

CPSC 304 Project Cover Page

Milestone #: 4

Date: November 25, 2022

Group Number: 46

Name	Student Number	CS Alias (Userid)	Preferred E-mail Address
Allison Luna	17158247	e0u4g	allisonmluna@gmail.com
Mariam Ayubi	75748251	s7w2b	mariamayubi7@gmail.com
Akim Ruslanov	52530805	y5t2b	akim.ruslanov@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

Description of Final Project

What is it?

A database for a gym called Silver's Gym for tracking info on members, memberships, classes and class enrollments, branches and facilities, as well as staff and their assignments within the gym.

What did it accomplish?

It allows people like managers of the gym to add and track info on gym members, remove fired staff from the database, update the memberships of members, check class enrollment numbers, and keep stock of rental equipment type quantities.

It can also be used by members to see what different classes are available at the gym in certain facilities, records of different weightlifting bests, and what branches have all facilities they could want.

In general, they can also view any table of our database, with the columns of their choosing, and also filter out rows based on conditions of their desire.

Users can easily interact with our web interface to view or modify the gym database in any of the above ways, to track activity of the members and staff, and learn more about what is available so members can optimize their use of available services.

Link to Github

https://github.students.cs.ubc.ca/CPSC304-2022W-T1/project_e0u4g_s7w2b_y5t2b

Link to GUI site:

<https://www.students.cs.ubc.ca/~amluna/insert.php>

How our final schema differed from the schema we turned in

No changes were made from the schema we turned in in Milestone 2.

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

(link to single file with all SQL:

https://github.students.cs.ubc.ca/CPSC304-2022W-T1/project_e0u4g_s7w2b_y5t2b/blob/master/resources/final.sql)

StaffRuns(AreaOfExpertise: CHAR(30), Name: CHAR(40), IDNumber: INTEGER, BranchCity: CHAR(40), BranchStreetAddress: CHAR(60))

AREAOFEXPERTISE	NAME	IDNUMBER	BRANCHCITY	BRANCHSTREETADDRESS
----	-----	-----	-----	-----
Yoga	Andy Smythe	193756	Burnaby	1673 Macdonald St.
Kickboxing	Sam Proud	739038	Vancouver	13 Main St.
Reception	Sasha Williams	178033	Coquitlam	4474 Maple Ave.
Kickboxing	Michelle Quaker	777977	Vancouver	13 Main St.
Olympic Weightlifting	Charlie Poth	872536	Vancouver	994 Marine Dr.
Bodybuilding	Arnold Schwartz	125367	Toronto	924 Joust St.
Pilates	Jordan Polo	45732	Toronto	924 Joust St.
Bodybuilding	Kiana Keith	19253	Vancouver	994 Marine Dr.
Water Aerobics	Vanna Blanche	555678	Coquitlam	4474 Maple Ave.
Yoga	Frank Rivers	6370	Vancouver	13 Main St.

PersonalTrainer(IDNumber: INTEGER)

IDNUMBER

6370
45732
125367
739038
872536

ClassInstructor(IDNumber: INTEGER)

IDNUMBER

19253
193756
555678
739038
777977

LocatedIn(FacilityID: CHAR(10), BranchCity: CHAR(40), BranchStreetAddress: CHAR(60))

FACILITYID	BRANCHCITY	BRANCHSTREETADDRESS
-----	-----	-----
BOXRNG	Burnaby	1673 Macdonald St.
BOXRNG	Coquitlam	4474 Maple Ave.
BOXRNG	Toronto	924 Joust St.
BOXRNG	Vancouver	13 Main St.
GYM	Burnaby	1673 Macdonald St.
GYM	Coquitlam	4474 Maple Ave.
GYM	Vancouver	13 Main St.
GYM	Vancouver	994 Marine Dr.
POOL	Burnaby	1673 Macdonald St.
POOL	Coquitlam	4474 Maple Ave.
POOL	Vancouver	13 Main St.
RUNTRK	Burnaby	1673 Macdonald St.
RUNTRK	Coquitlam	4474 Maple Ave.
RUNTRK	Vancouver	13 Main St.
YOGSTD	Burnaby	1673 Macdonald St.
YOGSTD	Coquitlam	4474 Maple Ave.
YOGSTD	Vancouver	13 Main St.

Branch(City: CHAR(40), StreetAddress: CHAR(60))

CITY	STREETADDRESS
Burnaby	1673 Macdonald St.
Coquitlam	4474 Maple Ave.
Toronto	924 Joust St.
Vancouver	13 Main St.
Vancouver	994 Marine Dr.

Member(Name: CHAR(40), PhoneNumber: CHAR(10), Emergency Contact: CHAR(10),
MembershipTier: CHAR(15), **PersonalTrainerId: INTEGER**, EndDate: DATE)

NAME	PHONENUMBE	EMERGENCYC	MEMBERSHIPTIER	PERSONALTRAINERID	ENDDATE
Terminator	1234555	9000955	Gold	872536	12-DEC-22
Bucky	12355	000000	Bronze	739038	12-DEC-22
Captain Canada	2352	5551555	Silver	125367	12-DEC-22
Iron Dog	54252424	655555	Platinum	45732	12-DEC-22
Guy Fiery	5152424	6969696	Basic	6370	12-DEC-22

Membership(Tier: CHAR(15), Price: CHAR(10))

TIER	PRICE
Gold	129.99
Bronze	59.99
Silver	79.99
Platinum	200
Basic	39.99

PersonalBest(**MemberName: CHAR(40)**, **MemberPhone: CHAR(10)**, Date: DATE, LiftType: CHAR(15), Weight: INTEGER)

MEMBERNAME	MEMBERPHON	RECORDDAT	LIFTTYPE	WEIGHT
Terminator	1234555	12-DEC-22	Bench Press	405
Bucky	12355	12-FEB-22	Squat	405
Captain Canada	2352	12-DEC-21	Dead Lift	455
Iron Dog	54252424	12-DEC-20	Bench Press	420
Guy Fiery	5152424	10-DEC-22	Front Squat	205
Guy Fiery	5152424	15-DEC-22	Squat	385
Iron Dog	54252424	15-DEC-21	Dead Lift	485
Iron Dog	54252424	15-DEC-21	Squat	375
Iron Dog	54252424	15-DEC-21	Front Squat	275
Iron Dog	54252424	15-DEC-21	Power Clean	225
Terminator	1234555	20-DEC-22	Squat	400

Accesses(**MembershipTier: CHAR(15)**, **FacilityID: CHAR(10)**)

```
SQL> select * from accesses;
```

MEMBERSHIPTIER	FACILITYID
Basic	GYM
Bronze	GYM
Gold	YOGSTD
Platinum	BOXRNG
Silver	POOL

Class(ID: INTEGER, Title: CHAR(40), **FacilityID**: CHAR(10))

ID	TITLE	FACILITYID
1	Yoga for Seniors	YOGSTD
2	Kickboxing for Beginners	BOXRNG
3	Mua Thai	BOXRNG
4	Body Building II	GYM
5	Water Aerobics I	POOL

Enrolled(**MemberName**: CHAR(40), **MemberPhone**: CHAR(10), **CourseID**: INTEGER)

MEMBERNAME	MEMBERPHON	CLASSID
Bucky	12355	1
Bucky	12355	2
Captain Canada	2352	4
Captain Canada	2352	5
Iron Dog	54252424	5
Terminator	1234555	1
Terminator	1234555	4
Terminator	1234555	5

BorrowsRentalEquipment(Barcode: INTEGER, Type: CHAR(15), **MemberName**: CHAR(40), **MemberPhone**: CHAR(10), RentalLimit: INTEGER, DateBorrowed: DATE, DueDate: DATE)

BARCODE	TYPE	MEMBERNAME	MEMBERPHON	RENTALLIMIT	DATEBORRO
11111	30lbs dumbbells	Iron Dog	54252424	5	12-SEP-22
11112	jump rope	Terminator	1234555	14	15-OCT-22
11113	boxing gloves	Bucky	12355	5	15-OCT-22
11114	yoga mat	Captain Canada	2352	7	03-SEP-22
11115	boxing gloves	Guy Fiery	5152424	5	13-SEP-22
11116	boxing gloves	Iron Dog	54252424	8	10-SEP-22
11117	yoga mat	Captain Canada	2352	15	03-SEP-22
11118	boxing gloves	Captain Canada	2352	10	10-OCT-22
11119	30lbs dumbbells	Guy Fiery	5152424	5	24-OCT-22
11110	30lbs dumbbells	Guy Fiery	5152424	5	12-SEP-22
11124	yoga mat	Guy Fiery	5152424	7	03-SEP-22
11122	jump rope	Guy Fiery	5152424	14	15-OCT-22

Facility(IDNumber: INTEGER, Capacity: INTEGER, Size: CHAR(10))

ID	AREASIZE

POOL	mid-large
YOGSTD	small
BOXRNG	medium
GYM	large
RUNTRK	small-mid

Teach(ClassID: INTEGER, ClassInstructorID: INTEGER, ClassTime: CHAR(11))

CLASSID	CLASSINSTRUCTORID	CLASSTIME

1	193756	2:30-3:30
2	739038	11:00-12:30
2	777977	11:00-12:30
3	777977	9:00-10:00
4	19253	9:00-10:00
5	555678	14:00-16:00

SQL Queries and Example Usage in GUI

INSERT:

SQL Statement

```
54
55     global $db_conn;
56
57     //Getting the values from user and insert data into the table
58     $tuple = array(
59         ":bind1" => $_POST['name'],
60         ":bind2" => $_POST['phonenummer'],
61         ":bind3" => $_POST['EMERGENCYCONTACT'],
62         ":bind4" => $_POST['MEMBERSHIPTIER'],
63         ":bind5" => (int) $_POST['PERSONALTRAINERID'],
64         ":bind6" => date( format: "d-M-y", strtotime($_POST['ENDDATE'])),
65     );
66
67     $alltuples = array(
68         $tuple
69     );
70
71     executeBoundSQL("insert into member values (:bind1, :bind2, :bind3, :bind4, :bind5, :bind6)", $alltuples);
```

File location: `src/insert.php`

Will add a new member to the database

Interface

Add new member

Name:

Phone Number:

Emergency Contact:

Membership Tier:

Personal Trainer ID:

End Date:

Data pre insert

Custom Project

Choose the table to view data from

STAFFRUNS

NAME	PHONENUMBER	EMERGENCYCONTACT	MEMBERSHIPTIER	PERSONALTRAINERID	ENDDATE
Steve P	7786783445	7783651890	Bronze	6370	31-JAN-23
Terminator	1234555	9000955	Gold	872536	12-DEC-22
Bucky	12355	000000	Bronze	739038	12-DEC-22
Captain Canada	2352	5551555	Silver	125367	12-DEC-22
Iron Dog	54252424	655555	Platinum	45732	12-DEC-22
Guy Fiery	5152424	6969696	Basic	6370	12-DEC-22

Post Insert

Custom Project

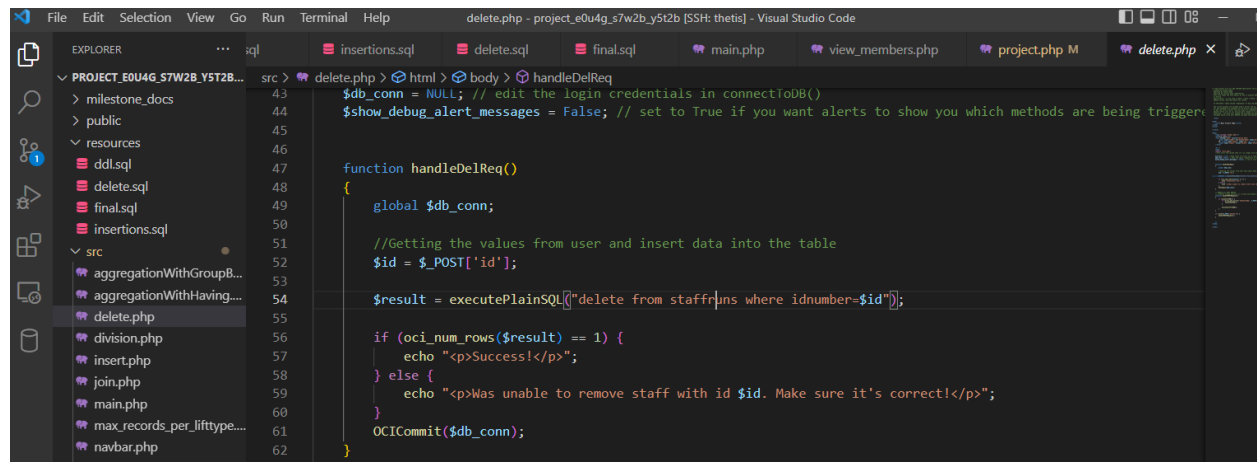
Choose the table to view data from

STAFFRUNS

NAME	PHONENUMBER	EMERGENCYCONTACT	MEMBERSHIPTIER	PERSONALTRAINERID	ENDDATE
Steve P	7786783445	7783651890	Bronze	6370	31-JAN-23
Akim	236999999	123456	Gold	125367	31-DEC-22
Terminator	1234555	9000955	Gold	872536	12-DEC-22
Bucky	12355	000000	Bronze	739038	12-DEC-22
Captain Canada	2352	5551555	Silver	125367	12-DEC-22
Iron Dog	54252424	655555	Platinum	45732	12-DEC-22
Guy Fiery	5152424	6969696	Basic	6370	12-DEC-22

Added new member Akim

DELETE: SQL Statement



```
delete.php - project_e0u4g_s7w2b_y5t2b [SSH: thetis] - Visual Studio Code

EXPLORER
PROJECT_E0U4G_S7W2B_Y5T2B...
  > milestone_docs
  > public
  > resources
    ddl.sql
    delete.sql
    final.sql
    insertions.sql
  > src
    aggregationWithGroupB...
    aggregationWithHaving...
    delete.php
    division.php
    insert.php
    join.php
    main.php
    max_records_per_lifttype...
    navbar.php

delete.php
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function handleDelReq()
{
    global $db_conn;

    //Getting the values from user and insert data into the table
    $id = $_POST['id'];

    $result = executePlainSQL(["delete from staffruns where idnumber=$id"]);

    if (oci_num_rows($result) == 1) {
        echo "<p>Success!</p>";
    } else {
        echo "<p>Was unable to remove staff with id $id. Make sure it's correct!</p>";
    }
    OCICommit($db_conn);
}
```

File location: `src/delete.php`

Will delete row from Staffruns table based on their IDNUMBER

Interface

≡ Menu

Fire staff

ID:

Data pre delete

Custom Project

Choose the table to view data from

AREAOFEXPERTISE	NAME	IDNUMBER	BRANCHCITY	BRANCHSTREETADDRESS
Yoga	Andy Smythe	193756	Burnaby	1673 Macdonald St.
Kickboxing	Sam Proud	739038	Vancouver	13 Main St.
Reception	Sasha Williams	178033	Coquitlam	4474 Maple Ave.
Kickboxing	Michelle Quaker	777977	Vancouver	13 Main St.
Olympic Weightlifting	Charlie Poth	872536	Vancouver	994 Marine Dr.
Bodybuilding	Arnold Schwartz	125367	Toronto	924 Joust St.
Pilates	Jordan Polo	45732	Toronto	924 Joust St.
Bodybuilding	Kiana Keith	19253	Vancouver	994 Marine Dr.
Water Aerobics	Vanna Blanche	555678	Coquitlam	4474 Maple Ave.
Yoga	Frank Rivers	6370	Vancouver	13 Main St.

Data post delete

Custom Project

Choose the table to view data from

STAFFRUNS

▼

Submit

AREAOFEXPERTISE	NAME	IDNUMBER	BRANCHCITY	BRANCHSTREETADDRESS
Yoga	Andy Smythe	193756	Burnaby	1673 Macdonald St.
Reception	Sasha Williams	178033	Coquitlam	4474 Maple Ave.
Kickboxing	Michelle Quaker	777977	Vancouver	13 Main St.
Olympic Weightlifting	Charlie Poth	872536	Vancouver	994 Marine Dr.
Bodybuilding	Arnold Schwartz	125367	Toronto	924 Joust St.
Pilates	Jordan Polo	45732	Toronto	924 Joust St.
Bodybuilding	Kiana Keith	19253	Vancouver	994 Marine Dr.
Water Aerobics	Vanna Blanche	555678	Coquitlam	4474 Maple Ave.
Yoga	Frank Rivers	6370	Vancouver	13 Main St.

Deleted staff with ID 739038

UPDATE:

```
src > update.php
  > show_debug_alert_messages = false; // set to true if you want alerts to show you which methods are being triggered (see how it is used in debugAlert(message))
49
50 function handleUpdateRequest()
51 {
52     global $db_conn;
53
54     $name = $_POST['name'];
55     $phoneNumber = $_POST['phoneNumber'];
56     $membershipTier = $_POST['membershipTier'];
57     $endDate = date("d-M-y", strtotime($_POST['endDate']));
58
59     if (empty($membershipTier)) {
60         executePlainSQL("UPDATE member SET enddate='" . $endDate . "' WHERE name='" . $name . "' and phonenumber='" . $phoneNumber . "'");
61     } else {
62         executePlainSQL("UPDATE member SET enddate='" . $endDate . "', membershipTier='" . $membershipTier . "' WHERE name='" . $name . "' and phonenumber='" . $phoneNumber . "'");
63     }
64
65     // you need the wrap the old name and new name values with single quotations
66
67     OCICommit($db_conn);
68 }
69
70 // HANDLE ALL POST ROUTES
71 // A better coding practice is to have one method that reroutes your requests accordingly. It will make it easier to add/remove functionality.
```

File location: `src/update.php`

Will update membership tier and end date of membership for a member given their name and phone number

Interface


Update Membership End Date and/or Tier

The values are case sensitive and if you enter in the wrong case, the update statement will not do anything.

Name:

Phone Number:

Membership Tier:

End Date: 

Pre update

Custom Project

Choose the table to view data from

NAME	PHONENUMBER	EMERGENCYCONTACT	MEMBERSHIPTIER	PERSONALTRAINERID	ENDDATE
Steve P	7786783445	7783651890	Bronze	6370	31-JAN-23
Akim	236999999	123456	Gold	125367	31-DEC-22
Terminator	1234555	9000955	Gold	872536	12-DEC-22
Bucky	12355	000000	Bronze		12-DEC-22
Captain Canada	2352	5551555	Silver	125367	12-DEC-22
Iron Dog	54252424	655555	Platinum	45732	12-DEC-22
Guy Fiery	5152424	6969696	Basic	6370	12-DEC-22

Post update

Custom Project

Choose the table to view data from

STAFFRUNS

▼

Submit

NAME	PHONENUMBER	EMERGENCYCONTACT	MEMBERSHIPTIER	PERSONALTRAINERID	ENDDATE
Steve P	7786783445	7783651890	Bronze	6370	31-JAN-23
Akim	236999999	123456	Bronze	125367	31-DEC-22
Terminator	1234555	9000955	Gold	872536	12-DEC-22
Bucky	12355	000000	Bronze		12-DEC-22
Captain Canada	2352	5551555	Silver	125367	12-DEC-22
Iron Dog	54252424	655555	Platinum	45732	12-DEC-22
Guy Fiery	5152424	6969696	Basic	6370	12-DEC-22

Update membership tier and end date for member Akim

SELECTION:

```
function handleSelect()
{
    // print_r($_GET);

    $count = $_GET['count'];
    $table = $_GET['table'];
    $where_str = "WHERE ";
    $fields = $_GET['fields'];
    $select_str = "SELECT ";
    for ($i = 0; $i < count($fields); $i++)
    {
        if ($i != 0) {
            $select_str .= ', ';
        }
        $select_str .= $fields[$i];
    }
    $from_str = "FROM " . $table;

    for ($i = 0; $i < $count; $i++) {
        echo '<br>';
        // echo $_GET['var' . (string)$i];
        if ($i != 0) {
            $where_str .= 'AND ';
        }
        $where_str .= $_GET['col' . (string)$i] . $_GET['condition' . (string)$i] . "" . $_GET['var' . (string)$i] . "" . ' ';
    }

    $result = executePlainSQL($select_str . ' ' . $from_str . ' ' . $where_str);
    echo "<table>";
    echo "<tr>";
    for ($i = 0; $i < count($fields); $i++)
    {
        echo "<th>" . $fields[$i] . "</th>";
    }
}
```

File location: `src/select.php`

Provides a custom way to do selection. Build query step by step based on the selected table, fields and conditions

Interface

Custom select

Choose the table to view data from

STAFFRUNS

▼

Submit

Select columns from that table and condition

Choose fields:

EMERGENCYCONTACT

MEMBERSHIPTIER

PERSONALTRAINERID

ENDDATE

Choose conditions (all will be AND)

Field 1 + Condition 1

NAME

▼

=

▼

Akim

Field 2 + Condition 2

MEMBERSHIPTIER

▼

=

▼

Bronze

Submit

Add Field for SQL

Result

Custom select

Choose the table to view data from

STAFFRUNS

▼

Submit

NAME	PHONENUMBER	EMERGENCYCONTACT	MEMBERSHIPTIER	PERSONALTRAINERID	ENDDATE
Akim	236999999	123456	Bronze	125367	31-DEC-22

Got member whose name is Akim and has a Bronze membership tier

PROJECTION:

```
src > project.php > html > body
127
128 function handleProject()
129 {
130     // print_r($_GET);
131
132     $count = $_GET['count'];
133     $table = $_GET['table'];
134     $where_str = "WHERE ";
135     $fields = $_GET['fields'];
136     $select_str = "SELECT ";
137     for ($i = 0; $i < count($fields); $i++)
138     {
139         if ($i != 0) {
140             $select_str .= ', ';
141         }
142         $select_str .= $fields[$i];
143     }
144     $from_str = "FROM " . $table;
145
146     $result = executePlainSQL($select_str . ' ' . $from_str);
147     echo "<table>";
148     echo "<tr>";
149     for ($i = 0; $i < count($fields); $i++)
150     {
151         echo "<th>" . $fields[$i] . "</th>";
152     }
153
154     while (($row = oci_fetch_row($result)) != false) {
155         echo "<tr>";
156         foreach ($row as $val) {
157             echo "<td> $val </td>";
158         }
159         echo "</tr>";
160     }
161
162
163 }
```

File location: `src/project.php`

Will project based on table and fields chosen by the user

Interface:

Custom Project

Choose the table to view data from

STAFFRUNS	▼	Submit
-----------	---	--------

Select columns from that table and condition

Choose fields:

NAME	▲ ▼	Submit
PHONENUMBER		
EMERGENCYCONTACT		
MEMBERSHIPTIER		

Result

Custom Project

Choose the table to view data from

STAFFRUNS

NAME	PHONENUMBER	EMERGENCYCONTACT	MEMBERSHIPTIER	PERSONALTRAINERID	ENDDATE
Steve P	7786783445	7783651890	Bronze	6370	31-JAN-23
Akim	236999999	123456	Bronze	125367	31-DEC-22
Terminator	1234555	9000955	Gold	872536	12-DEC-22
Bucky	12355	000000	Bronze		12-DEC-22
Captain Canada	2352	5551555	Silver	125367	12-DEC-22
Iron Dog	54252424	655555	Platinum	45732	12-DEC-22
Guy Fiery	5152424	6969696	Basic	6370	12-DEC-22

Got all fields from member table (can get only portion of them as well, but for this example we used all of them)

JOIN:

SQL Statement

```
<label for="facility-names">Located in Facility:</label>
<select name="facility-names" id="facility-names">
  <option value=POOL>Pool</option>
  <option value='YOGSTD'>Yoga Studio</option>
  <option value='BOXRNG'>Boxing Ring</option>
  <option value='GYM'>Gym</option>
</select>
```

```
function handleDisplayClassesReq()
{
  $facility = $_GET["facility-names"];
  $result = executePlainSQL("SELECT s.Name, s.IDNumber, c.ID, c.Title, c.FacilityID FROM Class c, ClassInstructor i,
                              Teach t, StaffRuns s WHERE t.ClassID = c.ID AND
                              t.ClassInstructorID = i.IDNumber AND i.IDNumber = s.IDNumber AND c.FacilityID = '$facility'");
}
```

Interface Input

≡ Menu

View available classes

Press the button to see information on all classes in any facility

Located in Facility:

Results

≡ Menu

View available classes

Press the button to see information on all classes in any facility

Located in Facility:

Instructor Name	Instructor ID	Class ID	Class Title	Facility
Michelle Quaker	777977	2	Kickboxing for Beginners	BOXRNG
Michelle Quaker	777977	3	Mua Thai	BOXRNG

AGGREGATION WITH GROUP BY:

Query:

```
main.php  remove_staff.php R  division.php A  aggregationWithGroupBy.php A x  branches_with_all_facilities.php
src > aggregationWithGroupBy.php
71     }
72   }
73
74   function handleDisplayBranchesReq()
75   {
76
77       $result = executePlainSQL("SELECT ClassID, Count(*)
78   FROM Enrolled e
79   GROUP BY ClassID");
```

Input: N/A (submit button)

Result:

Display members enrolled by class ID

Press the button to see details

Submit

Class ID	Number of Members Enrolled
1	2
2	1
4	2
5	3

AGGREGATION WITH HAVING:

Query:

```
main.php  remove_staff.php R  division.php A  aggregationWithHaving.php A x  branches_with_all_facilities.php  c
src > aggregationWithHaving.php
74
75     function handleDisplayCountsReq()
76     {
77
78         $result = executePlainSQL("SELECT b1.type, count(distinct b1.barcode)
79         FROM BorrowsRentalEquipment b1, BorrowsRentalEquipment b2
80         WHERE b1.barcode != b2.barcode and b1.type = b2.type
81         GROUP BY b1.type
82         HAVING COUNT(distinct b1.barcode)>2");
83     }
```

Input: N/A (submit button)

Result:

Display count of equipment types

For each equipment type the gym contains multiple of, display count of rental equipment types greater than 2

Press the button below to display counts

Submit

Rental Equipment Type	Number of distinct barcodes
yoga mat	3
boxing gloves	4
30lbs dumbbells	3

NESTED AGGREGATION WITH GROUP BY:

Query:

main.php remove_staff.php R division.php A nestedAggregation.php A X branches_with_all_facilities.php count

```
src > nestedAggregation.php
73
74 function handleDisplayMaxWeightReq()
75 {
76
77     $result = executePlainSQL("SELECT pb.liftType, MAX(pb.weight), AVG(pb.weight)
78     FROM PersonalBest pb
79     GROUP BY pb.liftType
80     HAVING AVG(pb.weight) > (SELECT avg(pb2.weight)
81     FROM PersonalBest pb2)");
```

Input: N/A (submit button)

Result:

Display max weight by lift type

Find the max and avg weight for each lift type for which the average weight is higher than the average weight across all lift types

Submit

Lift Type	Max Weight Record	Avg Weight Record
Dead Lift	485	470
Squat	405	391.25
Bench Press	420	412.5

DIVISION:

Query:

```
src > division.php
73
74     function handleDisplayBranchesReq()
75     {
76
77         $result = executePlainSQL("SELECT * FROM branch b WHERE NOT EXISTS
78         (SELECT f.id FROM facility f MINUS
79         SELECT l.facilityid FROM locatedin l WHERE l.branchcity = b.city AND l.branchstreetaddress = b.streetaddress)");
```

Input: N/A (submit button)

Result:

Display branches offering all facilities

Press the button to see details

Submit

Branch City	Branch Address
Burnaby	1673 Macdonald St.
Coquitlam	4474 Maple Ave.
Vancouver	13 Main St.