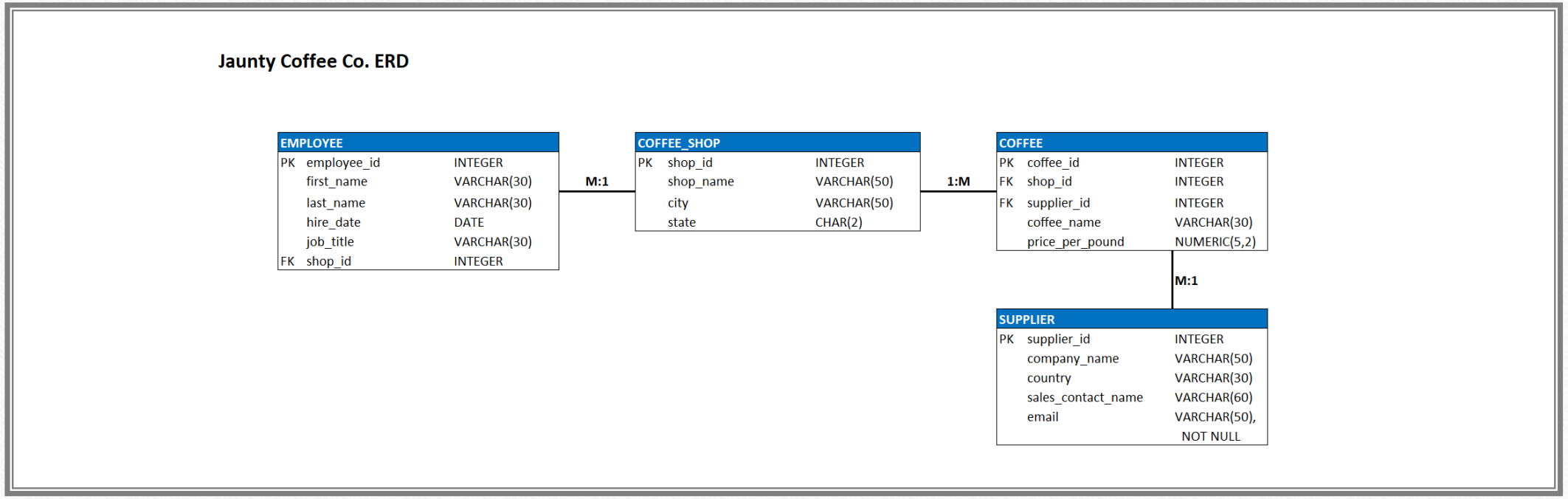
MS SQL Lab: Coffee Shop Database

Objectives

- **Develop a database** for a coffee shop based upon requirements from an Entity Relationship Diagram (ERD).
- **Create a view** to display all the information from the Employee table with the first and last name of each employee concatenated.
- **Create an index** on the coffee_name field in the Coffee table.



Coffee Shop Entity Relationship Diagram

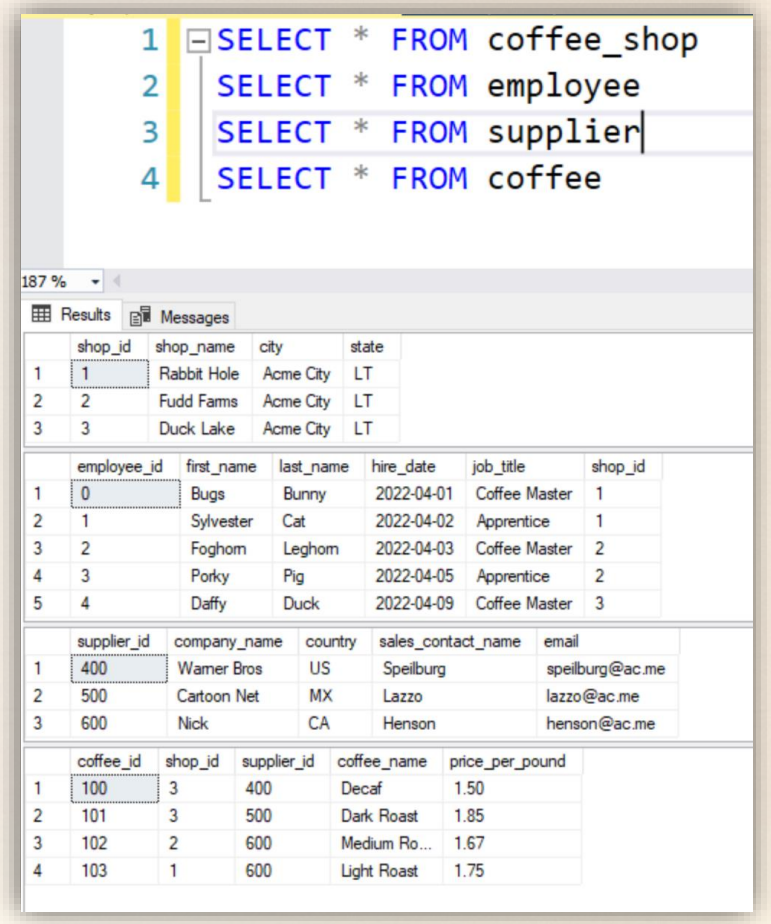
SQL CODE & QUERIES

DATABASE AND TABLES CREATION

```
--DB Creation

CREATE DATABASE CoffeeShop


--Tables Creation

CREATE TABLE coffee_shop(
   shop_id INT,
   shop_name VARCHAR(50),
   city VARCHAR(50),
   state CHAR(2),
   PRIMARY KEY (shop_id)
)

CREATE TABLE employee(
   employee_id INT,
   first_name  VARCHAR(30),
   last_name VARCHAR(30),
   hire_date DATE,
   job_title VARCHAR(30),
   shop_id INT,
   PRIMARY KEY (employee_id),
   FOREIGN KEY (shop_id) REFERENCES
coffee_shop(shop_id)
)

CREATE TABLE supplier(
   supplier_id INT,
   company_name VARCHAR(50),
   country VARCHAR(30),
   sales_contact_name VARCHAR(60),
   email VARCHAR(50) NOT NULL,
   PRIMARY KEY (supplier_id)
)

CREATE TABLE coffee(
   coffee_id INT,
   shop_id INT,
   supplier_id INT,
   coffee_name VARCHAR(30),
   price_per_pound NUMERIC(5,2),
   PRIMARY KEY (coffee_id),
   FOREIGN KEY (shop_id) REFERENCES
coffee_shop(shop_id),
   FOREIGN KEY (supplier_id) REFERENCES
supplier(supplier_id)
)
```

Table Data Population

```
--Data Population

INSERT INTO coffee_shop
VALUES      (1, 'Rabbit Hole', 'Acme City', 'LT'),
            (2, 'Fudd Farms', 'Acme City', 'LT'),
            (3, 'Duck Lake', 'Acme City', 'LT')
INSERT INTO employee
VALUES      (0, 'Bugs', 'Bunny', '04-01-2022', 'Coffee Master',1),
            (1, 'Sylvester', 'Cat', '04-02-2022', 'Apprentice', 1),
            (2, 'Foghorn', 'Leghorn', '04-03-2022', 'Coffee Master', 2),
            (3, 'Porky', 'Pig', '04-05-2022', 'Apprentice', 2),
            (4, 'Daffy', 'Duck', '04-09-2022', 'Coffee Master', 3)
INSERT INTO supplier
VALUES      (400, 'Warner Bros', 'US', 'Speilburg', 'speilburg@ac.me'),
            (500, 'Cartoon Net', 'MX', 'Lazzo', 'lazzo@ac.me'),
            (600, 'Nick', 'CA', 'Henson', 'henson@ac.me')
INSERT INTO coffee
VALUES      (100, 3, 400, 'Decaf', 1.50),
            (101, 3, 500, 'Dark Roast', 1.85),
            (102, 2, 600, 'Medium Roast', 1.67),
            (103, 1, 600, 'Light Roast', 1.75)
```



```
SELECT * FROM coffee_shop
SELECT * FROM employee
SELECT * FROM supplier
SELECT * FROM coffee
```

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Results | Messages

	shop_id	shop_name	city	state
1	1	Rabbit Hole	Acme City	LT
2	2	Fudd Farms	Acme City	LT
3	3	Duck Lake	Acme City	LT

	employee_id	first_name	last_name	hire_date	job_title	shop_id
1	0	Bugs	Bunny	2022-04-01	Coffee Master	1
2	1	Sylvester	Cat	2022-04-02	Apprentice	1
3	2	Foghorn	Leghorn	2022-04-03	Coffee Master	2
4	3	Porky	Pig	2022-04-05	Apprentice	2
5	4	Daffy	Duck	2022-04-09	Coffee Master	3

	supplier_id	company_name	country	sales_contact_name	email
1	400	Warner Bros	US	Speilburg	speilburg@ac.me
2	500	Cartoon Net	MX	Lazzo	lazzo@ac.me
3	600	Nick	CA	Henson	henson@ac.me

	coffee_id	shop_id	supplier_id	coffee_name	price_per_pound
1	100	3	400	Decaf	1.50
2	101	3	500	Dark Roast	1.85
3	102	2	600	Medium Ro...	1.67
4	103	1	600	Light Roast	1.75

DB Optimization:
View & Index Creations

```
--Create View to Display Employee Information
CREATE VIEW empView as
  SELECT employee_id,
  CONCAT(first_name,' ',last_name) as employee_full_name,
      hire_date,
      job_title,
      shop_id
  FROM employee
```

```
SELECT * FROM empView
```

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Results | Messages

	employee_id	employee_full_name	hire_date	job_title	shop_id
1	0	Bugs Bunny	2022-04-01	Coffee Master	1
2	1	Sylvester Cat	2022-04-02	Apprentice	1
3	2	Foghorn Leghorn	2022-04-03	Coffee Master	2
4	3	Porky Pig	2022-04-05	Apprentice	2
5	4	Daffy Duck	2022-04-09	Coffee Master	3

```
--Create Index Based Upon the Coffee Name
CREATE INDEX coffeeIndex ON coffee
(coffee_name)
```

```
EXEC sp_helpindex 'Coffee'
```

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Results | Messages

	index_name	index_description	index_keys
1	coffeeIndex	nonclustered located on PRIMARY	coffee_name

Summary

This lab demonstrates the development of a database based on requirements from an Entity Relationship Diagram (ERD). It also illustrates enhanced table data management through the creation of a view from the Employee table. Additionally, an index was implemented to improve data retrieval efficiency.

Thanks for viewing

S.J. Richardson

Github: SQLJamz