1A – Nora's Bagels
First Normal from Blue Print

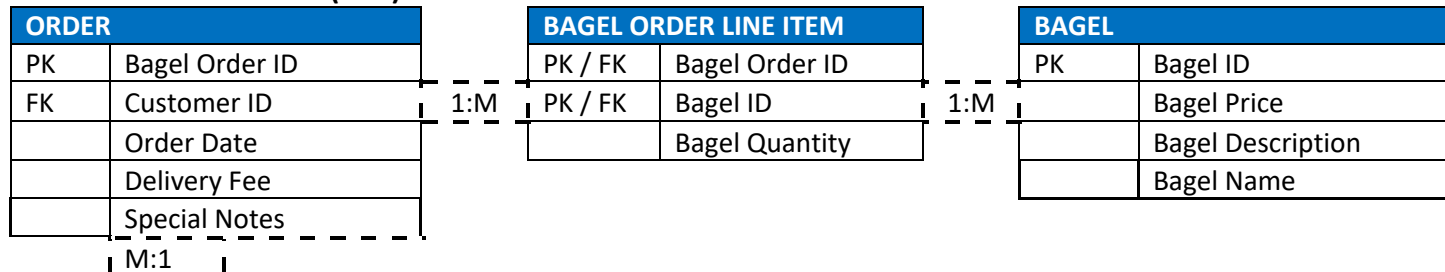| BAGEL ORDER	
PK	Bagel Order ID
PK	Bagel ID
	Order Date
	First Name
	Last Name
	Address 1
	Address 2
	City
	State
	Zip
	Mobile Phone
	Delivery Fee
	Bagel Name
	Bagel Description
	Bagel Price
	Bagel Quantity
	Special Notes

A1B - Second Normal Form (2NF)

BAGEL ORDER	
PK	Bagel Order ID
	Order Date
	First Name
	Last Name
	Address 1
	Address 2
	City
	State
	Zip
	Mobile Phone
	Delivery Fee
	Special Notes

1:M

BAGEL ORDER LINE ITEM	
PK / FK	Bagel Order ID
PK / FK	Bagel ID
	Bagel Quantity

1:M

BAGEL	
PK	Bagel ID
	Bagel Price
	Bagel Description
	Bagel Name

Explanation: 1 bagel order may contain many bagels order line items. A bagel order line item may contain many bagels.

A2C Third Normal Form (3NF)
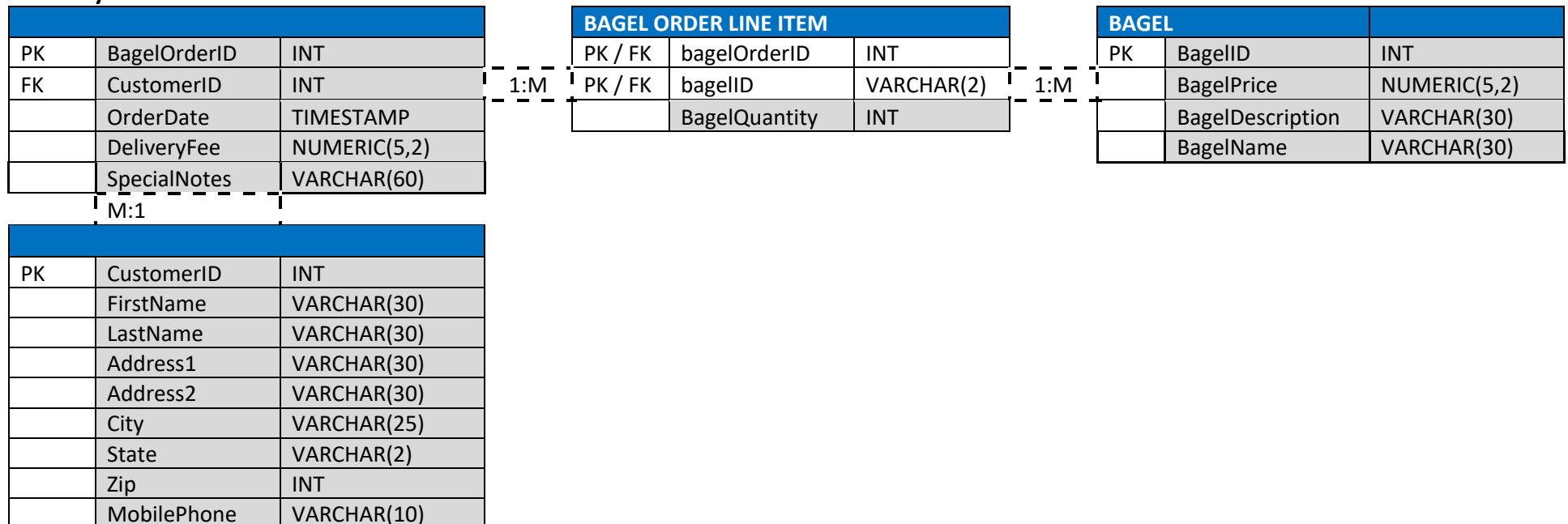
ORDER	
PK	Bagel Order ID
FK	Customer ID
	Order Date
	Delivery Fee
	Special Notes

BAGEL ORDER LINE ITEM	
PK / FK	Bagel Order ID
PK / FK	Bagel ID
	Bagel Quantity

BAGEL	
PK	Bagel ID
	Bagel Price
	Bagel Description
	Bagel Name

ORDER 1:M BAGEL ORDER LINE ITEM 1:M BAGEL

ORDER M:1 Customer Info

Customer Info	
PK/FK	Customer ID
	First Name
	Last Name
	Address 1
	Address 2
	City
	State
	Zip
	Mobile Phone

Explanation: Many Orders can have 1 customer, 1 Order may have many Bagel Order Line Items, A Bagel Order Line Item may have many Bagels.

Final Physical Database Model

PK	BagelOrderID	INT
FK	CustomerID	INT
	OrderDate	TIMESTAMP
	DeliveryFee	NUMERIC(5,2)
	SpecialNotes	VARCHAR(60)

BAGEL ORDER LINE ITEM		
PK / FK	bagelOrderID	INT
PK / FK	bagelID	VARCHAR(2)
	BagelQuantity	INT

BAGEL		
PK	BagelID	INT
	BagelPrice	NUMERIC(5,2)
	BagelDescription	VARCHAR(30)
	BagelName	VARCHAR(30)

1:M (Order to Line Item), 1:M (Line Item to Bagel)

M:1

PK	CustomerID	INT
	FirstName	VARCHAR(30)
	LastName	VARCHAR(30)
	Address1	VARCHAR(30)
	Address2	VARCHAR(30)
	City	VARCHAR(25)
	State	VARCHAR(2)
	Zip	INT
	MobilePhone	VARCHAR(10)

2B – Jaunty Coffee Co.

Table Creation

```sql
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)
 );
CREATE TABLE Coffee_Shop (
    shop_id     INT,
    shop_name   VARCHAR(50),
    city        VARCHAR(50),
    state       CHAR(2),
    PRIMARY KEY (shop_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)
);
CREATE TABLE Supplier (
    supplier_id INT,
    company_name VARCHAR(50),
    country VARCHAR(30),
    sales_contact_name VARCHAR(60),
    email VARCHAR(50),
    PRIMARY KEY (supplier_id)
);
```

Fiddle Title

50 characters remaining.

Fiddle Description

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Show Keyboard Shortcuts

Schema SQL ●

```
1   CREATE TABLE Employee (
2     employee_id    INT,
3     first_name     VARCHAR(30),
4     last_name      VARCHAR(30),
5     hire_date      DATE,
6     job_title      VARCHAR(30),
7     shop_id        INT,
8     PRIMARY KEY (employee_id)
9   );
10  CREATE TABLE Coffee_Shop (
11    shop_id        INT,
12    shop_name      VARCHAR(50),
13    city           VARCHAR(50),
14    state          CHAR(2),
15    PRIMARY KEY (shop_id)
16  );
17  CREATE TABLE Coffee (
18    coffee_id          INT,
19    shop_id            INT,
20    supplier_id        INT,
21    coffee_name        VARCHAR(30),
22    price_per_pound    NUMERIC(5,2),
23    PRIMARY KEY (coffee_id)
24  );
25  CREATE TABLE Supplier (
26    supplier_id INT,
27    company_name VARCHAR(50),
28    country VARCHAR(30),
29    sales_contact_name VARCHAR(60),
30    email VARCHAR(50),
31    PRIMARY KEY (supplier_id)
32  );
33
```

Text to DDL

Query SQL ●

```
1
```

Results

Copy as Markdown

There are no results to be displayed.

SHOW TABLES:

Results

Copy as Markdown

Query #1 Execution time: 0ms

Tables_in_test
Coffee
Coffee_Shop
Employee
Supplier

Population of Tables:

```sql
INSERT INTO Employee(employee_id, first_name, last_name, hire_date, job_title, shop_id)
VALUES
    (1, 'John', 'Travolta', '1962-01-05', 'Owner', 9001),
    (2, 'Samual', 'Jackson', '1969-05-12', 'Manager', 9002),
    (3, 'David', 'Hassellhoff', '1955-07-22', 'Temp', 9003);
INSERT INTO Coffee_Shop(shop_id, shop_name, city, state)
VALUES
    (9001, 'Caffeine Express', 'Draper', 'UT'),
    (9002, 'StarBoys', 'Seattle', 'WA'),
    (9003, 'CoffeeExpress', 'Salt Lake City', 'UT');
INSERT INTO Coffee(coffee_id, shop_id, supplier_id, coffee_name, price_per_pound)
VALUES
    (2001, 9001, 8, 'Mocha', '5.99'),
    (3001, 9002, 9, 'Americano', '6.99'),
    (4001, 9003, 7, 'PineappleExpress', '29.99');
INSERT INTO Supplier(supplier_id, company_name, country, sales_contact_name, email)
VALUES (8, 'MadHatter', 'USA', 'Tony Stark', 'tony.stark@email.com'),
(9, 'StarStruck', 'USA', 'Steve Rogers', 'steve.rogers@email.com'),
(7, 'StarBoy', 'Guam', 'Bruce Banner', 'brucebanner@gmail.com');
```

Fiddle Title

50 characters remaining.

Fiddle Description

300 characters remaining.

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Show Keyboard Shortcuts

Schema SQL ●

```
 7   hire_date     DATE,
 8   job_title     VARCHAR(30),
 9   shop_id       INT,
10   PRIMARY KEY (employee_id)
11 );
12
13 -- Added Data to the Employee Table --
14
15  INSERT INTO Employee(employee_id, first_name, last_name,
    hire_date, job_title, shop_id)
16 VALUES
17    (1, 'John', 'Travolta', '1962-01-05', 'Owner', 9001),
18    (2, 'Samual', 'Jackson', '1969-05-12', 'Manager', 9002),
19    (3, 'David', 'Hassellhoff', '1955-07-22', 'Temp', 9003);
20
21 -- Create Table for Coffee_Shop --
22
23 CREATE TABLE Coffee_Shop (
24    shop_id     INT,
25    shop_name   VARCHAR(50),
26    city        VARCHAR(50),
27    state       CHAR(2),
28    PRIMARY KEY (shop_id)
29 );
30
31 -- Added Data to the Coffee_Shop Table --
32
33 INSERT INTO Coffee_Shop(shop_id, shop_name, city, state)
34 VALUES
35    (9001, 'Caffeine Express', 'Draper', 'UT'),
36    (9002, 'StarBoys', 'Seattle', 'WA'),
37    (9003, 'CoffeeExpress', 'Salt Lake City', 'UT');
38
```

Text to DDL

Query SQL ●

```
 1
```

Results   Copy as Markdown

There are no results to be displayed.

Proof of Working Tables

```
SELECT *
FROM Employee, Coffee_Shop, Coffee, Supplier
```

employee_id	first_name	last_name	hire_date	job_title	shop_id	shop_id	shop_name	city	state	coffee_id	shop_id	supplier_id	coffee_name	price_p
1	John	Travolta	1962-01-05	Owner	9001	9001	Caffeine Express	Draper	UT	2001	9001	8	Mocha	5.99
2	Samual	Jackson	1969-05-12	Manager	9002	9001	Caffeine Express	Draper	UT	2001	9001	8	Mocha	5.99
3	David	Hassellhoff	1955-07-22	Temp	9003	9001	Caffeine Express	Draper	UT	2001	9001	8	Mocha	5.99
1	John	Travolta	1962-01-05	Owner	9001	9002	StarBoys	Seattle	WA	2001	9001	8	Mocha	5.99
2	Samual	Jackson	1969-05-12	Manager	9002	9002	StarBoys	Seattle	WA	2001	9001	8	Mocha	5.99
3	David	Hassellhoff	1955-07-22	Temp	9003	9002	StarBoys	Seattle	WA	2001	9001	8	Mocha	5.99
1	John	Travolta	1962-01-05	Owner	9001	9003	CoffeeExpress	Salt Lake City	UT	2001	9001	8	Mocha	5.99
2	Samual	Jackson	1969-05-12	Manager	9002	9003	CoffeeExpress	Salt Lake City	UT	2001	9001	8	Mocha	5.99
3	David	Hassellhoff	1955-07-22	Temp	9003	9003	CoffeeExpress	Salt Lake City	UT	2001	9001	8	Mocha	5.99
1	John	Travolta	1962-01-05	Owner	9001	9001	Caffeine Express	Draper	UT	3001	9002	9	Americano	6.99
2	Samual	Jackson	1969-05-12	Manager	9002	9001	Caffeine Express	Draper	UT	3001	9002	9	Americano	6.99

Database: MySQL v5.7 ▼   ▷ Run   🖫 Save   ⟳ Load Example   👥 Collaborate   →] Sign in   Have any feedback?

Fiddle Title

50 characters remaining.

Fiddle Description

300 characters remaining.

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Show Keyboard Shortcuts

Schema SQL ●

```
1  -- Create table for Employee --
2
3  CREATE TABLE Employee (
4    employee_id   INT,
5    first_name    VARCHAR(30),
6    last_name     VARCHAR(30),
7    hire_date     DATE,
8    job_title     VARCHAR(30),
9    shop_id       INT,
10   PRIMARY KEY (employee_id)
11  );
12
13  -- Added Data to the Employee Table --
14
15  INSERT INTO Employee(employee_id, first_name, last_name,
     hire_date, job_title, shop_id)
16  VALUES
17    (1, 'John', 'Travolta', '1962-01-05', 'Owner', 9001),
18    (2, 'Samual', 'Jackson', '1969-05-12', 'Manager', 9002),
19    (3, 'David', 'Hassellhoff', '1955-07-22', 'Temp', 9003);
20
21  -- Create Table for Coffee_Shop --
22
23  CREATE TABLE Coffee_Shop (
24    shop_id       INT,
25    shop_name     VARCHAR(50),
26    city          VARCHAR(50),
27    state         CHAR(2),
28    PRIMARY KEY (shop_id)
29  );
30
31  -- Added Data to the Coffee_Shop Table --
```

Text to DDL

Query SQL ●

```
1  SELECT *
2  FROM Employee, Coffee_Shop, Coffee, Supplier
```

Results   Copy as Markdown

Query #1   Execution time: 8ms

employee_id	first_name	last_name	hire_date	job_title	shop_id	shop_id	shop_name	city	state	coffee_id	shop_id	supplie
1	John	Travolta	1962-01-05	Owner	9001	9001	Caffeine Express	Draper	UT	2001	9001	8
2	Samual	Jackson	1969-05-12	Manager	9002	9001	Caffeine Express	Draper	UT	2001	9001	8
3	David	Hassellhoff	1955-07-22	Temp	9003	9001	Caffeine Express	Draper	UT	2001	9001	8
1	John	Travolta	1962-01-05	Owner	9001	9002	StarBoys	Seattle	WA	2001	9001	8
2	Samual	Jackson	1969-05-12	Manager	9002	9002	StarBoys	Seattle	WA	2001	9001	8
3	David	Hassellhoff	1955-07-22	Temp	9003	9002	StarBoys	Seattle	WA	2001	9001	8
1	John	Travolta	1962-01-05	Owner	9001	9003	CoffeeExpress	Salt Lake City	UT	2001	9001	8

CREATE VIEW: EmployeeView

```
CREATE VIEW EmployeeView AS
    SELECT
        employee_id,
        CONCAT (first_name,
        last_name) AS employee_full_name,
        hire_date,
        job_title,
        shop_id
    FROM
        Employee
```

Fiddle Title

50 characters remaining.

Fiddle Description

300 characters remaining.

Private Fiddle PRO

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Show Keyboard Shortcuts

Schema SQL ●

```
18      (2, 'Samual', 'Jackson', '1969-05-12', 'Manager', 9002),
19      (3, 'David', 'Hassellhoff', '1955-07-22', 'Temp', 9003);
20
21  -- Create Table for Coffee_Shop --
22
23  CREATE TABLE Coffee_Shop (
24      shop_id         INT,
25      shop_name       VARCHAR(50),
26      city            VARCHAR(50),
27      state           CHAR(2),
28      PRIMARY KEY (shop_id)
29  );
30
31  -- Added Data to the Coffee_Shop Table --
32
33  INSERT INTO Coffee_Shop(shop_id, shop_name, city, state)
34  VALUES
35      (9001, 'Caffeine Express', 'Draper', 'UT'),
36      (9002, 'StarBoys', 'Seattle', 'WA'),
37      (9003, 'CoffeeExpress', 'Salt Lake City', 'UT');
38
39  -- Create Coffee Table --
40
41  CREATE TABLE Coffee (
42      coffee_id           INT,
43      shop_id             INT,
44      supplier_id         INT,
45      coffee_name         VARCHAR(30),
46      price_per_pound     NUMERIC(5,2),
47      PRIMARY KEY (coffee_id)
48  );
49
```

Text to DDL

Query SQL ●

```
1  SHOW TABLES
```

Results   Copy as Markdown

Query #1   Execution time: 0ms

Tables_in_test
Coffee
Coffee_Shop
Employee
EmployeeView
Supplier

Select Statement Showing Employee View

```
SELECT * FROM EmployeeView
```

Results

Copy as Markdown

Query #1 Execution time: 1ms

employee_id	employee_full_name	hire_date	job_title	shop_id
1	JohnTravolta	1962-01-05	Owner	9001
2	SamualJackson	1969-05-12	Manager	9002
3	DavidHassellhoff	1955-07-22	Temp	9003

INDEX: SHOW INDEX FROM Coffee

Schema SQL ●

```
20
21  -- Create Table for Coffee_Shop --
22
23  CREATE TABLE Coffee_Shop (
24      shop_id      INT,
25      shop_name    VARCHAR(50),
26      city         VARCHAR(50),
27      state        CHAR(2),
28      PRIMARY KEY (shop_id)
29  );
30
31  -- Added Data to the Coffee_Shop Table --
32
33  INSERT INTO Coffee_Shop(shop_id, shop_name, city, state)
34  VALUES
35      (9001, 'Caffeine Express', 'Draper', 'UT'),
36      (9002, 'StarBoys', 'Seattle', 'WA'),
37      (9003, 'CoffeeExpress', 'Salt Lake City', 'UT');
38
39  -- Create Coffee Table --
40
41  CREATE TABLE Coffee (
42      coffee_id         INT,
43      shop_id           INT,
44      supplier_id       INT,
45      coffee_name       VARCHAR(30),
46      price_per_pound   NUMERIC(5,2),
47      PRIMARY KEY (coffee_id)
48  );
49
50  -- Added data to the Cofee table --
51
```

Text to DDL

Query SQL ●

```
1  SHOW INDEX FROM Coffee
```

Results

Copy as Markdown

Query #1 Execution time: 0ms

Table	Non_unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality	Sub_part	Packed	Null	Index_type	Comment
Coffee	0	PRIMARY	1	coffee_id	A	3	null	null		BTREE	
Coffee	1	coffe_name	1	coffee_name	A	3	null	null	YES	BTREE	

SFW Statement:

```sql
SELECT *
FROM Coffee
WHERE coffee_name = 'Mocha';
```

Schema SQL ●

```
17      (1, 'John', 'Travolta', '1962-01-05', 'Owner', 9001),
18      (2, 'Samual', 'Jackson', '1969-05-12', 'Manager', 9002),
19      (3, 'David', 'Hassellhoff', '1955-07-22', 'Temp', 9003);
20
21  -- Create Table for Coffee_Shop --
22
23  CREATE TABLE Coffee_Shop (
24      shop_id      INT,
25      shop_name    VARCHAR(50),
26      city         VARCHAR(50),
27      state        CHAR(2),
28      PRIMARY KEY (shop_id)
29  );
30
31  -- Added Data to the Coffee_Shop Table --
32
33  INSERT INTO Coffee_Shop(shop_id, shop_name, city, state)
34  VALUES
35      (9001, 'Caffeine Express', 'Draper', 'UT'),
36      (9002, 'StarBoys', 'Seattle', 'WA'),
37      (9003, 'CoffeeExpress', 'Salt Lake City', 'UT');
38
39  -- Create Coffee Table --
40
41  CREATE TABLE Coffee (
42      coffee_id         INT,
43      shop_id           INT,
44      supplier_id       INT,
45      coffee_name       VARCHAR(30),
46      price_per_pound   NUMERIC(5,2),
47      PRIMARY KEY (coffee_id)
48  );
```

Text to DDL

Query SQL ●

```
1  SELECT *
2  FROM Coffee
3  WHERE coffee_name = 'Mocha'
```

Results

Copy as Markdown

Query #1   **Execution time: 0ms**

coffee_id	shop_id	supplier_id	coffee_name	price_per_pound
2001	9001	8	Mocha	5.99

Three Table INNER JOIN:

```sql
SELECT Employee.employee_id, Employee.first_name, Employee.last_name, Coffee_Shop.city, Coffee_Shop.shop_name, Coffee.coffee_name
FROM ((Employee
INNER JOIN Coffee_Shop ON Employee.shop_id = Coffee_Shop.shop_id)
INNER JOIN Coffee ON Coffee_Shop.shop_id = Coffee.shop_id);
```

Schema SQL ●

```
       hire_date, job_title, shop_id)
16 VALUES
17     (1, 'John', 'Travolta', '1962-01-05', 'Owner', 9001),
18     (2, 'Samual', 'Jackson', '1969-05-12', 'Manager', 9002),
19     (3, 'David', 'Hassellhoff', '1955-07-22', 'Temp', 9003);
20
21 -- Create Table for Coffee_Shop --
22
23 CREATE TABLE Coffee_Shop (
24     shop_id      INT,
25     shop_name    VARCHAR(50),
26     city         VARCHAR(50),
27     state        CHAR(2),
28     PRIMARY KEY (shop_id)
29 );
30
31 -- Added Data to the Coffee_Shop Table --
32
33 INSERT INTO Coffee_Shop(shop_id, shop_name, city, state)
34 VALUES
35     (9001, 'Caffeine Express', 'Draper', 'UT'),
36     (9002, 'StarBoys', 'Seattle', 'WA'),
37     (9003, 'CoffeeExpress', 'Salt Lake City', 'UT');
38
39 -- Create Coffee Table --
40
41 CREATE TABLE Coffee (
42     coffee_id        INT,
43     shop_id          INT,
44     supplier_id      INT,
45     coffee_name      VARCHAR(30),
46     price_per_pound  NUMERIC(5,2),
47     PRIMARY KEY (coffee_id)
```

[Text to DDL]

Query SQL ●

```
1 SELECT Employee.employee_id, Employee.first_name,
  Employee.last_name, Coffee_Shop.city, Coffee_Shop.shop_name,
  Coffee.coffee_name
2 FROM ((Employee
3 INNER JOIN Coffee_Shop ON Employee.shop_id =
  Coffee_Shop.shop_id)
4 INNER JOIN Coffee ON Coffee_Shop.shop_id = Coffee.shop_id);
```

Results

[Copy as Markdown]

Query #1 Execution time: 1ms

employee_id	first_name	last_name	city	shop_name	coffee_name
1	John	Travolta	Draper	Caffeine Express	Mocha
2	Samual	Jackson	Seattle	StarBoys	Americano
3	David	Hassellhoff	Salt Lake City	CoffeeExpress	PineappleExpress