

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(trackingNum, expectedDate)

Supplier(supName, address)

Deliver(supName, trackingNum)

Purchase(trackingNum, listDate, price)

ShoppingList(listDate, funds)

Fund(listDate, salesDate)

Sales(salesDate, employeePay, cafeFunds)

Coffee(coffeeName, coffeeSize)

ListToppings(listDate, toppingName, toppingQuant, price)

AddToppings(toppingName, coffeeName, coffeeSize, toppingAmount)

Toppings(toppingName, toppingInv)

ListCream(listDate, creamName, creamQuant, price)

AddCream(creamName, coffeeName, coffeeSize, cupAmount)

Cream(creamName, creamInv)

ListSweetener(listDate, sweetenerName, sweetenerQuant, price)

AddSweetener(sweetName, coffeeName, coffeeSize, sweetenerAmount)

Sweetener(sweetName, sweetnerInv)

ListCoffee1(listDate, coffeeName, coffeeSize)

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	LISTDATE	FUNDS
1234	01-AUG-24	150	01-AUG-24	500
2345	18-JUN-24	452	18-JUN-24	900
3456	22-MAY-24	220	22-MAY-24	300
1235	11-AUG-24	300	11-AUG-24	650
1236	15-AUG-24	275	15-AUG-24	420
1237	20-AUG-24	399	20-AUG-24	399
1238	10-AUG-24	200	10-AUG-24	800
4567	19-JUL-24	60	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 315
- `"SELECT * FROM " . $table . ""`
- where \$table is the user's selected table; line 394
- `SELECT DISTINCT c.coffeeInv as caf, d.coffeeInv as decaf FROM caffeinated c, decaf d"`
- line 403
- `"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 299
- `UPDATE caffeinated SET coffeeInv =" . $caf . ""`
- where \$caf is the updated inventory input by the user; line 347
- `UPDATE decaf SET coffeeInv =" . $decaf . ""`
- where \$decaf is the updated inventory input by the user; line 355
- `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 381

```
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 334

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 320

```
- 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 334

```
- 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 386


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

- line 394

```
- SELECT * FROM Sales
```

- line 403, 416, 428

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

- where \$table is selected by the user; line 406

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

- line 419

```
- 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 432

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 502

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

- line 527

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

- line 535

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

- line 543

```
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 562

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

- where \$table is selected by the user, line 571

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

- line 586

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

- line 590

```
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 599

```
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 634

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

- line 648

```
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 673

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

- line 714

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

- line 722

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

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 COFFEESIZE
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 Additional Toppings

Display Additional Creams

Display Additional 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