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WGU C170 PA

1A,1B

Nora's Bagel Bin Database Blueprints

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

M:1

BAGEL	
PK	Bagel ID
	Bagel Name
	Bagel Price
	Bagel Description

1C

Attributes were assigned to each table for 2NF based on their relationship with a Primary Key. For 2NF all non-key values must be completely dependent on the full Primary Key of the table. For table Bagel Order all the values (Order Date, First Name, Last Name, etc.) are dependent on the Order so they are dependent are the Order ID. The same goes for Table Bagel. The name, price, and description are dependent on the Bagel ID.
How the cardinality between the tables was determined is, for every Order ID, there could be many line Items, so you have a one-to-many relationship. For Bagel Order Line Item to Bagel, there could be many line items that will point to one Bagel, so it is a Many to one relationship.

2A,2B,2C,2D

Nora's Bagel Bin Database Blueprints

BAGEL ORDER	
PK	Bagel Order ID
FK	Customer ID
	Order Date
	Delivery Fee
	Special Notes

1:M

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

M:1

BAGEL	
PK	Bagel ID
	Bagel Description
	Bagel Price
	Bagel Name

M:1

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

2E

For 3NF the Bagel Order Table was broken down into Bagel Order and Customer Tables. This is due to 3NF requiring no attributes to be transitively on other attributes not part of the PK. Since the attributes First Name, Last Name, Address, etc. relate more to the customer than the order, we can move them into their table to reduce the amount of information redundancy in the Bagel Order table.

As for the cardinality between the tables. Bagel Order – Customer is a Many-to-One relationship because each customer can have many orders. The other relationships do not change going from 2NF to 3NF.

3A,3B

Nora's Bagel Bin Database Blueprints

Bagel Order		
PK	bagel_order_id	INTEGER
FK	customer_id	INTEGER
	orderDate	TIMESTAMP
	dFee	NUMERIC(2,2)
	notes	VARCHAR(100)

1:M

BAGEL ORDER LINE ITEM		
PK / FK	bagel_order_id	INTEGER
PK / FK	bagel_id	INTEGER
	bagelQuantity	INTEGER

M:1

BAGEL		
PK	bagel_id	INTEGER
	name	VARCHAR(50)
	price	NUMERIC(2,2)
	description	VARCHAR(100)

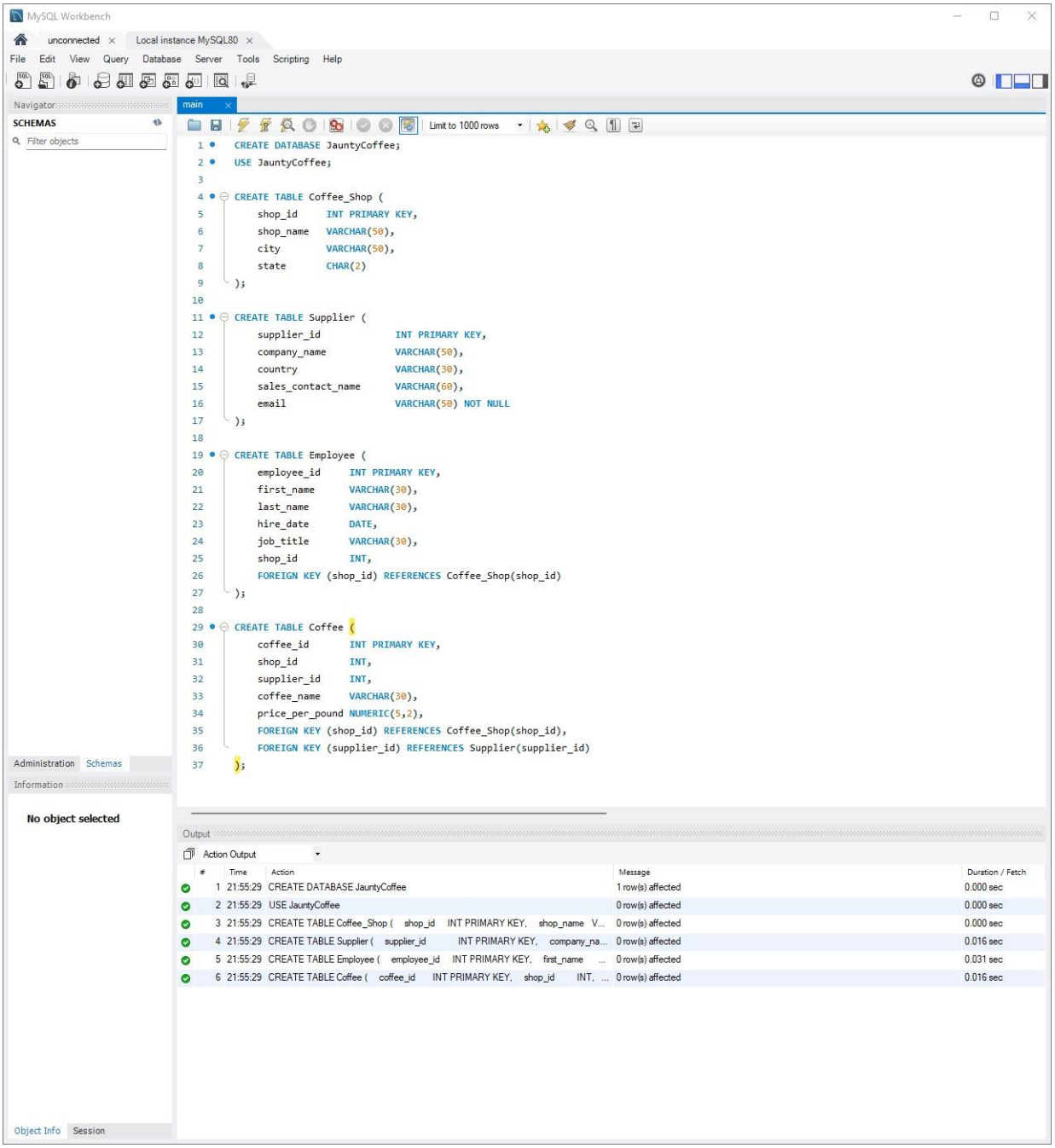
M:1

Customer		
PK	id	INTEGER
	fName	VARCHAR(50)
	lName	VARCHAR(50)
	address1	VARCHAR(100)
	address2	VARCHAR(100)
	city	VARCHAR(50)
	state	CHAR(2)
	zip	CHAR(5)
	phoneNumber	NUMBERIC(10,0)

B1a,B1b

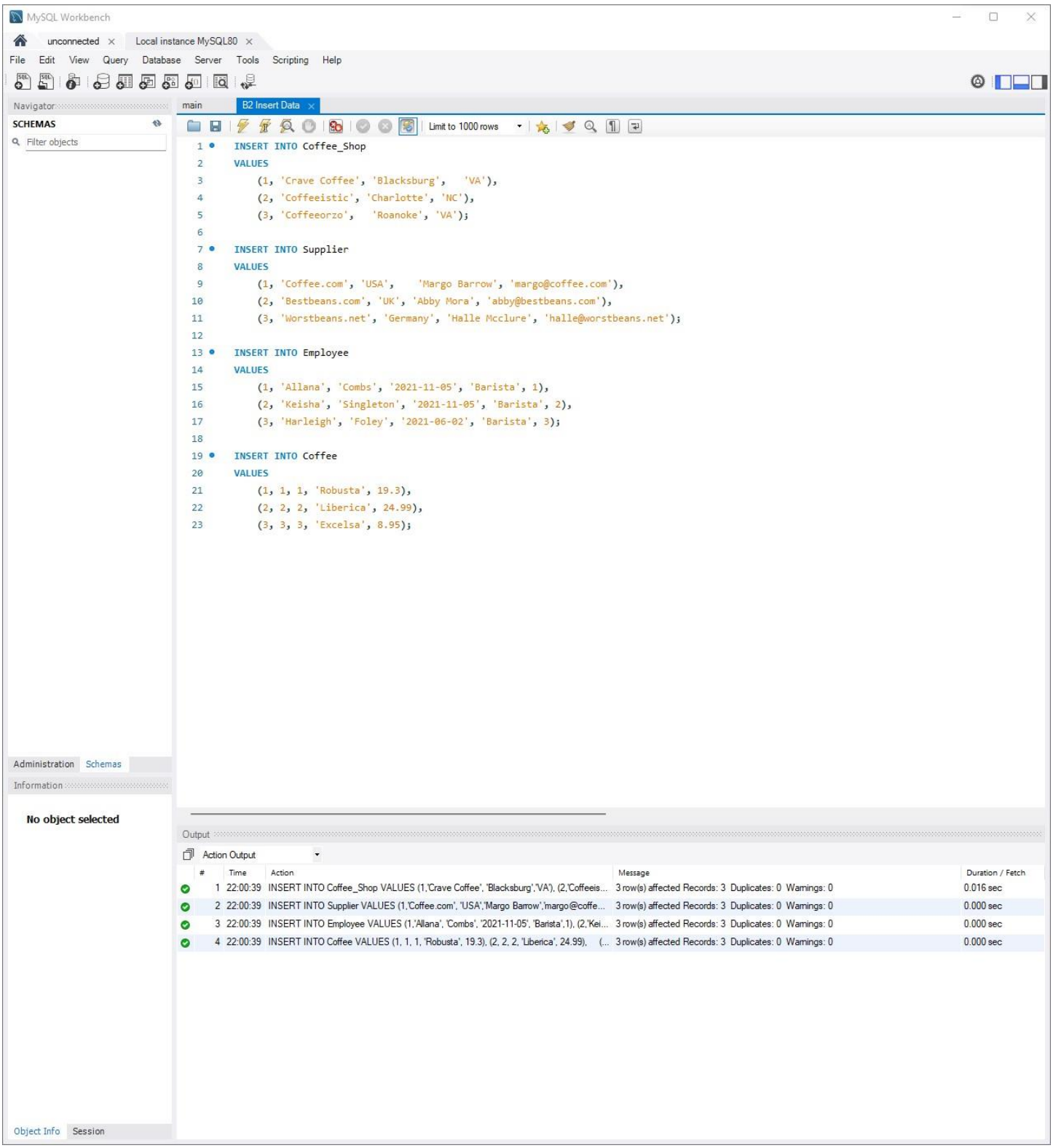
```
CREATE DATABASE JauntyCoffee;

USE JauntyCoffee;


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


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


CREATE TABLE Employee (
   employee_id     INT PRIMARY KEY,
   first_name      VARCHAR(30),
   last_name       VARCHAR(30),
   hire_date       DATE,
   job_title       VARCHAR(30),
   shop_id         INT,
   FOREIGN KEY (shop_id) REFERENCES Coffee_Shop(shop_id)
);


CREATE TABLE Coffee (
   coffee_id       INT PRIMARY KEY,
```

```
    shop_id        INT,
    supplier_id    INT,
    coffee_name    VARCHAR(30),
    price_per_pound NUMERIC(5,2),
    FOREIGN KEY (shop_id) REFERENCES Coffee_Shop(shop_id),
            FOREIGN KEY (supplier_id) REFERENCES Supplier(supplier_id)
);
```



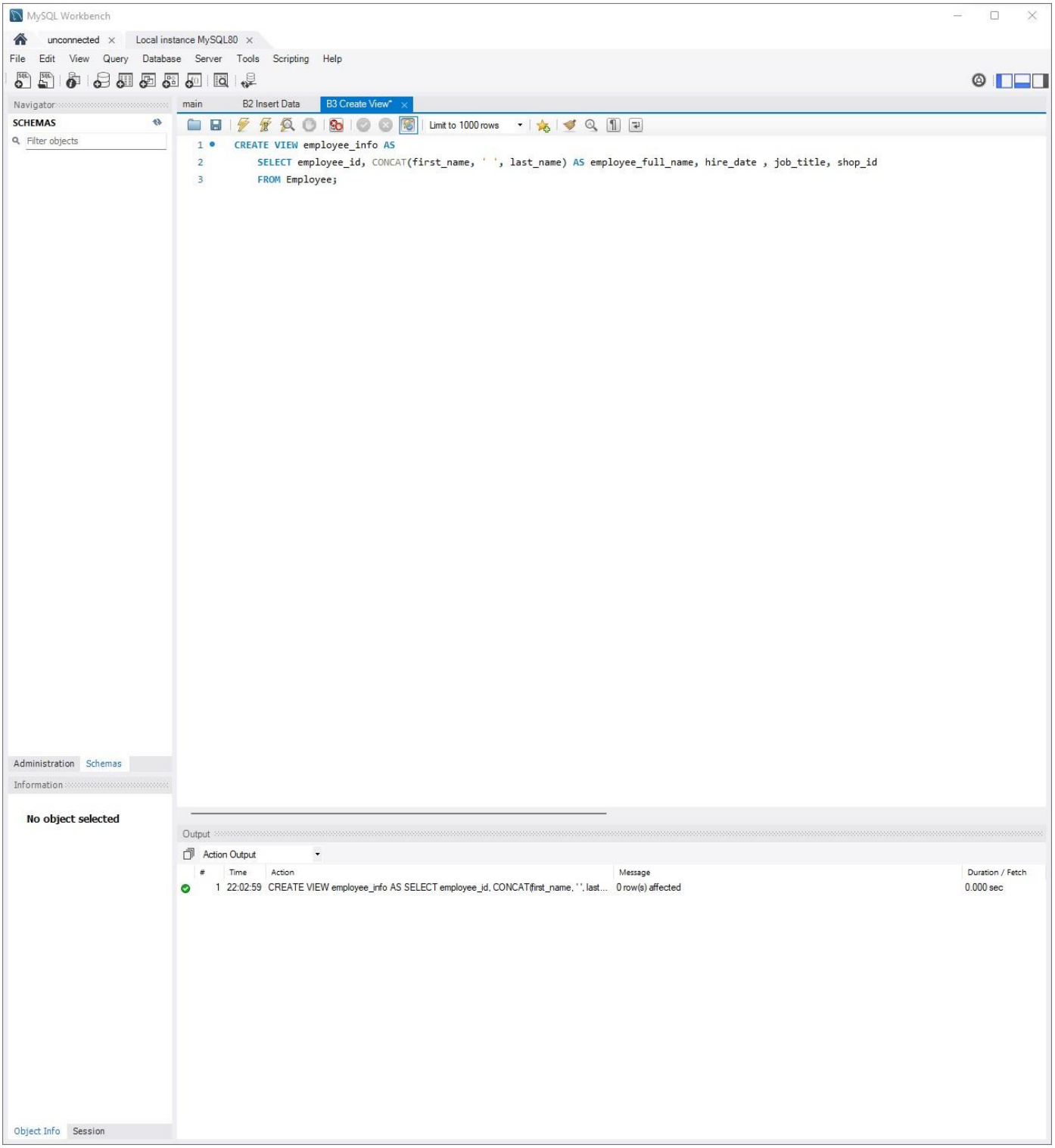
B2a,B2b

```
INSERT INTO Coffee_Shop
VALUES
        (1,     'Crave Coffee', 'Blacksburg',       'VA'),
        (2,     'Coffeeistic', 'Charlotte',     'NC'),
         (3,    'Coffeeorzo',       'Roanoke', 'VA');

INSERT INTO Supplier
VALUES
        (1,     'Coffee.com', 'USA',        'Margo Barrow',   'margo@coffee.com'),
        (2,     'Bestbeans.com', 'UK', 'Abby Mora', 'abby@bestbeans.com'),
         (3,    'Worstbeans.net', 'Germany', 'Halle Mcclure', 'halle@worstbeans.net');

INSERT INTO Employee
VALUES
        (1,     'Allana', 'Combs', '2021-11-05', 'Barista',     1),
        (2,     'Keisha', 'Singleton', '2021-11-05', 'Barista',   2),
         (3,    'Harleigh',         'Foley', '2021-06-02', 'Barista', 3);

INSERT INTO Coffee
VALUES
        (1, 1, 1, 'Robusta', 19.3),
        (2, 2, 2, 'Liberica', 24.99),
         (3, 3, 3, 'Excelsa', 8.95);
```


MySQL Workbench
unconnected
Local instance MySQL80
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
main
B2 Insert Data
Limit to 1000 rows
1 • INSERT INTO Coffee_Shop
2 VALUES
3 (1, 'Crave Coffee', 'Blacksburg', 'VA'),
4 (2, 'Coffeeistic', 'Charlotte', 'NC'),
5 (3, 'Coffeeorzo', 'Roanoke', 'VA');
6
7 • INSERT INTO Supplier
8 VALUES
9 (1, 'Coffee.com', 'USA', 'Margo Barrow', 'margo@coffee.com'),
10 (2, 'Bestbeans.com', 'UK', 'Abby Mora', 'abby@bestbeans.com'),
11 (3, 'Worstbeans.net', 'Germany', 'Halle Mcclure', 'halle@worstbeans.net');
12
13 • INSERT INTO Employee
14 VALUES
15 (1, 'Allana', 'Combs', '2021-11-05', 'Barista', 1),
16 (2, 'Keisha', 'Singleton', '2021-11-05', 'Barista', 2),
17 (3, 'Harleigh', 'Foley', '2021-06-02', 'Barista', 3);
18
19 • INSERT INTO Coffee
20 VALUES
21 (1, 1, 1, 'Robusta', 19.3),
22 (2, 2, 2, 'Liberica', 24.99),
23 (3, 3, 3, 'Excelsa', 8.95);
Administration Schemas
Information
No object selected
Object Info Session
Output
Action Output
Time Action Message Duration / Fetch
1 22:00:39 INSERT INTO Coffee_Shop VALUES (1,'Crave Coffee', 'Blacksburg','VA'), (2,'Coffeeis... 3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0 0.016 sec
2 22:00:39 INSERT INTO Supplier VALUES (1,'Coffee.com', 'USA','Margo Barrow','margo@coffe... 3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0 0.000 sec
3 22:00:39 INSERT INTO Employee VALUES (1,'Allana', 'Combs', '2021-11-05', 'Barista',1), (2,'Kei... 3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0 0.000 sec
4 22:00:39 INSERT INTO Coffee VALUES (1, 1, 1, 'Robusta', 19.3), (2, 2, 2, 'Liberica', 24.99), (... 3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0 0.000 sec

B3a,B3b

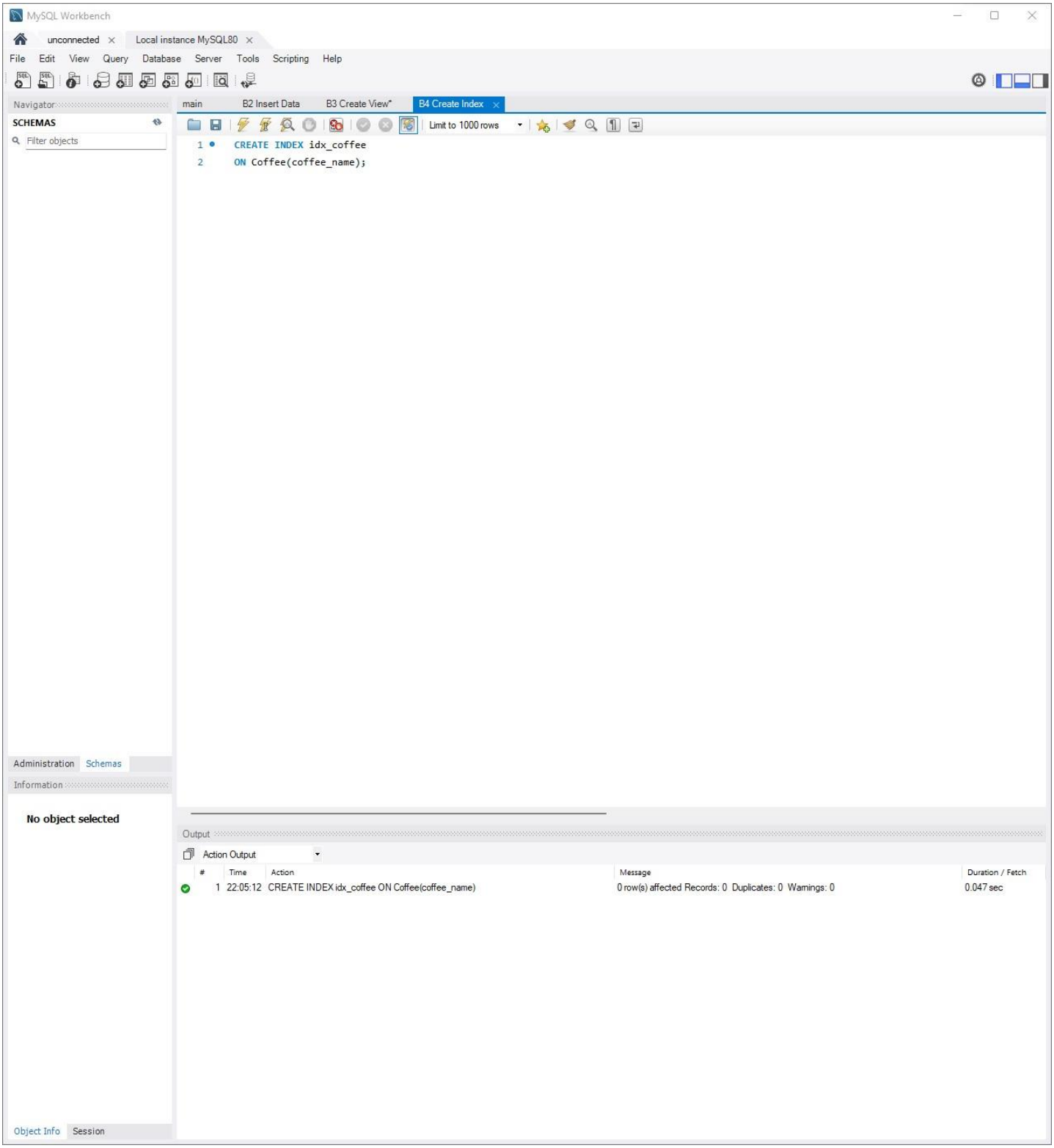
```
CREATE VIEW employee_info AS
    SELECT employee_id, CONCAT(first_name, ' ', last_name) AS employee_full_name, hire_date , job_title, shop_id
    FROM Employee;
```



B4a,B4b

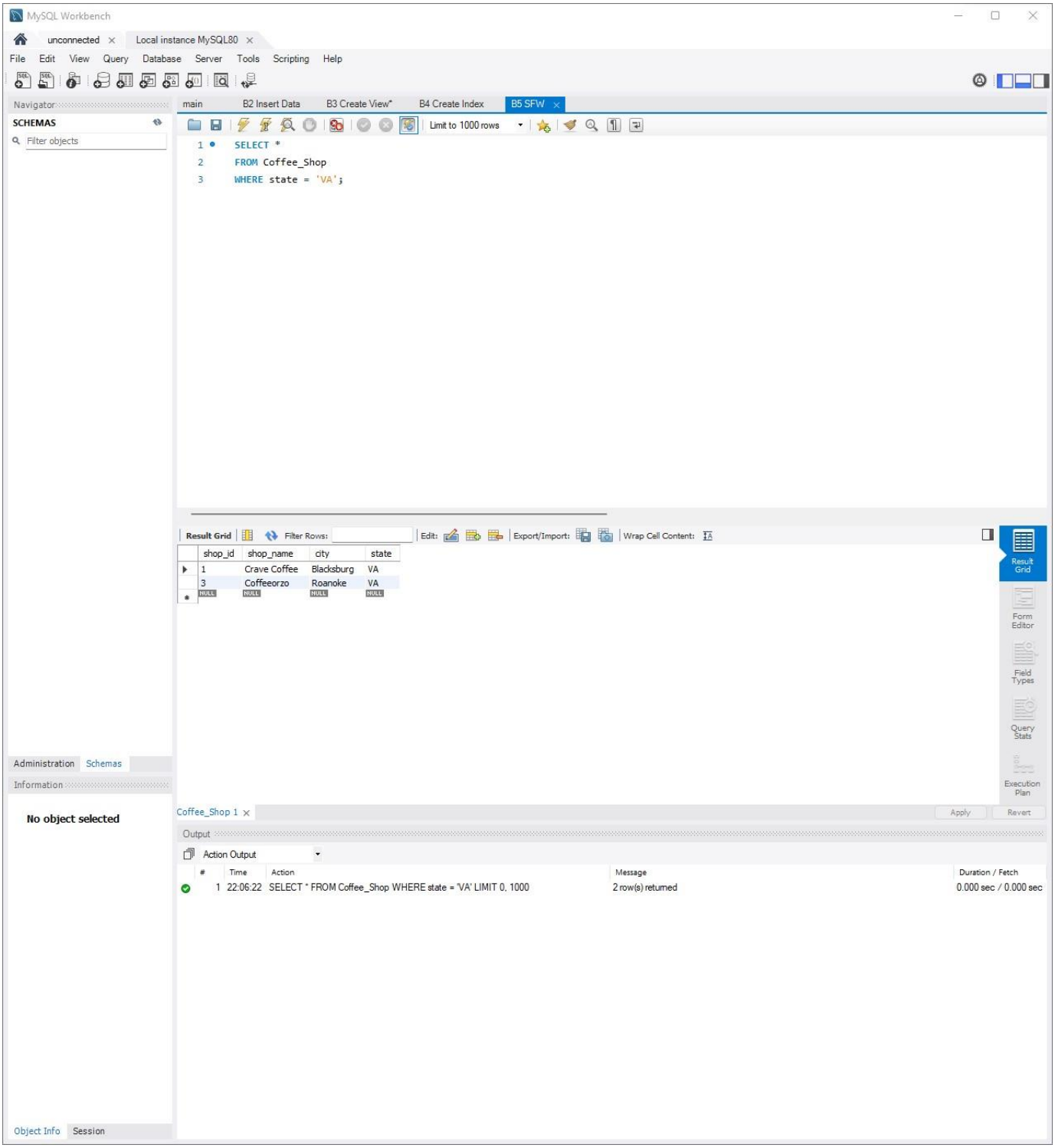
CREATE INDEX idx_coffee

ON Coffee(coffee_name);



B5a,B5b

```
SELECT *

FROM Coffee_Shop

WHERE state = 'VA';
```



B6a,B6b

SELECT Supplier.sales_contact_name AS 'Contact Name', Coffee_Shop.shop_name AS 'Shop Name', Coffee.coffee_name AS 'Coffee Name'

FROM Coffee

INNER JOIN Supplier

ON Coffee.supplier_id = Supplier.supplier_id

INNER JOIN Coffee_Shop

ON Coffee_Shop.shop_id = Coffee.shop_id;