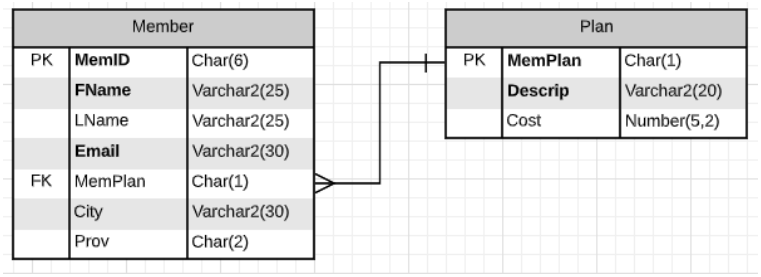
Intro to SQL Project

Read the **entirety** of the project before proceeding.
No, *really*. Read it all first. It's like 3 pages. You'll be fine, I promise.

You've been tasked with setting up and testing a database that keeps track of members and their plans for a monthly subscription service.



Part A: Create Tables

Use SQL statements to create the table structures shown above.

- note the constraints shown in the diagram
    - primary keys
    - foreign keys
    - not null (shown in **bold**)
    - Foreign key constraints **must be** applied by an ALTER statement

Additional constraints not shown in E-R diagram:

MEMBER table

- **Email** must contain an @ symbol

PLAN table

- **MemPlan** must hold a *unique* value.
- **Descrip** must hold a *unique* value.
- **Cost** field
    - has values in the range 4.99 to 129.99
    - A default value of 7.99

APPLY **ALL** CONSTRAINTS BEFORE ADDING DATA TO YOUR TABLES!

Named constraints

- Primary keys
- Foreign keys
- Unique
- Check

Unnamed constraints

- Not Null
- Default values

Create an SQL script file (plaintext, in something like Notepad++ or VSCode) with the commands needed to create your table. Call this file ***YOURNAME-PartA.sql***.

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Part B: Test Tables and Constraints

Confirm your table structures and constraints. This is very important for Part D.

Run a few SQL commands to test your constraints by trying to insert and/or update data in your tables. **Each constraint must be tested at least once.** Refer to the previous page to see a list of the table constraints.

When finished testing your constraints, **create statements to clear all data from the Member and Plan tables** so it does not affect future results.

Save these commands to a script file called ***YOURNAME-PartB.sql***.

Part C: Insert Data

Insert the following data into your table. Use SQL statements that include the field names. Populate the **MEMBER** table with the following information:

MemID	FName	LName	Email	MemPlan	City	Prov
100001	Shaquille	Oatmeal	shaqo@nbcc.ca	B	Fredericton	NB
100002	Bread	Pitt	bpitt@nbcc.ca	S	Saint John	NB
100003	Beytwice	Knowles	beyk@nbcc.ca	P	Halifax	NS

Populate the **PLAN** table with the following information:

MemPlan	Descrip	Cost
P	Premium	39.99
S	Standard	19.99
B	Basic	12.99
T	Trial	(NULL)

Note: Trial should have a cost; let the default value set it.

Check your table contents and confirm the data you expect to find in each table.

Save these commands to a script file called ***YOURNAME-PartC.sql***.

Part D: Import Data

Download the **ProjectMemberData.sql** from Brightspace. Rename it to **YOURNAME-PartD.sql**. Add a query that does a count of all members in the Member table.

Run the SQL file to import the data. Including the 3 records you added in Part C, the member table will now have 964 records. Not all of them will import due to your constraints. Save your changes. Submit this file with your project.

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Part E: Queries

Create SQL statements to answer the following questions about the database.

1. What is the company's total revenue from member plan subscriptions each month?
2. How many members have a trial member plan?
3. What is the company's revenue from each member plan each month?
   Display plan description and total revenues.
   Sort by description ascending.
4. Make a copy of the statement from #3 and modify it to only display revenues from people in the province of New Brunswick.
5. Make a copy of the statement from #3 and modify it to only show member plans with a total revenue above $5000.00 are shown.
6. List all Premium and Standard members from the province of Ontario, showing the member's full name, city, and plan description.
   The member's name should be in a single column titled "Member Name" formatted as <last name>, <first name>. You'll need to lookup how to concatenate in Oracle SQL.
   Order by city (descending) then by last name (ascending).

Save these commands to a script file called ***YOURNAME-PartE.sql***.

Part F: Changes

Delete from the **MEMBER** table:

1. All members that have a trial member plan.
2. All members who's email addresses end with bigcartel.com or weibo.com
   Make this a single SQL statement, use wildcards.

Modify data in the **MEMBER** table for the following situations:

1. Due to a running promotion, members from Nova Scotia with a Standard plan are promoted to a Premium plan.
2. Due to another promotion, members with a Basic Plan from Fredericton, New Brunswick have been promoted to a Standard plan.
3. The member Vonnie Yeatman (Member ID: 107825) needs their plan updated Premium.

Save these commands to a script file called ***YOURNAME-PartF.sql***. Verify all your files work correctly. I will be running all the files in sequence on my own blank database. For full marks I expect to be able to run all files (PartA, then PartB, then PartC, etc.) in sequence on a blank database and recreate your results. Test your own files by dropping your project's tables from your database and using your files to recreate everything required for the project.

When complete, submit all the .sql files you created to Brightspace.