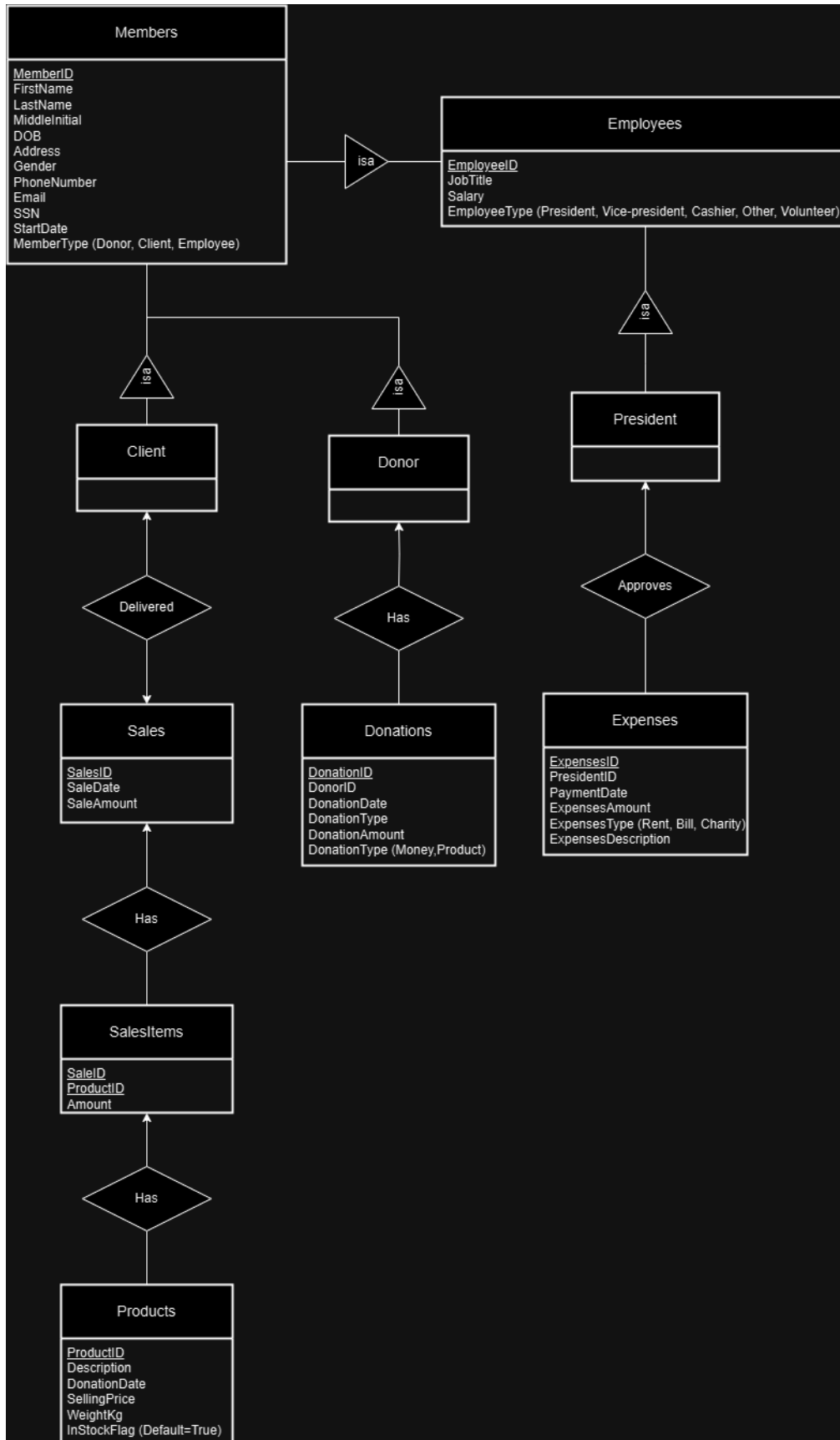# COMP 353 Assignment 2

Neil Fisher - 40240320

Part 1

a, b)

Members

MemberID
FirstName
LastName
MiddleInitial
DOB
Address
Gender
PhoneNumber
Email
SSN
StartDate
MemberType (Donor, Client, Employee)

Employees

EmployeeID
JobTitle
Salary
EmployeeType (President, Vice-president, Cashier, Other, Volunteer)

isa

Client

Donor

President

Delivered

Has

Approves

Sales

SalesID
SaleDate
SaleAmount

Donations

DonationID
DonorID
DonationDate
DonationType
DonationAmount
DonationType (Money,Product)

Expenses

ExpensesID
PresidentID
PaymentDate
ExpensesAmount
ExpensesType (Rent, Bill, Charity)
ExpensesDescription

Has

SalesItems

SaleID
ProductID
Amount

Has

Products

ProductID
Description
DonationDate
SellingPrice
WeightKg
InStockFlag (Default=True)

c)

```
Members{MemberID,FirstName,LastName,MiddleInitial,DOB,Address,Ge
StartDate,MemberType}

Employees{EmployeeID(FK->MemberID),JobTitle,Salary,EmployeeType}

Donations{DonationID,DonorID(FK->MemberID),DonationDate,Donatio

Sales{SalesID,SaleDate,SaleAmount}

SalesItems{SalesID(FK->SalesID),ProductID(FK->ProductID),Amount}

Products{ProductID,Description,DonationDate,SellingPrice,Weight

Expenses{ExpensesID,PresidentID(FK->EmployeeID),PaymentDate,Expe
ExpensesDescription}
```

d)

I would ALTER the table to add a non-null VicePresidentID to the table, which would signify the requirement of approval for an Expense.

Part 2

a)

```
SELECT MemberID AS ClientID,
       FirstName,
       LastName,
       MiddleInitial,
       DOB,
       Address,
```

```
        Gender,
        PhoneNum,
        Email,
        SSN,
        MemberType
FROM Members
WHERE MemberType = 'Client'
  AND MemberID NOT IN (SELECT EmployeeID
                          FROM Employees
                          WHERE Salary = 0)
```

b)

```
SELECT Expenses.ExpensesID,
       Members.FirstName,
       Members.LastName,
       Expenses.PaymentDate,
       Expenses.ExpensesAmount,
       Expenses.ExpensesType,
       Expenses.ExpensesDescription
FROM Expenses
        JOIN Employees ON Expenses.PresidentID = Employees.Empl
        JOIN Members ON Employees.EmployeeID = Members.MemberI
WHERE YEAR(Expenses.PaymentDate) = 2024
  AND MONTH(Expenses.PaymentDate) BETWEEN 1 AND 6;
```

c)

```
SELECT Sales.SalesID,
       Sales.SaleDate,
       Members.FirstName,
       Members.LastName,
       Products.Description,
       SalesItems.Amount,
       Products.SellingPrice,
       Products.WeightKg
```

```
    FROM Sales
            JOIN SalesItems ON Sales.SalesID = SalesItems.SalesID
            JOIN Products ON SalesItems.ProductID = Products.Produ
            JOIN Members ON Sales.SalesID = Members.MemberID
    WHERE (Members.Address LIKE '%Brossard%' OR Members.Address LIKE
      AND YEAR(Sales.SaleDate) = 2024
      AND MONTH(Sales.SaleDate) = 6
    ORDER BY Sales.SalesID, Members.FirstName, Members.LastName, Pro
```

d)

```
    SELECT MONTH(Sales.SaleDate)      AS Month,
           COUNT(SalesItems.ProductID) AS NumberOfProductsSold,
           AVG(Products.SellingPrice)  AS AveragePrice,
           AVG(Products.WeightKg)      AS AverageWeight
    FROM Sales
            JOIN SalesItems ON Sales.SalesID = SalesItems.SalesID
            JOIN Products ON SalesItems.ProductID = Products.Produ
    WHERE YEAR(Sales.SaleDate) = 2023
    GROUP BY MONTH(Sales.SaleDate)
    ORDER BY NumberOfProductsSold DESC;
```

e)

```
    SELECT Members.MemberID                              AS ClientI
           Members.FirstName,
           Members.LastName,
           Sales.SalesID,
           Sales.SaleDate,
           SUM(SalesItems.Amount * Products.SellingPrice) AS TotalSa
    FROM Members
            LEFT JOIN Sales ON Members.MemberID = Sales.SalesID
            LEFT JOIN SalesItems ON Sales.SalesID = SalesItems.Sale
            LEFT JOIN Products ON SalesItems.ProductID = Products.P
    WHERE Members.MemberType = 'Client'
      AND Members.MemberID NOT IN (SELECT Sales.SalesID
```

```
                                    FROM Sales
                                    WHERE Sales.SaleDate >= '2024-01
GROUP BY Members.MemberID, Members.FirstName, Members.LastName,
ORDER BY TotalSales DESC;
```