**IS 456 IT Database Systems Management**

**HOP03B Working with Joins**

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**Before You Start**

* The directory path shown in screenshots may be different from yours.
* Some steps are not explained in the tutorial**.** If you are not sure what to do:
  1. Consult the resources listed below.
  2. If you cannot solve the problem after a few tries, ask a TA for help.

**Learning Outcomes**

Students will be able to:

Students will be able to:

* Understand the SQLite queries.
* Run queries in SQLite.
* Understand join queries

Execute the following query

## -- 02 JOIN -- test.db

-- join example tables, left and right

CREATE TABLE left ( id INTEGER, description TEXT );

CREATE TABLE right ( id INTEGER, description TEXT );

INSERT INTO left VALUES ( 1, 'left 01' );

INSERT INTO left VALUES ( 2, 'left 02' );

INSERT INTO left VALUES ( 3, 'left 03' );

INSERT INTO left VALUES ( 4, 'left 04' );

INSERT INTO left VALUES ( 5, 'left 05' );

INSERT INTO left VALUES ( 6, 'left 06' );

INSERT INTO left VALUES ( 7, 'left 07' );

INSERT INTO left VALUES ( 8, 'left 08' );

INSERT INTO left VALUES ( 9, 'left 09' );

INSERT INTO right VALUES ( 6, 'right 06' );

INSERT INTO right VALUES ( 7, 'right 07' );

INSERT INTO right VALUES ( 8, 'right 08' );

INSERT INTO right VALUES ( 9, 'right 09' );

INSERT INTO right VALUES ( 10, 'right 10' );

INSERT INTO right VALUES ( 11, 'right 11' );

INSERT INTO right VALUES ( 11, 'right 12' );

INSERT INTO right VALUES ( 11, 'right 13' );

INSERT INTO right VALUES ( 11, 'right 14' );

SELECT \* FROM left;

SELECT \* FROM right;

SELECT l.description AS left, r.description AS right

FROM left AS l

JOIN right AS r ON l.id = r.id;

-- restore database

DROP TABLE left;

DROP TABLE right;

-- sale example

SELECT \* FROM sale;

SELECT \* FROM item;

SELECT s.id AS sale, i.name, s.price

FROM sale AS s

JOIN item AS i ON s.item\_id = i.id;

SELECT s.id AS sale, s.date, i.name, i.description, s.price

FROM sale AS s

JOIN item AS i ON s.item\_id = i.id;

## -- 03 Junction Table -- test.db

SELECT \* FROM customer;

SELECT \* FROM item;

SELECT \* FROM sale;

SELECT c.name AS Cust, c.zip, i.name AS Item, i.description, s.quantity AS Quan, s.price AS Price

FROM sale AS s

JOIN item AS i ON s.item\_id = i.id

JOIN customer AS c ON s.customer\_id = c.id

ORDER BY Cust, Item;

-- a customer without sales

INSERT INTO customer ( name ) VALUES ( 'Jane Smith' );

SELECT \* FROM customer;

-- left joins

SELECT c.name AS Cust, c.zip, i.name AS Item, i.description, s.quantity AS Quan, s.price AS Price

FROM customer AS c

LEFT JOIN sale AS s ON s.customer\_id = c.id

LEFT JOIN item AS i ON s.item\_id = i.id

ORDER BY Cust, Item;

-- restore database

DELETE FROM customer WHERE id = 4;

# Screenshots

Provide at least 3 screenshots as part of HOP submission.

# Summary

Write a 150-word summary to explain your understandings and findings from this lab assignment.