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C170: Data Management – Applications

Data Management Project B

Create a database using the attached "Jaunty Coffee Co. ERD" by doing the following:

1. *Develop SQL code to create each table as specified in the attached "Jaunty Coffee Co. ERD" by doing the following:*
   a. *Provide the SQL code you wrote to create all the tables.*
   b. *Demonstrate that you tested your code by providing a screenshot showing your SQL commands and the database server's response.*

Create table "coffee_shop"

```
CREATE TABLE coffee_shop (
    shop_id INTEGER NOT NULL,
    shop_name varchar(50) NOT NULL,
    city varchar(50) NOT NULL,
    state varchar(2) NOT NULL,
    PRIMARY KEY (shop_id)
);
```

Action Output

#	Time	Action
1	13:37:16	CREATE TABLE coffee_shop (shop_id INTEGER NOT NULL,
2	13:37:16	CREATE TABLE employee (employee_id INTEGER NOT NULL,...
3	13:37:16	CREATE TABLE supplier (supplier_id INTEGER NOT NULL, c...
4	13:37:16	CREATE TABLE coffee (coffee_id INTEGER NOT NULL, shop...

MySQL code

```
CREATE TABLE coffee_shop (
  shop_id INTEGER NOT NULL,
  shop_name varchar(50) NOT NULL,
  city varchar(50) NOT NULL,
  state varchar(2) NOT NULL,
  PRIMARY KEY (shop_id)
);
```

Create table "employee"

```
CREATE TABLE employee (
    employee_id INTEGER NOT NULL,
    first_name varchar(30) NOT NULL,
    last_name varchar(30) NOT NULL,
    hire_date date NOT NULL,
    job_title varchar(30) NOT NULL,
    shop_id INTEGER NOT NULL,
    PRIMARY KEY (employee_id),
    FOREIGN KEY (shop_id) REFERENCES coffee_shop(shop_id )
);
```

Action Output

#	Time	Action	Me
1	13:37:16	CREATE TABLE coffee_shop (shop_id INTEGER NOT NULL, ...	0 ro
2	13:37:16	CREATE TABLE employee (employee_id INTEGER NOT NULL,...	
3	13:37:16	CREATE TABLE supplier (supplier_id INTEGER NOT NULL, c...	0 ro
4	13:37:16	CREATE TABLE coffee (coffee_id INTEGER NOT NULL, shop...	0 ro

MySQL code

```
CREATE TABLE employee (
  employee_id INTEGER NOT NULL,
  first_name varchar(30) NOT NULL,
  last_name varchar(30) NOT NULL,
  hire_date date NOT NULL,
  job_title varchar(30) NOT NULL,
  shop_id INTEGER NOT NULL,
  PRIMARY KEY (employee_id),
  FOREIGN KEY (shop_id) REFERENCES
coffee_shop(shop_id )
);
```

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Create table "supplier"

```
23 • CREATE TABLE supplier (
24       supplier_id INTEGER NOT NULL,
25       company_name varchar(50) NOT NULL,
26       country varchar(30) NOT NULL,
27       sales_contact_name varchar(60) NOT NULL,
28       email varchar(50) NOT NULL,
29       PRIMARY KEY (supplier_id)
30   );
```

```
tput
Action Output
#   Time       Action
1   13:37:16   CREATE TABLE coffee_shop (  shop_id INTEGER NOT NULL,  ...
2   13:37:16   CREATE TABLE employee (  employee_id INTEGER NOT NULL,...
3   13:37:16   CREATE TABLE supplier (  supplier_id INTEGER NOT NULL,
4   13:37:16   CREATE TABLE coffee (  coffee_id INTEGER NOT NULL,  shop...
```

MySQL code

```
CREATE TABLE supplier (
  supplier_id INTEGER NOT NULL,
  company_name varchar(50) NOT NULL,
  country varchar(30) NOT NULL,
  sales_contact_name varchar(60) NOT NULL,
  email varchar(50) NOT NULL,
  PRIMARY KEY (supplier_id)
);
```

Create table "coffee"

```
32 • CREATE TABLE coffee (
33       coffee_id INTEGER NOT NULL,
34       shop_id INTEGER NOT NULL,
35       supplier_id INTEGER NOT NULL,
36       coffee_name varchar(30) NOT NULL,
37       price_per_pound NUMERIC(5,2) NOT NULL,
38       PRIMARY KEY (coffee_id),
39       FOREIGN KEY (shop_id) REFERENCES coffee_shop(shop_id ),
40       FOREIGN KEY (supplier_id) REFERENCES supplier(supplier_id)
41   );
```

```
utput
Action Output
#   Time       Action                                                  Message
1   13:37:16   CREATE TABLE coffee_shop (  shop_id INTEGER NOT NULL,  ...  0 row(s) affe
2   13:37:16   CREATE TABLE employee (  employee_id INTEGER NOT NULL,...  0 row(s) affe
3   13:37:16   CREATE TABLE supplier (  supplier_id INTEGER NOT NULL,  c...  0 row(s) affe
4   13:37:16   CREATE TABLE coffee (  coffee_id INTEGER NOT NULL,  shop...  0 row(s)
```

MySQL code

```
CREATE TABLE coffee (
  coffee_id INTEGER NOT NULL,
  shop_id INTEGER NOT NULL,
  supplier_id INTEGER NOT NULL,
  coffee_name varchar(30) NOT NULL,
  price_per_pound NUMERIC(5,2) NOT NULL,
  PRIMARY KEY (coffee_id),
  FOREIGN KEY (shop_id) REFERENCES
coffee_shop(shop_id ),
  FOREIGN KEY (supplier_id) REFERENCES
supplier(supplier_id)
);
```

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2. *Develop SQL code to populate each table in the database design document by doing the following: (Note: This data is not provided. You will be fabricating the data for this step.)*
   a. *Provide the SQL code you wrote to populate the tables with at least three rows of data in each table.*
   b. *Demonstrate that you tested your code by providing a screenshot showing your SQL commands and the database server's response.*

MySQL code needed to populate the tables

```
INSERT INTO coffee_shop (shop_id, shop_name, city, state)
VALUES(1, 'Weinsteins Coffee Shop', 'Ithaca', 'NY');
INSERT INTO coffee_shop (shop_id, shop_name, city, state)
VALUES(2, 'Homers Brew', 'Springfield', 'OR');
INSERT INTO coffee_shop (shop_id, shop_name, city, state)
VALUES(3, 'Coffee Queens', 'Beverly Hills', 'CA');



INSERT INTO employee (employee_id, first_name, last_name, hire_date, job_title, shop_id)
VALUES(1, 'Harvey', 'Weinstein', '1899-02-03', 'Manager', 1);
INSERT INTO employee (employee_id, first_name, last_name, hire_date, job_title, shop_id)
VALUES(2, 'Homer', 'Simpson', '1995-12-24', 'Manager', 2);
INSERT INTO employee (employee_id, first_name, last_name, hire_date, job_title, shop_id)
VALUES(3, 'Michelle', 'Rodriguez', '2011-08-21', 'Manager', 3);



INSERT INTO supplier (supplier_id, company_name, country, sales_contact_name, email)
VALUES(1, 'McCullagh Coffee', 'U.S.A', 'Sully Sullivan', 'youvebeensullied@mail.com');
INSERT INTO supplier (supplier_id, company_name, country, sales_contact_name, email)
VALUES(2, 'Yu Cha Corp', 'china', 'Yao Ming', 'stole_your_coffee@ymail.com');
INSERT INTO supplier (supplier_id, company_name, country, sales_contact_name, email)
VALUES(3, 'Africa Merchants Ltd', 'Nigeria', 'Michael Boulos', 'african_coffee@conmail.com');



INSERT INTO coffee (coffee_id, shop_id, supplier_id, coffee_name, price_per_pound)
VALUES(1, 1, 1, 'Celtic Green', 30);
INSERT INTO coffee (coffee_id, shop_id, supplier_id, coffee_name, price_per_pound)
VALUES(2, 2, 2, 'Wu Lao', 11);
INSERT INTO coffee (coffee_id, shop_id, supplier_id, coffee_name, price_per_pound)
VALUES(3, 3, 3, 'Wild Savannah 3', 15);
```

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Select Statement Result "Coffee Shop"

```
SELECT * FROM coffee_shop;
```

Result Grid | Filter Rows: | Edit:

shop_id	shop_name	city	state
1	Weinsteins Coffee Shop	Ithaca	NY
2	Homers Brew	Springfield	OR
3	Coffee Queens	Beverly Hills	CA

Select Statement Result "Employee"

```
SELECT * FROM employee;
```

Result Grid | Filter Rows: | Edit:

employee_id	first_name	last_name	hire_date	job_title	shop_id
1	Harvey	Weinstein	1899-02-03	Manager	1
2	Homer	Simpson	1995-12-24	Manager	2
3	Michelle	Rodriguez	2011-08-21	Manager	3

Select Statement Result "Supplier"

```
SELECT * FROM supplier;
```

Result Grid | Filter Rows: | Edit: | Export/Import:

supplier_id	company_name	country	sales_contact_name	email
1	McCullagh Coffee	U.S.A	Sully Sullivan	youvebeensullied@mail.com
2	Yu Cha Corp	china	Yao Ming	stole_your_coffee@ymail.com
3	Africa Merchants Ltd	Nigeria	Michael Boulos	african_coffee@conmail.com

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Select Statement Result "Coffee"

```
SELECT * FROM coffee;
```

Filter Rows: Edit:

coffee_id	shop_id	supplier_id	coffee_name	price_per_pound
1	1	1	Celtic Green	30.00
2	2	2	Wu Lao	11.00
3	3	3	Wild Savannah 3	15.00

3. *Develop SQL code to create a view by doing the following:*
   a. *Provide the SQL code you wrote to create your view. The view should show* all *of the information from the "Employee" table but concatenate* each *employee's first and last name, formatted with a space between the first and last name, into a new attribute called employee_full_name.*
   b. *Demonstrate that you tested your code by providing a screenshot showing your SQL commands and the database server's response.*

Created "Employee" View

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

Action Output

#	Time	Action
21	13:02:26	SELECT * FROM supplier LIMIT 0, 1000
22	13:05:33	SELECT * FROM coffee LIMIT 0, 1000
23	14:17:14	CREATE VIEW Employee_View AS SELECT employee_id, CONCAT(first_name, ' ', last_name) AS employee_full_name...

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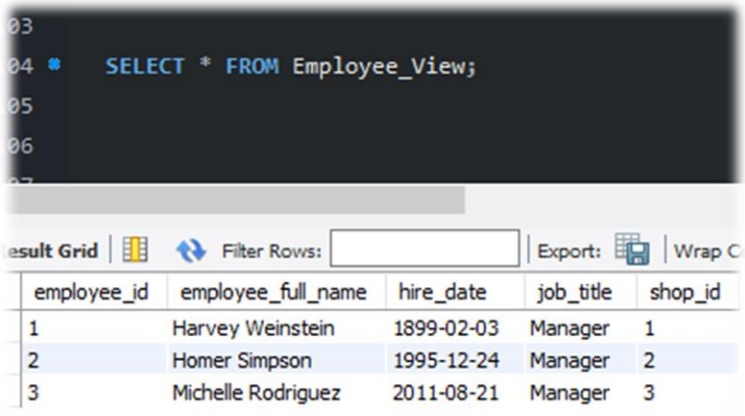
MySQL code to create "Employee View"

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

View Table showing "Employee Full Name"



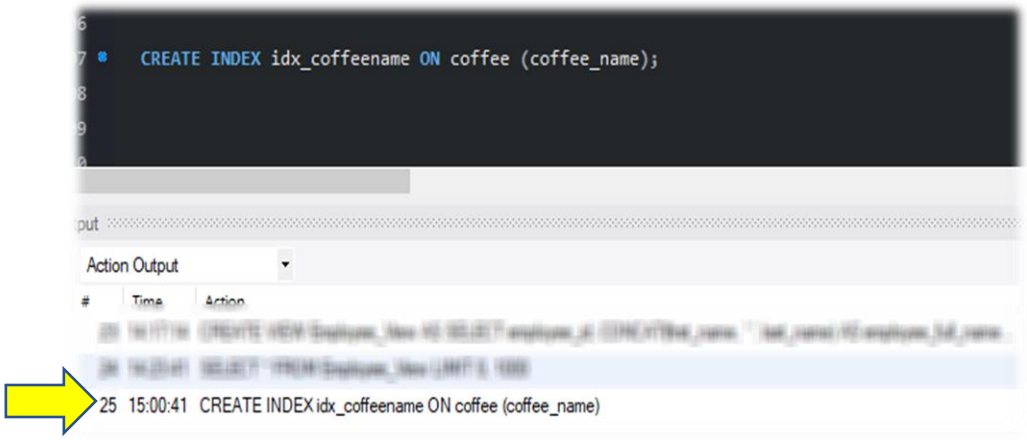
```
SELECT * FROM Employee_View;
```

Result Grid | Filter Rows: | Export: | Wrap C

employee_id	employee_full_name	hire_date	job_title	shop_id
1	Harvey Weinstein	1899-02-03	Manager	1
2	Homer Simpson	1995-12-24	Manager	2
3	Michelle Rodriguez	2011-08-21	Manager	3

4. *Develop SQL code to create an index on the coffee_name field by doing the following:*
   a. *Provide the SQL code you wrote to create your index on the coffee_name field from the "Coffee" table.*
   b. *Demonstrate that you tested your code by providing a screenshot showing your SQL commands and the database server's response.*

Create Index on "Coffee name" field



```
CREATE INDEX idx_coffeename ON coffee (coffee_name);
```

Action Output

#	Time	Action
25	15:00:41	CREATE INDEX idx_coffeename ON coffee (coffee_name)

MySQL code for index

```
CREATE INDEX
idx_coffeename ON coffee
(coffee_name);
```

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5. *Develop SQL code to create an SFW (SELECT–FROM–WHERE) query for* any *of your tables or views by doing the following:*
   a. *Provide the SQL code you wrote to create your SFW query.*
   b. *Demonstrate that you tested your code by providing a screenshot showing your SQL commands and the database server's response.*

(SELECT-FROM-WHERE) Demo

```
SELECT * FROM employee WHERE hire_date < '1900-01-01';
```

Result Grid | Filter Rows: | Edit: | Export/In

employee_id	first_name	last_name	hire_date	job_title	shop_id
1	Harvey	Weinstein	1899-02-03	Manager	1

MySQL code

```
SELECT * FROM employee WHERE hire_date < '1900-01-01';
```

6. *Develop SQL code to create a query by doing the following:*
   a. *Provide the SQL code you wrote to create your table joins query. The query should join together* ***three*** *different tables and include attributes from* all *three tables in its output.*
   b. *Demonstrate that you tested your code by providing a screenshot showing your SQL commands and the database server's response.*

Joined 4 columns from 3 different tables

```
SELECT
  coffee_shop.shop_name,
  coffee.coffee_name,
  supplier.sales_contact_name,
  supplier.email
FROM coffee_shop
JOIN coffee
  ON coffee_shop.shop_id = coffee.shop_id
JOIN supplier
  ON supplier.supplier_id = coffee.supplier_id;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

shop_name	coffee_name	sales_contact_name	email
Weinsteins Coffee Shop	Celtic Green	Sully Sullivan	youvebeensullied@mail.com
Homers Brew	Wu Lao	Yao Ming	stole_your_coffee@ymail.com
Coffee Queens	Wild Savannah 3	Michael Boulos	african_coffee@conmail.com

MySQL code

```
SELECT
coffee_shop.shop_name,
coffee.coffe_name,
supplier.sales_contact_name,
supplier.email
FROM coffee_shop
JOIN coffee
ON coffee_shop.shop_id
JOIN supplier
ON supplier.supplier_id =
coffee.supplier_id;
```

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