

1A – Nora’s Bagels

First Normal from Blue Print

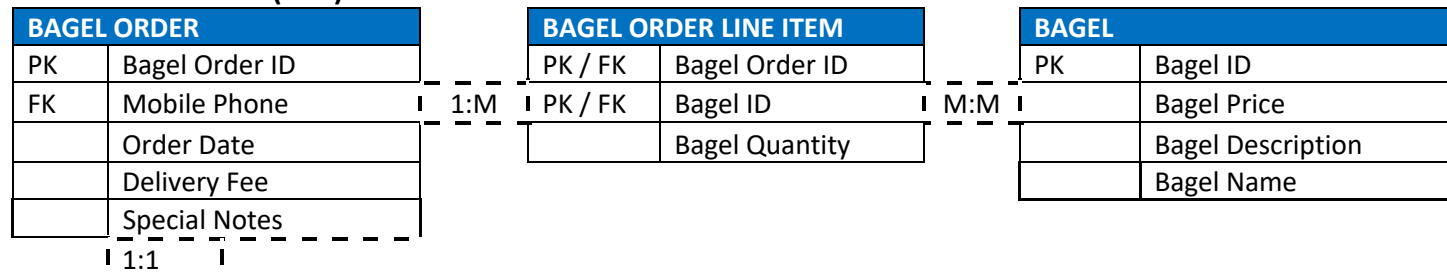
BAGEL ORDER	
PK	Bagel Order ID
PK	Bagel ID
	Order Date
	First Name
	Last Name
	Address 1
	Address 2
	City
	State
	Zip
	Mobile Phone
	Delivery Fee
	Bagel Name
	Bagel Description
	Bagel Price
	Bagel Quantity
	Special Notes

Second Normal Form (2NF)

BAGEL ORDER			BAGEL ORDER LINE ITEM			BAGEL	
PK	Bagel Order ID		PK / FK	Bagel Order ID		PK	Bagel ID
	Order Date	1:M	PK / FK	Bagel ID	M:M		Bagel Price
	First Name			Bagel Quantity			Bagel Description
	Last Name						Bagel Name
	Address 1						
	Address 2						
	City						
	State						
	Zip						
	Mobile Phone						
	Delivery Fee						
	Special Notes						

Explanation: Removed repeating fields from Tables to ensure no redundancy was found. Categorization of the order process broken down by component.

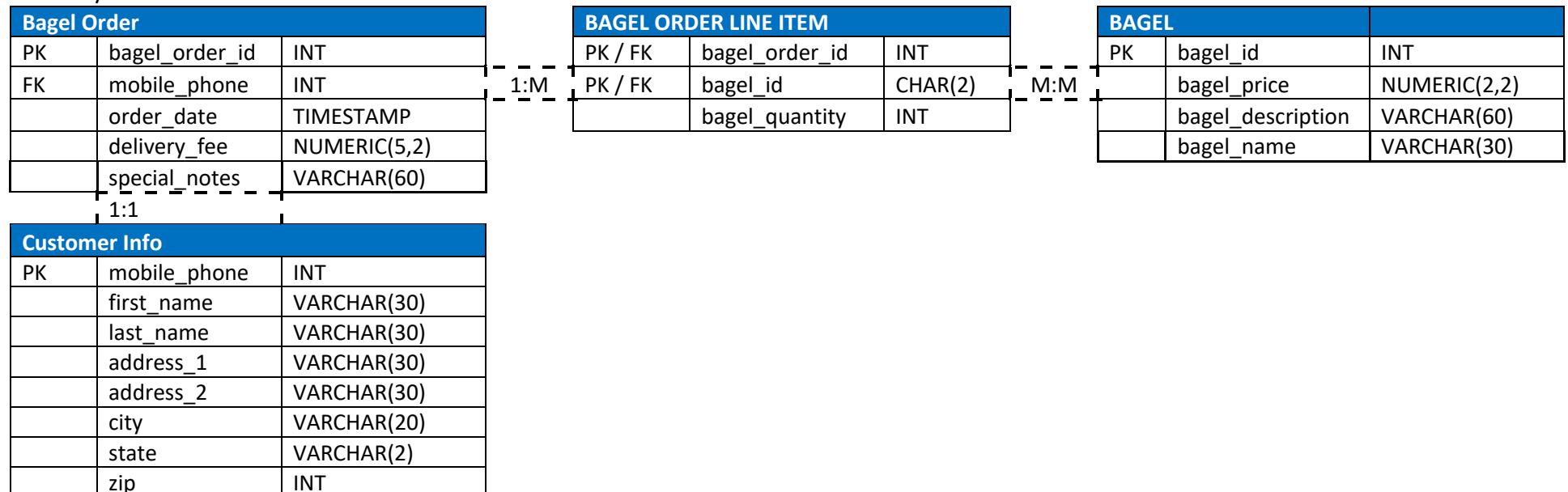
Third Normal Form (3NF)



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

Explanation: Further removed redundancy, removing the need for repeat customer data in the table. Using the Mobile Number as a unique ID

Final Physical Database Model



--	--	--

2B – Jaunty Coffee Co.

Table Creation

```
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)
);
```



Database: MySQL v5.7 ▼

▶ Run

📁 Save

↻ Load Example

👤 Collaborate

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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:

```
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');
```

3

Database: MySQL v5.7

Run

Save

Load Example

Collaborate

Sign in

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Private Fiddle

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Show Keyboard Shortcuts

Schema SQL

```
1 / hire_date DATE,
2 job_title VARCHAR(30),
3 shop_id INT,
4 PRIMARY KEY (employee_id)
5 );
6
7 -- Added Data to the Employee Table --
8
9 INSERT INTO Employee(employee_id, first_name, last_name,
10 hire_date, job_title, shop_id)
11 VALUES
12 (1, 'John', 'Travolta', '1962-01-05', 'Owner', 9001),
13 (2, 'Samual', 'Jackson', '1969-05-12', 'Manager', 9002),
14 (3, 'David', 'Hassellhoff', '1955-07-22', 'Temp', 9003);
15
16 -- Create Table for Coffee_Shop --
17
18 CREATE TABLE Coffee_Shop (
19 shop_id INT,
20 shop_name VARCHAR(50),
21 city VARCHAR(50),
22 state CHAR(2),
23 PRIMARY KEY (shop_id)
24 );
25
26 -- Added Data to the Coffee_Shop Table --
27
28 INSERT INTO Coffee_Shop(shop_id, shop_name, city, state)
29 VALUES
30 (9001, 'Caffeine Express', 'Draper', 'UT'),
31 (9002, 'StarBoys', 'Seattle', 'WA'),
32 (9003, 'CoffeeExpress', 'Salt Lake City', 'UT');
33
```

Text to DDL

Query SQL

1

Results

There are no results to be displayed.

Copy as Markdown

Proof of Working Tables

```
SELECT *
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	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

Fiddle Title

50 characters remaining.

Fiddle Description

300 characters remaining.

Private Fiddle

PRO

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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,
16   hire_date, job_title, shop_id)
17 VALUES
18   (1, 'John', 'Travolta', '1962-01-05', 'Owner', 9001),
19   (2, 'Samual', 'Jackson', '1969-05-12', 'Manager', 9002),
20   (3, 'David', 'Hassellhoff', '1955-07-22', 'Temp', 9003);
21
22 -- Create Table for Coffee_Shop --
23
24 CREATE TABLE Coffee_Shop (
25   shop_id INT,
26   shop_name VARCHAR(50),
27   city VARCHAR(50),
28   state CHAR(2),
29   PRIMARY KEY (shop_id)
30 );
31
32 -- Added Data to the Coffee_Shop Table --
33
34
```

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 AS
```

Database: MySQL v5.7 ▶ Run 💾 Save ↻ Load Example 👤 Collaborate → Sign in Have any feedback?

100

```

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

```


Copy as Markdown

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

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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:

```
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 );
49
50

```

Text to DDL

Query SQL

```

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

```

Copy as Markdown

Results

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:

```
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