

Faculty of Engineering and Computer Science Expectations of Originality

This form sets out the requirements for originality for work submitted by students in the Faculty of Engineering and Computer Science. Submissions such as assignments, lab reports, project reports, computer programs and take-home exams must conform to the requirements stated on this form and to the Academic Code of Conduct. The course outline may stipulate additional requirements for the course.

1. Your submissions must be your own original work. Group submissions must be the original work of the students in the group.
2. Direct quotations must not exceed 5% of the content of a report, must be enclosed in quotation marks, and must be attributed to the source by a numerical reference citation¹. Note that engineering reports rarely contain direct quotations.
3. Material paraphrased or taken from a source must be attributed to the source by a numerical reference citation.
4. Text that is inserted from a web site must be enclosed in quotation marks and attributed to the web site by numerical reference citation.
5. Drawings, diagrams, photos, maps or other visual material taken from a source must be attributed to that source by a numerical reference citation.
6. No part of any assignment, lab report or project report submitted for this course can be submitted for any other course.
7. In preparing your submissions, the work of other past or present students cannot be consulted, used, copied, paraphrased or relied upon in any manner whatsoever.
8. Your submissions must consist entirely of your own or your group's ideas, observations, calculations, information and conclusions, except for statements attributed to sources by numerical citation.
9. Your submissions cannot be edited or revised by any other student.
10. For lab reports, the data must be obtained from your own or your lab group's experimental work.
11. For software, the code must be composed by you or by the group submitting the work, except for code that is attributed to its sources by numerical reference.

You must write one of the following statements on each piece of work that you submit:

For individual work: **"I certify that this submission is my original work and meets the Faculty's Expectations of Originality"**, with your signature, I.D. #, and the date.

For group work: **"We certify that this submission is the original work of members of the group and meets the Faculty's Expectations of Originality"**, with the signatures and I.D. #s of all the team members and the date.

A signed copy of this form must be submitted to the instructor at the beginning of the semester in each course.

I certify that I have read the requirements set out on this form, and that I am aware of these requirements. I certify that all the work I will submit for this course will comply with these requirements and with additional requirements stated in the course outline.

Course Number: COMP 353

Instructor: Khaled Jababo

Name: Neil Fisher, Jei wen Wu, Terryl Foryoung, Maésa Mahmud

I.D. # 40240320, 40246641, 40127596, 40281586

Signature: Neil Fisher Jei wen Wu

Date: 7/18/2024



¹ Rules for reference citation can be found in "Form and Style" by Patrich MacDonagh and Jack Bordan, fourth edition, May, 2000, available at <http://www.encs.concordia.ca/scs/Forms/Form&Style.pdf>.

Report

Group Account: joc353_1

Create statements for the tables (create.sql)

```
SET FOREIGN_KEY_CHECKS = 0;

DROP TABLE IF EXISTS `Locations`;
CREATE TABLE Locations (
    LocationID INT PRIMARY KEY AUTO_INCREMENT,
    Name VARCHAR(100) NOT NULL,
    Address VARCHAR(255) NOT NULL,
    City VARCHAR(100) NOT NULL,
    Province VARCHAR(100) NOT NULL,
    PostalCode VARCHAR(20) NOT NULL,
    PhoneNumber VARCHAR(20),
    WebAddress VARCHAR(100),
    Type ENUM('Head', 'Branch') NOT NULL,
    Capacity INT,
    GeneralManagerName VARCHAR(100)
);

DROP TABLE IF EXISTS `Personnel`;
CREATE TABLE Personnel (
    PersonnelID INT PRIMARY KEY AUTO_INCREMENT,
    FirstName VARCHAR(100) NOT NULL,
    LastName VARCHAR(100) NOT NULL,
    DateOfBirth DATE NOT NULL,
    SocialSecurityNumber VARCHAR(50) UNIQUE NOT NULL,
    MedicareCardNumber VARCHAR(50) UNIQUE,
    TelephoneNumber VARCHAR(20),
    Address VARCHAR(255),
    City VARCHAR(100),
```

```

        Province VARCHAR(100),
        PostalCode VARCHAR(20),
        EmailAddress VARCHAR(100),
        Role ENUM('Administrator', 'Trainer', 'Other') NOT NULL,
        Mandate ENUM('Volunteer', 'Salaries') NOT NULL
    );

DROP TABLE IF EXISTS `PersonnelLocations`;
CREATE TABLE PersonnelLocations (
    PersonnelLocationID INT PRIMARY KEY AUTO_INCREMENT,
    PersonnelID INT NOT NULL,
    LocationID INT NOT NULL,
    StartDate DATE NOT NULL,
    EndDate DATE,
    FOREIGN KEY (PersonnelID) REFERENCES Personnel(PersonnelID)
    FOREIGN KEY (LocationID) REFERENCES Locations(LocationID) ON
);

DROP TABLE IF EXISTS `FamilyMembers`;
CREATE TABLE FamilyMembers (
    FamilyMemberID INT PRIMARY KEY AUTO_INCREMENT,
    Type ENUM('Father', 'Mother', 'GrandFather', 'GrandMother',
    FirstName VARCHAR(100) NOT NULL,
    LastName VARCHAR(100) NOT NULL,
    DateOfBirth DATE NOT NULL,
    SocialSecurityNumber VARCHAR(50) UNIQUE NOT NULL,
    MedicareCardNumber VARCHAR(50) UNIQUE,
    TelephoneNumber VARCHAR(20),
    Address VARCHAR(255),
    City VARCHAR(100),
    Province VARCHAR(100),
    PostalCode VARCHAR(20),
    EmailAddress VARCHAR(100),
    LocationID INT NOT NULL,
    FOREIGN KEY (LocationID) REFERENCES Locations(LocationID) ON
);

```

```

DROP TABLE IF EXISTS `FamilyMemberLocations`;
CREATE TABLE FamilyMemberLocations (
    FamilyMemberLocationID INT PRIMARY KEY AUTO_INCREMENT,
    FamilyMemberID INT NOT NULL,
    LocationID INT NOT NULL,
    StartDate DATE NOT NULL,
    EndDate DATE,
    FOREIGN KEY (FamilyMemberID) REFERENCES FamilyMembers(FamilyMemberID),
    FOREIGN KEY (LocationID) REFERENCES Locations(LocationID) ON DELETE CASCADE
);

```

```

DROP TABLE IF EXISTS `ClubMembers`;
CREATE TABLE ClubMembers (
    ClubMemberID INT PRIMARY KEY AUTO_INCREMENT,
    MembershipNumber INT UNIQUE NOT NULL,
    FirstName VARCHAR(100) NOT NULL,
    LastName VARCHAR(100) NOT NULL,
    DateOfBirth DATE NOT NULL,
    SocialSecurityNumber VARCHAR(50) UNIQUE NOT NULL,
    MedicareCardNumber VARCHAR(50) UNIQUE,
    TelephoneNumber VARCHAR(20),
    Address VARCHAR(255),
    City VARCHAR(100),
    Province VARCHAR(100),
    PostalCode VARCHAR(20),
    FamilyMemberID INT NOT NULL,
    LocationID INT NOT NULL,
    TeamType ENUM('Boys', 'Girls') NOT NULL,
    Status ENUM('Active', 'Inactive') NOT NULL,
    FOREIGN KEY (FamilyMemberID) REFERENCES FamilyMembers(FamilyMemberID),
    FOREIGN KEY (LocationID) REFERENCES Locations(LocationID) ON DELETE CASCADE
);

```

```

DROP TABLE IF EXISTS `Teams`;
CREATE TABLE Teams (

```

```

        TeamID INT PRIMARY KEY AUTO_INCREMENT,
        TeamName VARCHAR(100) NOT NULL,
        LocationID INT NOT NULL,
        TeamType ENUM('Boys', 'Girls') NOT NULL,
        FOREIGN KEY (LocationID) REFERENCES Locations(LocationID)
    );

DROP TABLE IF EXISTS `ClubMemberTeams`;
CREATE TABLE ClubMemberTeams (
    ClubMemberTeamID INT PRIMARY KEY AUTO_INCREMENT,
    ClubMemberID INT NOT NULL,
    TeamID INT NOT NULL,
    StartDate DATE NOT NULL,
    EndDate DATE,
    FOREIGN KEY (ClubMemberID) REFERENCES ClubMembers(ClubMemberID),
    FOREIGN KEY (TeamID) REFERENCES Teams(TeamID)
);

SET FOREIGN_KEY_CHECKS = 1;

```

Insert statements (insert.sql)

```

INSERT INTO Locations (Name, Address, City, Province, PostalCode)
VALUES
    ('Head Office', '123 Main St', 'Toronto', 'Ontario', 'M1K 1M1', 1),
    ('Branch A', '456 Maple Ave', 'Toronto', 'Ontario', 'M1K 2M2', 2),
    ('Branch B', '789 Oak St', 'Montreal', 'Quebec', 'H1K 3K3', '514', 3),
    ('Branch C', '321 Pine Rd', 'Vancouver', 'British Columbia', 'V6K 4K4', 4),
    ('Branch D', '654 Cedar Ln', 'Calgary', 'Alberta', 'T2K 5K5', '403', 5),
    ('Branch E', '987 Birch Blvd', 'Edmonton', 'Alberta', 'T5K 6K6', '780', 6),
    ('Branch F', '213 Elm St', 'Halifax', 'Nova Scotia', 'B3K 7K7', '902', 7),
    ('Branch G', '432 Willow Dr', 'Winnipeg', 'Manitoba', 'R3K 8K8', '204', 8),
    ('Branch H', '654 Spruce Ct', 'Victoria', 'British Columbia', 'V8K 9K9', 9),
    ('Branch I', '876 Fir St', 'Regina', 'Saskatchewan', 'S4K 0K0', 10);

INSERT INTO Personnel (FirstName, LastName, DateOfBirth, SocialSecurityNumber)
VALUES
    ('John', 'Doe', '1980-01-01', '123-456789'),
    ('Jane', 'Smith', '1985-03-15', '987-654321'),
    ('Michael', 'Johnson', '1990-07-22', '555-111222'),
    ('Emily', 'Brown', '1992-11-08', '333-999888'),
    ('David', 'Wilson', '1988-05-30', '777-444333'),
    ('Sophia', 'Garcia', '1995-09-10', '222-777666'),
    ('Daniel', 'Martinez', '1991-02-28', '666-000111'),
    ('Olivia', 'Lee', '1993-06-18', '888-555444'),
    ('Liam', 'Kim', '1989-12-05', '111-222333'),
    ('Ava', 'Nguyen', '1994-04-20', '444-777666');

```

```

('John', 'Doe', '1980-01-01', '123-45-6789', '1234567890', '416',
('Alice', 'Johnson', '1970-01-01', '111-11-1111', '1111111111',
('Bob', 'Williams', '1972-02-02', '222-22-2222', '2222222222',
('Jane', 'Smith', '1982-02-02', '234-56-7890', '2345678901', '4',
('James', 'Brown', '1984-03-03', '345-67-8901', '3456789012', '!',
('Emily', 'Davis', '1986-04-04', '456-78-9012', '4567890123', '!',
('Michael', 'Wilson', '1988-05-05', '567-89-0123', '5678901234',
('Sarah', 'Johnson', '1990-06-06', '678-90-1234', '6789012345',
('David', 'Lee', '1992-07-07', '789-01-2345', '7890123456', '90',
('Laura', 'King', '1994-08-08', '890-12-3456', '8901234567', '20',
('Robert', 'Taylor', '1996-09-09', '901-23-4567', '9012345678',
('Patricia', 'White', '1998-10-10', '012-34-5678', '0123456789',
('Alex', 'Morgan', '1985-01-01', '123-45-6780', '1234567801', '!',
('Betty', 'Sanders', '1986-02-02', '234-56-7891', '2345678912',
('Carlos', 'Ramirez', '1987-03-03', '345-67-8902', '3456789023',
('Diana', 'Freeman', '1988-04-04', '456-78-9013', '4567890134',
('Ethan', 'Murphy', '1989-05-05', '567-89-0124', '5678901245',
('Fiona', 'Wright', '1990-06-06', '678-90-1235', '6789012356',
('George', 'Hughes', '1991-07-07', '789-01-2346', '7890123467',
('Hannah', 'Anderson', '1992-08-08', '890-12-3457', '8901234578',
('Ian', 'Thomas', '1993-09-09', '901-23-4568', '9012345689', '2!',
('Jenny', 'Lopez', '1994-10-10', '012-34-5679', '0123456790', '!',

```

```

INSERT INTO PersonnelLocations (PersonnelID, LocationID, StartDate)
(1, 1, '2022-01-01', NULL),
(2, 1, '2022-01-01', NULL),
(3, 2, '2022-01-01', NULL),
(4, 2, '2022-01-01', NULL),
(5, 3, '2022-01-01', NULL),
(6, 3, '2022-01-01', NULL),
(7, 4, '2022-01-01', NULL),
(8, 4, '2022-01-01', NULL),
(9, 5, '2022-01-01', NULL),
(10, 5, '2022-01-01', NULL),
(11, 6, '2022-01-01', NULL),

```

```
(12, 6, '2022-01-01', NULL),
(13, 7, '2022-01-01', NULL),
(14, 7, '2022-01-01', NULL),
(15, 8, '2022-01-01', NULL),
(16, 8, '2022-01-01', NULL),
(17, 9, '2022-01-01', NULL),
(18, 9, '2022-01-01', NULL),
(19, 10, '2022-01-01', NULL),
(20, 10, '2022-01-01', NULL),
(21, 1, '2022-01-01', NULL),
(22, 1, '2022-01-01', NULL);
```

```
INSERT INTO FamilyMembers (Type, FirstName, LastName, DateOfBirth,
('Mother', 'Alice', 'Johnson', '1970-01-01', '111-11-1111', '1111111111'),
('Father', 'Bob', 'Williams', '1972-02-02', '222-22-2222', '2222222222'),
('GrandFather', 'Charlie', 'Brown', '1974-03-03', '333-33-3333', '3333333333'),
('Partner', 'Diana', 'Smith', '1976-04-04', '444-44-4444', '4444444444'),
('Tutor', 'Edward', 'Davis', '1978-05-05', '555-55-5555', '5555555555'),
('Friend', 'Fiona', 'Wilson', '1980-06-06', '666-66-6666', '6666666666'),
('Other', 'George', 'White', '1982-07-07', '777-77-7777', '7777777777'),
('Mother', 'Hannah', 'Taylor', '1984-08-08', '888-88-8888', '8888888888'),
('Father', 'Ian', 'King', '1986-09-09', '999-99-9999', '9999999999'),
('Other', 'Jack', 'Lee', '1988-10-10', '000-00-0000', '0000000000'),
('GrandMother', 'Karen', 'Parker', '1980-11-11', '123-45-6780', '1234567801'),
('GrandFather', 'Larry', 'Adams', '1981-12-12', '234-56-7891', '2345678912'),
('Partner', 'Megan', 'Clark', '1982-01-01', '345-67-8902', '3456789023'),
('Tutor', 'Nathan', 'Hall', '1983-02-02', '456-78-9013', '4567890134'),
('Friend', 'Olivia', 'Young', '1984-03-03', '567-89-0124', '5678901245'),
('Other', 'Peter', 'Harris', '1985-04-04', '678-90-1235', '6789012356'),
('Mother', 'Quinn', 'Martinez', '1986-05-05', '789-01-2346', '7890123467'),
('Partner', 'Rebecca', 'Robinson', '1987-06-06', '890-12-3457', '8901234578'),
('Father', 'Samuel', 'Lewis', '1988-07-07', '901-23-4568', '9012345689'),
('Friend', 'Tina', 'Walker', '1989-08-08', '012-34-5679', '0123456790');
```

```
-- Calculate the current year
```

```

SET @current_year = YEAR(CURDATE());

-- Insert data with the Status calculated based on the age
INSERT INTO ClubMembers (MembershipNumber, FirstName, LastName,
(1, 'Evan', 'Johnson', '2012-01-01', '111-22-3333', '1112233334
(2, 'Grace', 'Johnson', '2015-02-02', '222-33-4444', '2223344444
(3, 'Henry', 'Williams', '2020-03-03', '333-44-5555', '333445555
(4, 'Ivy', 'Williams', '2019-04-04', '444-55-6666', '4445566667
(5, 'Jack', 'Brown', '2018-05-05', '555-66-7777', '5556677778',
(6, 'Katie', 'Brown', '2014-06-06', '666-77-8888', '6667788889',
(7, 'Leo', 'Smith', '2010-07-07', '777-88-9999', '7778899990',
(8, 'Mia', 'Smith', '2017-08-08', '888-99-0000', '8889900001',
(9, 'Nolan', 'Davis', '2009-09-09', '999-00-1111', '9990011112',
(10, 'Olivia', 'Davis', '2013-10-10', '000-11-2222', '0001122222

INSERT INTO Teams (TeamName, LocationID, TeamType) VALUES
('Toronto Boys Team A', 1, 'Boys'),
('Toronto Girls Team A', 1, 'Girls'),
('Toronto Boys Team B', 2, 'Boys'),
('Toronto Girls Team B', 2, 'Girls'),
('Montreal Boys Team', 3, 'Boys'),
('Montreal Girls Team', 3, 'Girls'),
('Vancouver Boys Team', 4, 'Boys'),
('Vancouver Girls Team', 4, 'Girls'),
('Calgary Boys Team', 5, 'Boys'),
('Calgary Girls Team', 5, 'Girls');

INSERT INTO ClubMemberTeams (ClubMemberID, TeamID, StartDate, En
(1, 1, '2023-01-01', NULL),
(2, 2, '2023-01-01', NULL),
(3, 3, '2023-01-01', NULL),
(4, 4, '2023-01-01', NULL),
(5, 5, '2023-01-01', NULL),
(6, 6, '2023-01-01', NULL),
(7, 7, '2023-01-01', NULL),

```



```
(8, 8, '2023-01-01', NULL),  
(9, 9, '2023-01-01', NULL),  
(10, 10, '2023-01-01', NULL);
```

```
INSERT INTO FamilyMemberLocations (FamilyMemberID, LocationID, S  
(1, 1, '2022-01-01', NULL),  
(2, 2, '2022-02-01', NULL),  
(3, 3, '2022-03-01', NULL),  
(4, 4, '2022-04-01', NULL),  
(5, 5, '2022-05-01', NULL),  
(6, 6, '2022-06-01', NULL),  
(7, 7, '2022-07-01', NULL),  
(8, 8, '2022-08-01', NULL),  
(9, 9, '2022-09-01', NULL),  
(10, 10, '2022-10-01', NULL),  
(1, 2, '2023-01-01', NULL),  
(2, 3, '2023-02-01', NULL),  
(3, 4, '2023-03-01', NULL),  
(4, 5, '2023-04-01', NULL),  
(5, 6, '2023-05-01', NULL),  
(6, 7, '2022-06-01', NULL),  
(7, 8, '2022-07-01', NULL),  
(8, 9, '2022-08-01', NULL),  
(9, 10, '2022-09-01', NULL),  
(10, 1, '2022-10-01', NULL);
```

Select statements (select.sql)

```
-- Q1  
SELECT Address, City, Province, PostalCode, PhoneNumber, WebAddi  
FROM Locations  
ORDER BY Province ASC, City ASC;  
  
-- Q2  
SELECT fm.FirstName, fm.LastName, (SELECT COUNT(*) FROM ClubMeml
```

```

FROM FamilyMembers fm
WHERE fm.LocationID = 2;

-- Q3
SELECT p.FirstName, p.LastName, p.DateOfBirth, p.SocialSecurityN
FROM Personnel p
JOIN PersonnelLocations pl ON p.PersonnelID = pl.PersonnelID
WHERE pl.LocationID = 8
AND (pl.EndDate IS NULL OR pl.EndDate > CURDATE());

-- Q4
SELECT loc.Name AS LocationName, cm.MembershipNumber, cm.FirstName
FROM ClubMembers cm
JOIN Locations loc ON cm.LocationID = loc.LocationID
ORDER BY LocationName ASC, cm.DateOfBirth ASC;

-- Q5
SELECT cm.MembershipNumber, cm.FirstName, cm.LastName, cm.DateOf
FROM ClubMembers cm
WHERE cm.FamilyMemberID = 4;

-- Q6
SELECT loc.Name AS LocationName, loc.City, loc.Province, fl.Star
FROM FamilyMembers fm
JOIN FamilyMemberLocations fl ON fm.FamilyMemberID = fl.FamilyM
JOIN Locations loc ON fl.LocationID = loc.LocationID
WHERE fm.FamilyMemberID = 10
ORDER BY fl.StartDate ASC;

-- Q7
SELECT DISTINCT fm.FirstName, fm.LastName, fm.TelephoneNumber
FROM FamilyMembers fm
JOIN ClubMembers cm ON fm.FamilyMemberID = cm.FamilyMemberID
JOIN Personnel p ON p.SocialSecurityNumber = fm.SocialSecurityN
WHERE cm.Status = 'Active' AND fm.LocationID = 1;

```

```

-- Q8
SELECT cm.ClubMemberID, cm.FirstName, cm.LastName, fl1.LocationID
FROM ClubMembers cm
JOIN FamilyMemberLocations fl1 ON cm.FamilyMemberID = fl1.FamilyMemberID
JOIN FamilyMemberLocations fl2 ON cm.FamilyMemberID = fl2.FamilyMemberID
WHERE fl1.LocationID != fl2.LocationID
ORDER BY cm.FirstName ASC, cm.LastName ASC, fl1.StartDate ASC;

-- C1
SELECT COUNT(*) FROM ClubMemberTeams;

-- C2
SELECT COUNT(*) FROM FamilyMemberLocations;

-- C3
SELECT COUNT(*) FROM PersonnelLocations;

```

Return statements for each query

Q1

Address	City	Province	PostalCode	PhoneNumber	WebAddress	Type	Capacity	GeneralManagerName	NumberOfClubMembers
654 Cedar Ln	Calgary	Alberta	T2K 5K5	403-567-8901	www.branchD.com	Branch	85	Michael Wilson	2
987 Birch Blvd	Edmonton	Alberta	T5K 6K6	780-678-9012	www.branchE.com	Branch	75	Sarah Johnson	0
321 Pine Rd	Vancouver	British Columbia	V5K 4K4	604-456-7890	www.branchC.com	Branch	90	Emily Davis	2
654 Spruce Ct	Victoria	British Columbia	V8K 9K9	250-901-2345	www.branchH.com	Branch	55	Robert Taylor	0
432 Willow Dr	Winnipeg	Manitoba	R3K 8K8	204-890-1234	www.branchG.com	Branch	65	Laura King	0
213 Elm St	Halifax	Nova Scotia	B3K 7K7	902-789-0123	www.branchF.com	Branch	60	David Lee	0
123 Main St	Toronto	Ontario	M1K 1M1	416-123-4567	www.headlocation.com	Head	100	John Doe	2
456 Maple Ave	Toronto	Ontario	M1K 2M2	416-234-5678	www.branchA.com	Branch	80	Jane Smith	2
789 Oak St	Montreal	Quebec	H1K 3K3	514-345-6789	www.branchB.com	Branch	70	James Brown	2
876 Fir St	Regina	Saskatchewan	S4K 0K0	306-012-3456	www.branchI.com	Branch	50	Patricia White	0

Q2

FirstName	LastName	NumberOfActiveClubMembers
Charlie	Brown	0
Diana	Smith	0

Q3

FirstName	LastName	DateOfBirth	SocialSecurityNumber	MedicareCardNumber	TelephoneNumber	Address	City	Province	PostalCode	EmailAddress	Role	Mandate
Carlos	Ramirez	1987-03-03	345-67-8902	3456789023	514-345-9012	987 Work Ave	Montreal	Quebec	H1K 3C3	carlos.ramirez@example.com	Other	Volunteer
Diana	Freeman	1988-04-04	456-78-9013	4567890134	604-456-0123	213 Work Blvd	Vancouver	British Columbia	V5K 4C4	diana.freeman@example.com	Trainer	Salaries

Q4

LocationName	MembershipNumber	FirstName	LastName	DateOfBirth	City	Province
Branch A	4	Ivy	Williams	2019-04-04	Toronto	Ontario
Branch A	3	Henry	Williams	2020-03-03	Toronto	Ontario
Branch B	6	Katie	Brown	2014-06-06	Montreal	Quebec
Branch B	5	Jack	Brown	2018-05-05	Montreal	Quebec
Branch C	7	Leo	Smith	2010-07-07	Vancouver	British Columbia
Branch C	8	Mia	Smith	2017-08-08	Vancouver	British Columbia
Branch D	9	Nolan	Davis	2009-09-09	Calgary	Alberta
Branch D	10	Olivia	Davis	2013-10-10	Calgary	Alberta
Head Office	1	Evan	Johnson	2012-01-01	Toronto	Ontario
Head Office	2	Grace	Johnson	2015-02-02	Toronto	Ontario

Q5

MembershipNumber	FirstName	LastName	DateOfBirth	SocialSecurityNumber	MedicareCardNumber	TelephoneNumber	Address	City	Province	PostalCode	FamilyMemberID
7	Leo	Smith	2010-07-07	777-88-9999	7778899990	604-444-8888	321 Kid Rd	Vancouver	British Columbia	V5K 4B4	4
8	Mia	Smith	2017-08-08	888-99-0000	8889900001	604-444-9999	321 Kid Rd	Vancouver	British Columbia	V5K 4B4	4

Q6

LocationName	City	Province	StartDate	EndDate
Branch I	Regina	Saskatchewan	2022-10-01	NULL
Head Office	Toronto	Ontario	2022-10-01	NULL

Q7

FirstName	LastName	TelephoneNumber
Alice	Johnson	416-111-1111
Bob	Williams	416-222-2222

Q8

ClubMemberID	FirstName	LastName	FirstLocationID	FirstLocationStartDate	SecondLocationID	SecondLocationStartDate
1	Evan	Johnson	1	2022-01-01	2	2023-01-01
1	Evan	Johnson	2	2023-01-01	1	2022-01-01
2	Grace	Johnson	1	2022-01-01	2	2023-01-01
2	Grace	Johnson	2	2023-01-01	1	2022-01-01
3	Henry	Williams	2	2022-02-01	3	2023-02-01
3	Henry	Williams	3	2023-02-01	2	2022-02-01
4	Ivy	Williams	2	2022-02-01	3	2023-02-01
4	Ivy	Williams	3	2023-02-01	2	2022-02-01
5	Jack	Brown	3	2022-03-01	4	2023-03-01
5	Jack	Brown	4	2023-03-01	3	2022-03-01
6	Katie	Brown	3	2022-03-01	4	2023-03-01
6	Katie	Brown	4	2023-03-01	3	2022-03-01
7	Leo	Smith	4	2022-04-01	5	2023-04-01
7	Leo	Smith	5	2023-04-01	4	2022-04-01
8	Mia	Smith	4	2022-04-01	5	2023-04-01
8	Mia	Smith	5	2023-04-01	4	2022-04-01
9	Nolan	Davis	5	2022-05-01	6	2023-05-01
9	Nolan	Davis	6	2023-05-01	5	2022-05-01
10	Olivia	Davis	5	2022-05-01	6	2023-05-01
10	Olivia	Davis	6	2023-05-01	5	2022-05-01

C1

COUNT(*)
10

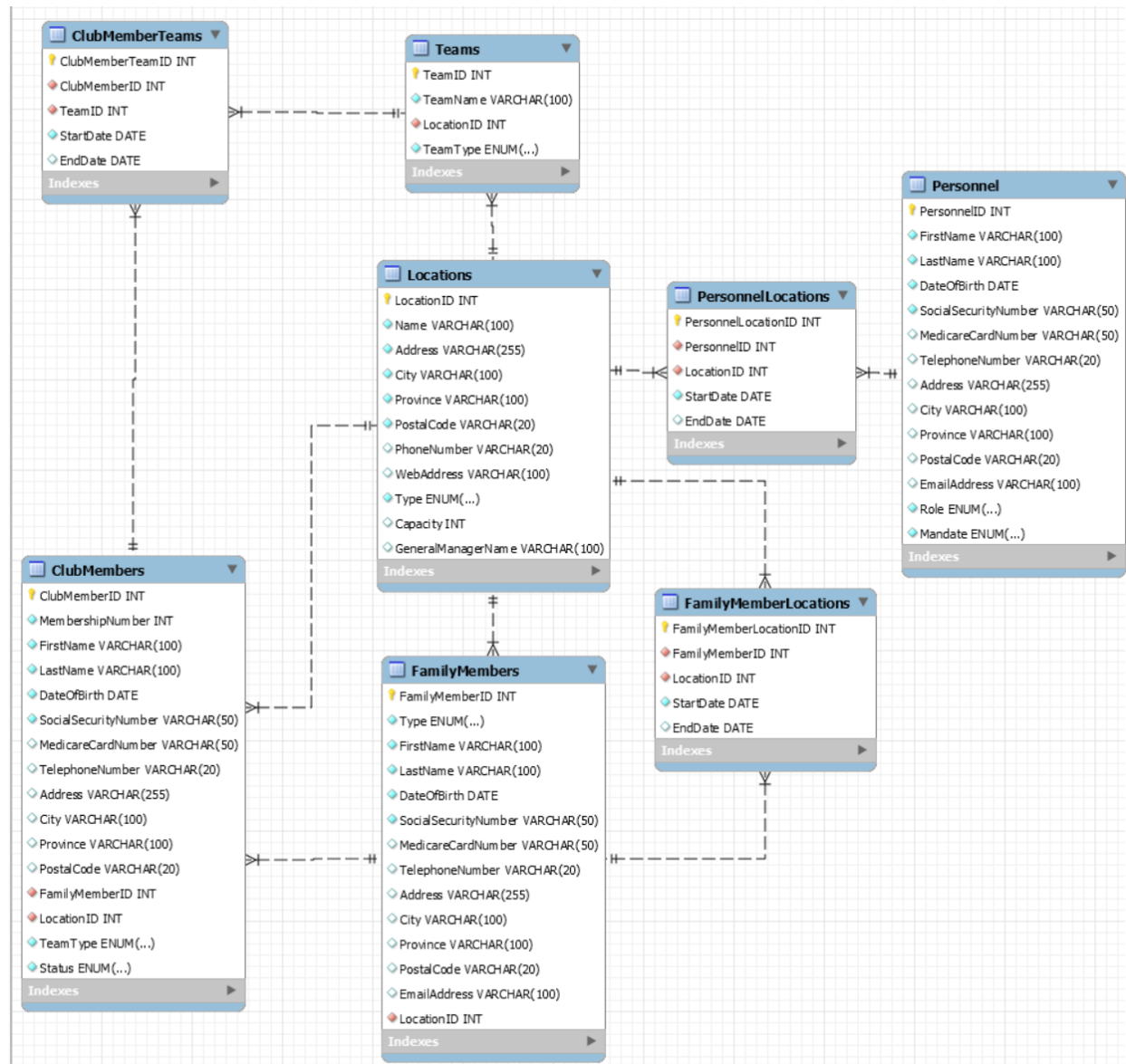
C2

COUNT(*)
20

C3

COUNT(*)
22

Relational Model Diagram



Entity Relationship Diagram

