppingQuant, price)

AddToppings(**<u>toppingName</u>**, **<u>coffeeName</u>**, **<u>coffeeSize</u>**, toppingAmount)

Toppings(<u>toppingName</u>, toppingInv)

ListCream(**<u>listDate</u>**, **<u>creamName</u>**, creamQuant, price)

AddCream(**<u>creamName</u>**, **<u>coffeeName</u>**, **<u>coffeeSize</u>**, cupAmount)

Cream(<u>creamName</u>, creamInv)

ListSweetener(**<u>listDate</u>**, **<u>sweetenerName</u>**, sweetenerQuant, price)

AddSweetener(**<u>sweetName</u>**, **<u>coffeeName</u>**, **<u>coffeeSize</u>**, sweetenerAmount)

Sweetener(<u>sweetName</u>, sweetnerInv)

ListCoffee1(**<u>listDate</u>**, **<u>coffeeName</u>**, **<u>coffeeSize</u>**)

ListCoffee2(**listDate**, coffeeQuant, price)

Decaf(coffeeName, coffeeSize, coffeeInv, roastLevel)

Caffeinated(coffeeName, coffeeSize, coffeeInv, roastLevel, numShots)

IcedCoffee(method, **coffeeName**, **coffeeSize**, iceAmount)

Populated Tables:

Delivery:

```
TRACKINGNUM EXPECTEDD
----------- ---------
       1234 01-SEP-24
       2345 10-JUL-24
       3456 01-JUN-24
       1235 10-SEP-24
       1236 20-SEP-24
       1237 30-SEP-24
       1238 15-OCT-24
       4567 29-JUL-24
```

Supplier:

```
SUPNAME                                          ADDRESS
------------------------------------------------ ----------------
COSTCO                                           1234 Main St.
Blenz Beans                                      1234 Arbutus St.
Kona Beans                                       1234 Kailua St.
Superstore                                       317 Cambie St.
The Bean Shop                                    9288 Oak St.
```

Deliver:

```
SUPNAME                                          TRACKINGNUM
------------------------------------------------ -----------
Blenz Beans                                             1235
COSTCO                                                  1234
COSTCO                                                  2345
COSTCO                                                  3456
Kona Beans                                              1236
Superstore                                             1237
The Bean Shop                                          1238
The Bean Shop                                          4567
```

Purchase:

```
TRACKINGNUM LISTDATE      PRICE
----------- --------- ---------
       1234 01-AUG-24      150
       2345 18-JUN-24      452
       3456 22-MAY-24      220
       1235 11-AUG-24      300
       1236 15-AUG-24      275
       1237 20-AUG-24      399
       1238 10-AUG-24      200
       4567 19-JUL-24       60
```

ShoppingList:

TRACKINGNUM	LISTDATE	PRICE
1234	01-AUG-24	150
2345	18-JUN-24	452
3456	22-MAY-24	220
1235	11-AUG-24	300
1236	15-AUG-24	275
1237	20-AUG-24	399
1238	10-AUG-24	200
4567	19-JUL-24	60

LISTDATE	FUNDS
01-AUG-24	500
18-JUN-24	900
22-MAY-24	300
11-AUG-24	650
15-AUG-24	420
20-AUG-24	399
10-AUG-24	800
19-JUL-24	110

Fund:

LISTDATE	SALESDATE
01-AUG-24	30-JUL-24
10-AUG-24	09-AUG-24
11-AUG-24	10-AUG-24
15-AUG-24	14-AUG-24
20-AUG-24	19-AUG-24

Sales:

SALESDATE	EMPLOYEEPAY	CAFEFUNDS
30-JUL-24	500	1200
10-AUG-24	590	1300
14-AUG-24	700	1250
19-AUG-24	600	1350
09-AUG-24	800	1100

Coffee:

COFFEENAME	COFFEESIZE
cappuccino	small
decaf cappuccino	small
decaf drip coffee	large
decaf flat white	short
decaf latte	extra large
decaf macchiato	medium
drip coffee	large
flat white	short
latte	extra large
macchiato	large
macchiato	medium

ListToppings:

LISTDATE	TOPPINGNAME	TOPPINGQUANT	PRICE
01-AUG-24	whipped cream	4 bottles	10
18-JUN-24	cinnamon	2 bottles	50
22-MAY-24	icing sugar	1 bottle	5
11-AUG-24	caramel drizzle	2 bottles	40
15-AUG-24	cinnamon	1 bottle	10
20-AUG-24	icing sugar	3 bottles	29
10-AUG-24	cocoa powder	4 bottles	60
01-AUG-24	cocoa powder	1 bottle	15

AddToppings:

TOPPINGNAME	TOPPINGAMOUNT	COFFEENAME	COFFEESIZE
whipped cream	5 tsp	latte	extra large
caramel drizzle	3 tsp	macchiato	medium
cinnamon	2 tsp	cappuccino	small
icing sugar	4 tsp	drip coffee	large
cocoa powder	1 tsp	flat white	short
cocoa powder	5 tsp	macchiato	medium
cinnamon	5 tsp	macchiato	medium
icing sugar	5 tsp	macchiato	medium
whipped cream	5 tsp	macchiato	medium
whipped cream	7 tsp	macchiato	large

Toppings:

TOPPINGNAME	TOPPINGINV
whipped cream	50
caramel drizzle	30
cinnamon	20
icing sugar	100
cocoa powder	120

ListCream:

LISTDATE	CREAMNAME	CREAMQUANT	PRICE
01-AUG-24	half and half	10 cartons	100
18-JUN-24	coconut	5 cartons	200
22-MAY-24	almond	4 cartons	100
11-AUG-24	coconut	5 cartons	120
15-AUG-24	oat	4 cartons	140
20-AUG-24	almond	3 cartons	150
10-AUG-24	soy	2 cartons	40
10-AUG-24	oat	1 carton	40

AddCream:

CREAMNAME	CUPAMOUNT	COFFEENAME	COFFEESIZE
half and half	2 cups	latte	extra large
coconut	1 cup	macchiato	medium
oat	1/2 cup	cappuccino	small
almond	1.5 cups	drip coffee	large
soy	1/3 cup	flat white	short
soy	1/3 cup	latte	extra large
coconut	1/3 cup	latte	extra large
oat	1/3 cup	latte	extra large
almond	1/3 cup	latte	extra large

Cream:

CREAMNAME	CREAMINV
half and half	100
coconut	50
oat	89
almond	165
soy	83

ListSweetener:

LISTDATE	SWEETNAME	SWEETENERQUANT	PRICE
01-AUG-24	honey	5 bottles	15
18-JUN-24	stevia	5 bottles	52
22-MAY-24	honey	2 bottles	14
11-AUG-24	cane sugar	5 bottles	40
15-AUG-24	stevia	2 bottles	30
20-AUG-24	vanilla syrup	4 bottles	40
10-AUG-24	chocolate syrup	1 bottle	15
19-JUL-24	chocolate syrup	3 bottles	15

AddSweetener:

SWEETNAME	SWEETENERAMOUNT	COFFEENAME	COFFEESIZE
honey	2 pump	latte	extra large
cane sugar	3 spoons	macchiato	medium
stevia	2 pumps	cappuccino	small
vanilla syrup	1 pump	drip coffee	large
chocolate syrup	3 pumps	flat white	short
chocolate syrup	3 pumps	drip coffee	large
honey	2 pumps	decaf cappuccino	small
cane sugar	2 pumps	decaf cappuccino	small
stevia	2 pumps	decaf cappuccino	small
vanilla syrup	2 pumps	decaf cappuccino	small
chocolate syrup	2 pumps	decaf cappuccino	small

Sweetener:

SWEETNAME	SWEETENERINV
honey	148
cane sugar	167
stevia	60
vanilla syrup	76
chocolate syrup	51

ListCoffee1:

LISTDATE	COFFEENAME	COFFEESIZE
22-MAY-24	decaf latte	extra large
18-JUN-24	cappuccino	small
19-JUL-24	macchiato	medium
01-AUG-24	latte	extra large
10-AUG-24	flat white	short
11-AUG-24	macchiato	medium
15-AUG-24	cappuccino	small
20-AUG-24	drip coffee	large

ListCoffee2:

LISTDATE	COFFEEQUANT	PRICE
01-AUG-24	5 bottles	10
11-AUG-24	6 bottles	150
15-AUG-24	3 bottles	100
18-JUN-24	5 bottles	100
22-MAY-24	2 bottles	95
20-AUG-24	4 bottles	180
10-AUG-24	1 bottle	45
19-JUL-24	2 bottle	45

Decaf:

```
COFFEENAME                 COFFEESIZE           COFFEEINV ROASTLEVEL
-------------------------- -------------------- --------- ----------
decaf latte                extra large                 95 light
decaf macchiato            medium                      95 light
decaf cappuccino           small                       95 medium
decaf drip coffee          large                       95 dark
decaf flat white           short                       95 dark
```

Caffeinated:

```
COFFEENAME                 COFFEESIZE           COFFEEINV ROASTLEVEL            NUMSHOTS
-------------------------- -------------------- --------- -------------------- ---------
latte                      extra large               145 light                       3
macchiato                  medium                    145 light                       2
macchiato                  large                     145 light                       3
cappuccino                 small                     145 medium                      1
drip coffee                large                     145 dark                        3
flat white                 short                     145 dark                        0
```

IcedCoffee:

```
COFFEENAME                 COFFEESIZE           METHOD                        ICEAMOUNT
-------------------------- -------------------- ----------------------------- ----------
latte                      extra large          iced                          1 scoop
macchiato                  medium               ice cap                       2 scoops
cappuccino                 small                iced                          half scoop
drip coffee                large                cold brew                     2 scoops
flat white                 short                ice cap                       half scoop
```


All SQL Queries (i.e., file name and line number(s))

SQL Queries in inventory-home.php:

- `SELECT Count(*) FROM " . $table . " WHERE " . $checkName . "='" . $_POST['inName']. "'")`
  - line 316
- `"SELECT * FROM " . $table . ""`
  - where $table is the user's selected table; line 395
- `SELECT DISTINCT c.coffeeInv as caf, d.coffeeInv as decaf FROM caffeinated c, decaf d"`
  - line 404
- `"UPDATE " . $table . " SET " . $inv . " ='" . $updatedItemInv . "' WHERE " . $name . " ='" . $itemName . "'"`
  - where $table is the table selected, and the $inv and $name are updated by the user's input; line 300
- `UPDATE caffeinated SET coffeeInv ='" . $caf . "'")`
  - where $caf is the updated inventory input by the user; line 348
- `UPDATE decaf SET coffeeInv ='" . $decaf . "'"`
  - where $decaf is the updated inventory input by the user; line 356
- `DELETE FROM " . $table . " WHERE " . $name . "='" . $deleteName . "'"`
  - where $table is the selected table, $deleteName is the item the user wants to delete, and $name is the name of the item in the table; line 382

```
insert into " . $table . " values (:bind1, :bind2)
```
- where $table is the table selected by the user, and bind1 and bind2 are variables to represent the new item to be inserted and the inventory of it; line 335

SQL Queries in home-page.php:
```
- SELECT COLUMN_NAME
    FROM user_tab_columns
    WHERE table_name='$currentTable
```
- $current table is the table selected by the user; line 324
```
SELECT $attrs FROM $currentTable
```
- where$attrs is the attribute specified by the user; line 339

SQL Queries in past-purchases.php:
```
SELECT d.supName AS SUPNAME, COUNT(d.supName) AS COUNT_SUPNAME,
AVG(p.price) AS AVG_PRICE
FROM Deliver d, Delivery dy, Purchase p, ShoppingList sl
WHERE d.trackingNum=dy.trackingNum
AND dy.trackingNum=p.trackingNum
AND p.listDate=sl.listDate
GROUP BY d.supName");
```
- line 325
```
SELECT d.trackingNum, dy.expectedDate, d.supName, p.listDate, p.price
FROM Deliver d, Delivery dy, Purchase p, ShoppingList sl
WHERE d.trackingNum=dy.trackingNum
AND dy.trackingNum=p.trackingNum
AND p.listDate=sl.listDate");
```
- line 353
```
SELECT d.trackingNum, dy.expectedDate, d.supName, p.listDate, p.price
        FROM Deliver d, Delivery dy, Purchase p, ShoppingList sl
        WHERE d.trackingNum=dy.trackingNum
        AND dy.trackingNum=p.trackingNum
        AND p.listDate=sl.listDate
```
- line 348
```
SELECT COUNT(*) FROM " . $table . " WHERE price < (SELECT AVG(price)
FROM " . $table . "
```
- where $table is selected by the user; line 370

SQL Queries in order.php:
```
insert into sales
values (to_date(:bind1, 'YYYY-MM-DD'), :bind2, :bind3)
```
- where bind 1, 2, 3 are values of date, employee pay and cafe funds input by the user; LINE 392

```
SELECT * FROM Sales ORDER BY salesDate DESC
```
- line 400

```
SELECT * FROM Sales
```
- line 409, 422, 434

```
SELECT * FROM " . $table . ""
```
- where $table is selected by the user; line 412

```
SELECT DISTINCT c.coffeeInv as caf, d.coffeeInv as decaf FROM
caffeinated c, decaf d"
```
- line 425

```
SELECT toppingName AS ITEMNAME, toppingQuant as ITEMAMOUNT, price as
PRICE
    FROM listToppings lt
    WHERE  lt.listDate=to_date('$listDate','YYYY-MM-DD')
    UNION
    SELECT sweetName AS ITEMNAME, sweetenerQuant as ITEMAMOUNT, price as
PRICE
    FROM listSweetener ls
    WHERE  ls.listDate=to_date('$listDate','YYYY-MM-DD')
    UNION
    SELECT creamName AS ITEMNAME, creamQuant as ITEMAMOUNT, price as
PRICE
    FROM listCream lc
    WHERE  lc.listDate=to_date('$listDate','YYYY-MM-DD')
    UNION
    SELECT coffeeName AS ITEMNAME, coffeeQuant as ITEMAMOUNT, price as
PRICE
    FROM listCoffee1 lcf1, listCoffee2 lcf2
    WHERE  lcf1.listDate=to_date('$listDate','YYYY-MM-DD') AND
lcf1.listDate=lcf2.listDate"
```
- where $listDate is selected by the user, line 438

SQL Queries in listRecipes:

```
"SELECT coffeeInv FROM " . $table .""
```
- where $table is selected from the user; line 419

```
insert into coffee values (:bind11, :bind12)"
```
- where bind1 and 2 are the coffee name and coffee size input by the user, line 458

```
insert into " . $table . " values (:bind1, :bind2, :bind3, :bind4,
:bind5)
```
- where $table is selected by the user and bind 1-5 being attributes input by the
  user; line 463

```
insert into " . $table . " values (:bind1, :bind2, :bind3, :bind4)
```
- where $table is selected by the user and bind 1-4 being attributes input by the
  user; line 465

```
insert into icedCoffee values (:bind1, :bind2, :bind3, :bind4)
```

- bind 1-4 being attributes input by the user; line 503

```
"SELECT Count(*) FROM coffee WHERE coffeeName='" .
$_POST['inCoffeeName']. "'AND coffeeSize = '" . $_POST['inCoffeeSize'] .
"'"
```

- line 530

```
SELECT Count(*) FROM " . $table . " WHERE " . $check . "='" .
$_POST['inAdd']. "'"
```

- line 538

```
SELECT Count(*) FROM " . $table . " WHERE coffeeName='" .
$_POST['inCoffeeName']. "'AND coffeeSize = '" . $_POST['inCoffeeSize'] .
"'AND " . $check . "='" . $_POST['inAdd']. "'"
```

- line 546

```
insert into " . $table . " values (:bind1, :bind2, :bind3, :bind4)
```

- where $table is selected by the user, bind 1-4 being attributes input by the user;
  line 565

```
SELECT * FROM " . $table ."
```

- where $table is selected by the user, line 576

```
SELECT DISTINCT * FROM icedcoffee i, caffeinated c WHERE i.coffeeName =
c.coffeeName AND i.coffeeSize = c.coffeeSize
```

- line 591

```
SELECT DISTINCT * FROM icedcoffee i, decaf d WHERE i.coffeeName =
d.coffeeName AND i.coffeeSize = d.coffeeSize"
```

- line 595

```
SELECT * FROM coffee c WHERE NOT EXISTS (SELECT " . $addName . " FROM "
. $add . " WHERE NOT EXISTS (SELECT " . $addOnName . " FROM " . $addOn .
" WHERE " . $addOnName . " = " . $addName . " AND a.coffeeName =
c.coffeeName AND a.coffeeSize = c.coffeeSize))
```

- where $addname and $addonName are input by the user; line 604

```
SELECT * FROM " . $table . " a, " . $coffee . " c WHERE c.coffeeName =
'" . $name . "' AND a.coffeeName = c.coffeeName AND a.coffeeSize =
c.coffeeSize
```

- where $table, $name are input by the user; line 639

```
SELECT coffeeName, coffeeSize, COUNT(" .$name. ") as num FROM " . $table
. " GROUP BY coffeeName, coffeeSize HAVING COUNT(*)>1"
```

- line 653

```
DELETE FROM " . $table . " WHERE coffeeName='" . $delCoffee . "' AND
coffeeSize='" . $delSize . "'"
```

- where $table is chosen by the user, and $delCoffee and $delSize are input by the
  user; line 678

```
SELECT Count(*) FROM coffee WHERE coffeeName='" . $name. "' AND
coffeeSize = '" . $size . "'"
```

- line 719

```
"DELETE FROM " . $table . " WHERE coffeeName='" . $name . "' AND
coffeeSize='" . $size . "' AND " . $addName . "='" . $add . "'"
```
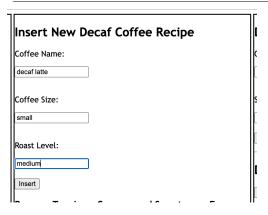
- line 727

Query Functionalities (in order of left to right, top to bottom: Before, During, After)

Insert Operation:

Decaf Coffee Recipes

Name	Size	Inventory (kg)	Roast Level
decaf latte	extra large	95	light
decaf macchiato	medium	95	light
decaf cappuccino	small	95	medium
decaf drip coffee	large	95	dark
decaf flat white	short	95	dark

Insert New Decaf Coffee Recipe

Coffee Name:

decaf latte

Coffee Size:

small

Roast Level:

medium

Insert

Decaf Coffee Recipes

Name	Size	Inventory (kg)	Roast Level
decaf latte	extra large	95	light
decaf macchiato	medium	95	light
decaf cappuccino	small	95	medium
decaf drip coffee	large	95	dark
decaf flat white	short	95	dark
decaf latte	small	95	medium

Delete Operation:

Caffeinated Coffee Recipes

Name	Size	Inventory (kg)	Roast Level	Number of Espresso Shots
latte	extra large	145	light	3
macchiato	medium	145	light	2
macchiato	large	145	light	3
cappuccino	small	145	medium	1
drip coffee	large	145	dark	3
flat white	short	145	dark	0

Delete Coffee Recipe

Coffee Name:

macchiato

Size:

medium

Delete

Display Caffeinated Coffee Recipes

Caffeinated Coffee Recipes

Name	Size	Inventory (kg)	Roast Level	Number of Espresso Shots
latte	extra large	145	light	3
macchiato	large	145	light	3
cappuccino	small	145	medium	1
drip coffee	large	145	dark	3
flat white	short	145	dark	0

Update Operation:

Cream Inventory

Name	Inventory (kg)
half and half	100
coconut	50
oat	89
almond	165
soy	83

Update Cream Inventory

Cream name:

half and half

Updated inventory (kg):

125

Update

Cream Inventory

Name	Inventory (kg)
half and half	125
coconut	50
oat	89
almond	165
soy	83

Selection Operation: (during, after)

Categories

[Toppings]

[Cream]

[Sweetener]

[Coffee Beans]

Name	Inventory (kg)
whipped cream	50
caramel drizzle	30
cinnamon	20
icing sugar	100
cocoa powder	120

Projection Operation: (during, after)

View Attribute Names

Select a table name to view its attributes:

[Coffee] [Toppings] [Cream]
[Sweetener] [Decaf] [Caffeinated]
[IcedCoffee] [Delivery] [Supplier]
[ShoppingList] [Purchase] [Sales]
[Fund] [ListToppings] [ListCream]
[ListSweetener] [ListCoffee1]
[ListCoffee2] [AddToppings]
[AddCream] [AddSweetener]
[AddCoffee] [Deliver]

Welcome! Input the table name and attributes you'd like to view:

Note: Not all attribute boxes need to be filled, but put the attribute name in the corresponding number text box (i.e. 'CREAMINV' is the 2nd attribute of 'Cream', so write it in the 'Attribute 2' textbox)

Input attribute names in ALL CAPS

Table Name:

[CAFFEINATED]

Attribute 1:

[ ]

Attribute 2:

[COFFEESIZE]

Attribute 3:

[ ]

Attribute 4:

[ ]

Attribute 5:

[NUMSHOTS]

[View Table]

Attribute Num.	Attribute Name
1	COFFEENAME
2	COFFEESIZE
3	COFFEEINV
4	ROASTLEVEL
5	NUMSHOTS

COFFEESIZE	NUMSHOTS
extra large	3
large	3
small	1
large	3
short	0

Join Operation: (during, after)

Recipes With Additions

Coffee Name:

macchiato

◉ Caffeinated
◯ Decaffeinated

[Display Addtional Toppings] [Display Addtional Creams]
[Display Addtional Sweeteners]

List Recipes That Use All Additions

[Display Recipes With All Toppings] [Display Recipes With All Creams]
[Display Recipes With All Sweeteners]

List The Number of Additions for Recipes With Multiple Additions

[Display Recipes Number of Toppings] [Display Recipes Number of Creams]
[Display Recipes Number of Sweeteners]

Toppings Used:

Coffee Name	Size	Roast Level	Espresso Shots	Toppings	Amount
macchiato	medium	light	2	caramel drizzle	3 tsp
macchiato	medium	light	2	cocoa powder	5 tsp
macchiato	medium	light	2	cinnamon	5 tsp
macchiato	medium	light	2	icing sugar	5 tsp
macchiato	medium	light	2	whipped cream	5 tsp
macchiato	large	light	3	whipped cream	7 tsp

Aggregation with Group By:

Tracking Num.	Expected By	Supplier	Order Date	Total Cost
1234	01-SEP-24	COSTCO	01-AUG-24	150
2345	10-JUL-24	COSTCO	18-JUN-24	452
3456	01-JUN-24	COSTCO	22-MAY-24	220
1235	10-SEP-24	Blenz Beans	11-AUG-24	300
1236	20-SEP-24	Kona Beans	15-AUG-24	275
1237	30-SEP-24	Superstore	20-AUG-24	399
1238	15-OCT-24	The Bean Shop	10-AUG-24	200
4567	29-JUL-24	The Bean Shop	19-JUL-24	60

Options

Average Costs

Supplier	Num. of Orders	Average Order Cost
Superstore	1	399
The Bean Shop	2	130
Kona Beans	1	275
Blenz Beans	1	300
COSTCO	3	274

Aggregation with Having: (during, after)

List The Number of Additions for Recipes With Multiple Additions

Display Recipes Number of Toppings
Display Recipes Number of Creams
Display Recipes Number of Sweeteners

Coffee Recipes With Multiple Sweeteners and How Many

Name	Size	Number of Sweeteners
decaf cappuccino	small	5
drip coffee	large	2

Nested Aggregation with Group By: (during, after)

Find the number of items that were purchased at a below average price:

○ Toppings
○ Creams
○ Sweeteners
● Coffee

Submit

The number of sweet purchases below it's average price: 4

Division Operation: (during, after)

List Recipes That Use All Additions

Display Recipes With All Toppings   Display Recipes With All Creams
Display Recipes With All Sweeteners

Coffee Recipes that add all Sweeteners

Name	Size
decaf cappuccino	small