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.