CSCD 327 Lab 2

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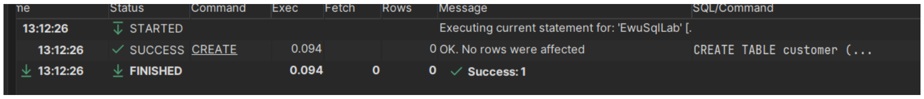
January 15, 2026

1 Create Customer table

```sql
CREATE TABLE customer (
        customerId int,
        first_name varchar(20),
        last_name varchar(20),
        city varchar(20),
        state char(2),
        check(state in (’WA’, ’OR’, ’ID’)),
        primary key(customerId)
        );
```

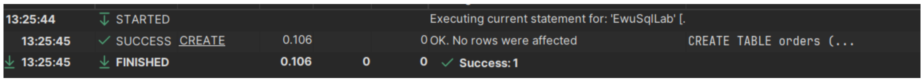


ne	Status	Command	Exec	Fetch	Rows	Message	SQL/Command
13:12:26	STARTED					Executing current statement for: 'EwuSqlLab' [.	
13:12:26	✓ SUCCESS	CREATE	0.094		0	OK. No rows were affected	CREATE TABLE customer (...
13:12:26	FINISHED		0.094	0	0	✓ Success: 1	

Figure 1: Creating the customer table

2 Create Orders table

```sql
CREATE TABLE orders (
        orderId char(5),
        customerId int,
        order_date date,
        order_value decimal(10,2),
        check(order_value > 0.0),
        primary key(orderId),
        foreign key(customerId) references customer(customerId)
                on update cascade
                on delete set null
);
```

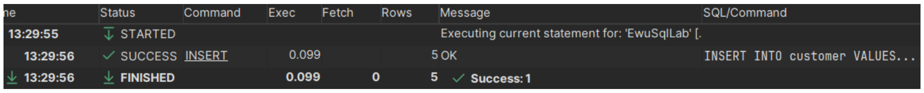


```
13:25:44     STARTED                                    Executing current statement for: 'EwuSqlLab' [.
  13:25:45   SUCCESS  CREATE     0.106               0  OK. No rows were affected        CREATE TABLE orders (...
  13:25:45   FINISHED            0.106      0        0  ✓ Success: 1
```

Figure 2: Creating the orders table

3 Insert data into tables

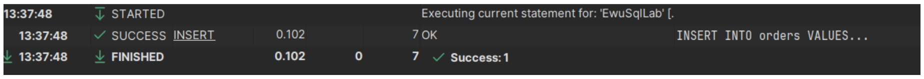
```sql
INSERT INTO customer VALUES
      (1001, ’Jane’, ’Eyre’, ’Spokane’, ’WA’),
      (1002, ’Harry’, ’Potter’, ’Boise’, ’ID’),
      (1003, ’James’, ’Bond’, ’Seattle’, ’WA’),
      (1004, ’Jo’, ’March’, ’Portland’, ’OR’),
      (1005, ’Sherlock’, ’Holmes’, ’Salem’, ’OR’);
```



ne	Status	Command	Exec	Fetch	Rows	Message	SQL/Command
13:29:55	STARTED					Executing current statement for: 'EwuSqlLab' [.	
13:29:56	✓ SUCCESS	INSERT	0.099		5	OK	INSERT INTO customer VALUES...
13:29:56	FINISHED		0.099	0	5	✓ Success: 1	

Figure 3: Inserting data into the customer table

```sql
INSERT INTO orders VALUES
      (’DB101’, 1001, ’2026-01-01’, 150.00),
      (’DB102’, 1003, ’2026-01-01’, 50.50),
      (’DB103’, 1001, ’2026-01-03’, 25.25),
      (’DB104’, 1005, ’2026-01-04’, 125.75),
      (’DB105’, 1004, ’2026-01-07’, 43.25),
      (’DB106’, 1004, ’2026-01-08’, 11.50),
      (’DB107’, 1001, ’2026-01-12’, 84.75);
```

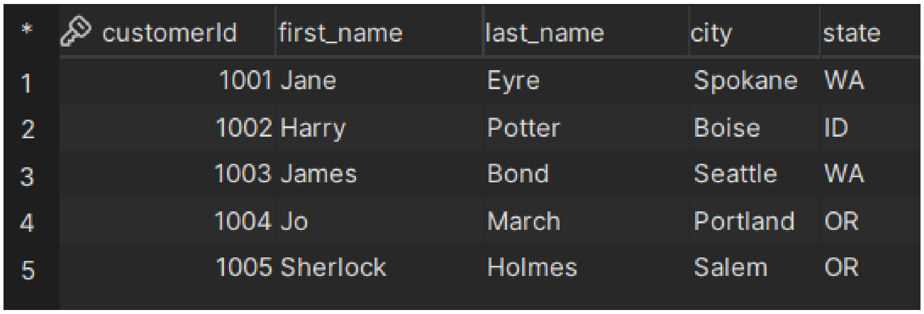


13:37:48	STARTED					Executing current statement for: 'EwuSqlLab' [.	
13:37:48	✓ SUCCESS	INSERT	0.102		7	OK	INSERT INTO orders VALUES...
13:37:48	FINISHED		0.102	0	7	✓ Success: 1	

Figure 4: Inserting data into the orders table

4 Query inserted data

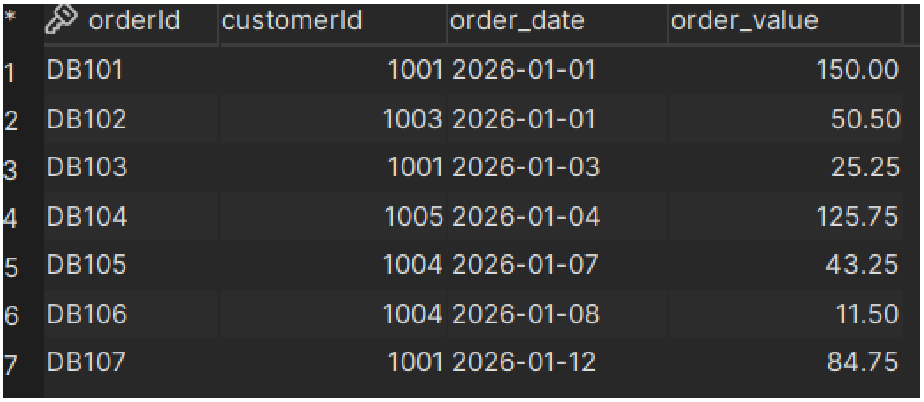
```sql
SELECT * FROM customer;
```



*	customerId	first_name	last_name	city	state
1	1001	Jane	Eyre	Spokane	WA
2	1002	Harry	Potter	Boise	ID
3	1003	James	Bond	Seattle	WA
4	1004	Jo	March	Portland	OR
5	1005	Sherlock	Holmes	Salem	OR

Figure 5: Selecting all data from the customer table

```sql
SELECT * FROM orders;
```



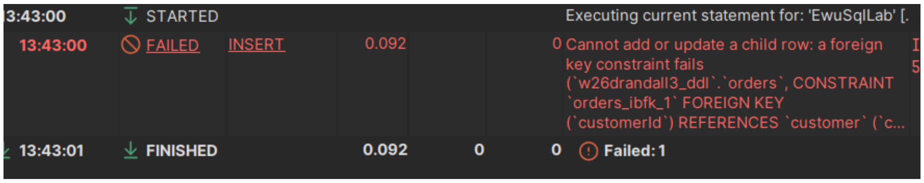
*	orderId	customerId	order_date	order_value
1	DB101	1001	2026-01-01	150.00
2	DB102	1003	2026-01-01	50.50
3	DB103	1001	2026-01-03	25.25
4	DB104	1005	2026-01-04	125.75
5	DB105	1004	2026-01-07	43.25
6	DB106	1004	2026-01-08	11.50
7	DB107	1001	2026-01-12	84.75

Figure 6: Selecting all data from the orders table

5 Attempt insert

The attempt fails because of a foreign key constraint violation (1010 is not a valid customer id).

```sql
INSERT INTO orders VALUES ('DB108', 1010, '2026-01-15', 50.00);
```

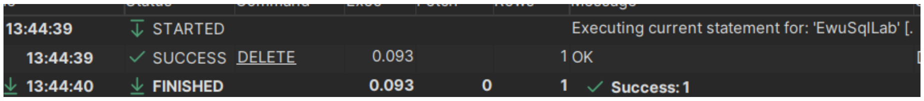


```
3:43:00     STARTED                                          Executing current statement for: 'EwuSqlLab' [.
 13:43:00   FAILED   INSERT    0.092                       0 Cannot add or update a child row: a foreign        I
                                                             key constraint fails                               5
                                                             (`w26drandall3_ddl`.`orders`, CONSTRAINT
                                                             `orders_ibfk_1` FOREIGN KEY
                                                             (`customerId`) REFERENCES `customer` (`c...
 13:43:01   FINISHED           0.092         0             0 Failed: 1
```

Figure 7: Attempting to insert invalid foreign key into orders table

6 Delete Sherlock from customer table

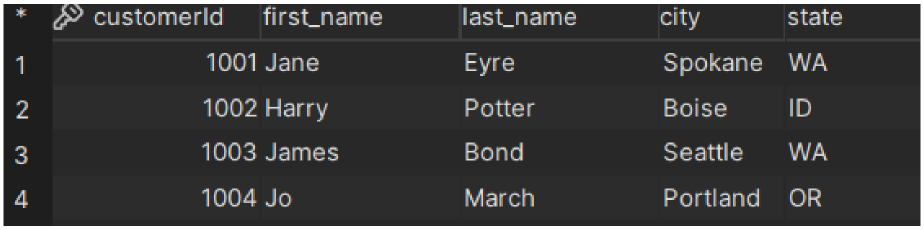
```sql
DELETE from customer WHERE first_name = 'Sherlock';
```



```
13:44:39     ↓ STARTED                                       Executing current statement for: 'EwuSqlLab' [.
   13:44:39  ✓ SUCCESS  DELETE    0.093               1  OK
↓  13:44:40  ↓ FINISHED           0.093     0         1  ✓ Success: 1
```

Figure 8: Deleting Sherlock Holmes from customer table and checking orders table

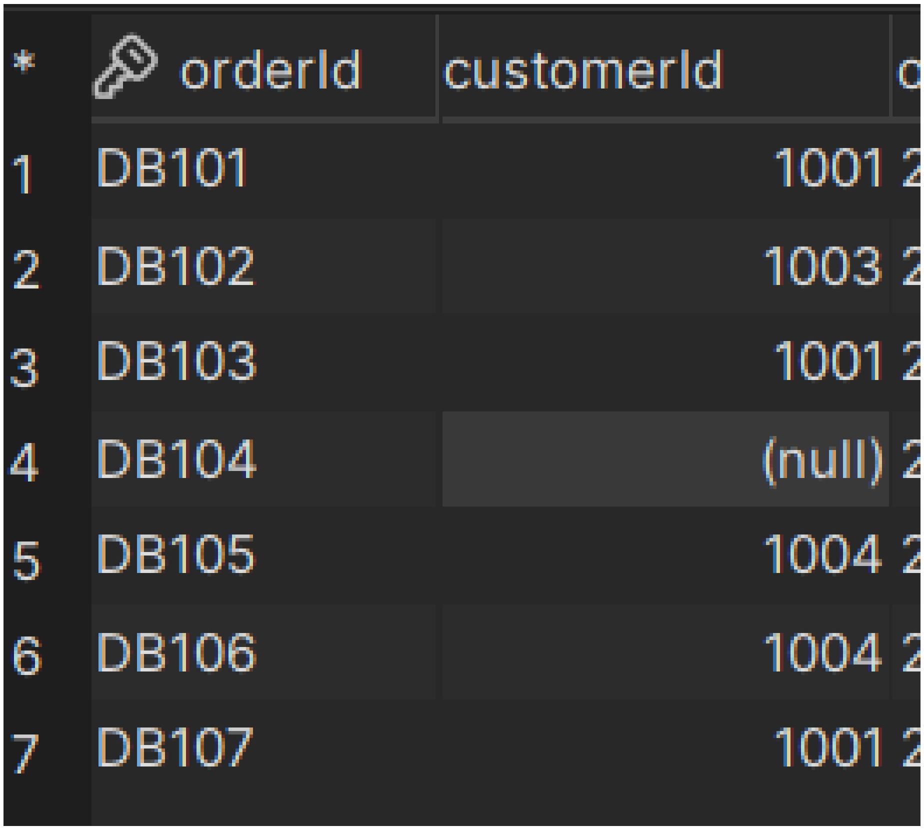
```sql
SELECT * FROM customer;
```



*	customerId	first_name	last_name	city	state
1	1001	Jane	Eyre	Spokane	WA
2	1002	Harry	Potter	Boise	ID
3	1003	James	Bond	Seattle	WA
4	1004	Jo	March	Portland	OR

Figure 9: Customer table after deleting Sherlock Holmes

```sql
SELECT * FROM orders;
```

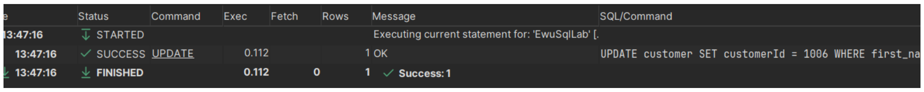


*	orderId	customerId	o
1	DB101	1001	2
2	DB102	1003	2
3	DB103	1001	2
4	DB104	(null)	2
5	DB105	1004	2
6	DB106	1004	2
7	DB107	1001	2

Figure 10: Orders table with null customerId after deleting Sherlock Holmes

7 update Harry Potter's customerId to 1006

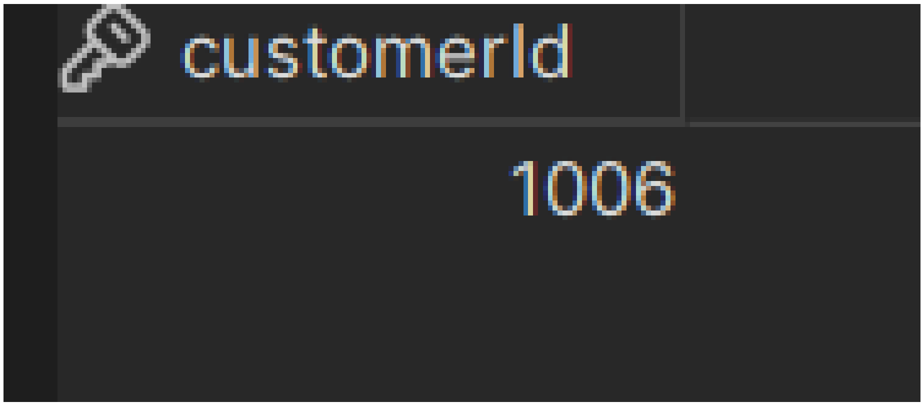
```sql
UPDATE customer SET customerId = 1006 WHERE first_name
    = 'Harry' AND last_name = 'Potter';
```



e	Status	Command	Exec	Fetch	Rows	Message	SQL/Command
13:47:16	STARTED					Executing current statement for: 'EwuSqlLab' [.	
13:47:16	✓ SUCCESS	UPDATE	0.112		1	OK	UPDATE customer SET customerId = 1006 WHERE first_na
13:47:16	FINISHED		0.112	0	1	✓ Success: 1	

Figure 11: Updating Harry Potter's customerId to 1006

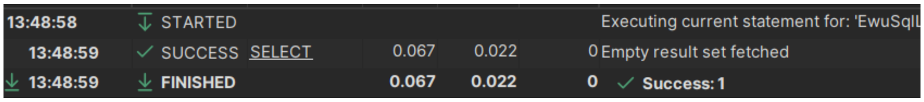
```sql
SELECT customerId FROM customer WHERE first_name = 'Harry' AND last_name = 'Potter';
```



```
customerId
      1006
```

Figure 12: Selecting Harry Potter’s updated customerId

```sql
SELECT * from orders WHERE customerId = 1006;
```

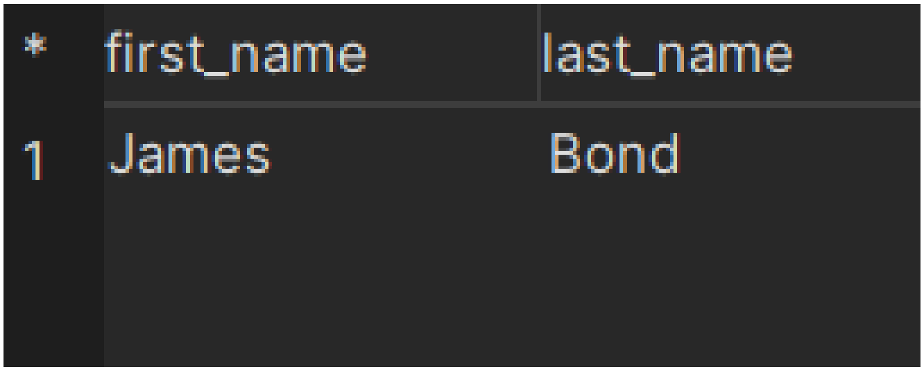


```
13:48:58      STARTED                                       Executing current statement for: 'EwuSqlL
  13:48:59  ✓ SUCCESS  SELECT          0.067    0.022      0 Empty result set fetched
  13:48:59    FINISHED                 0.067    0.022      0  ✓ Success: 1
```

Figure 13: Orders table showing Harry Potter has no orders

8 Find all customers in WA but not in Spokane

```sql
SELECT first_name, last_name from customer WHERE state
    = ’WA’ AND city <> ’Spokane’;
```

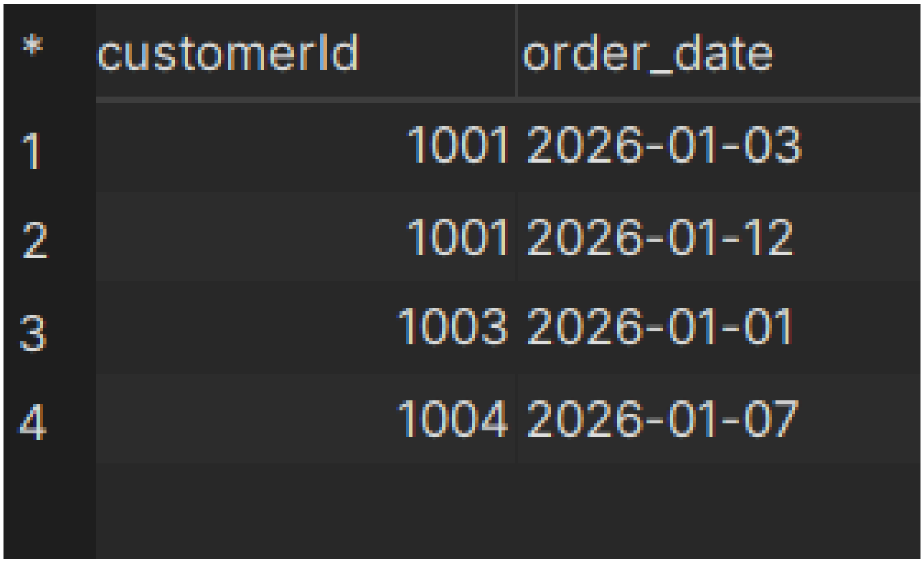


*	first_name	last_name
1	James	Bond

Figure 14: Selecting all customers in WA but not in Spokane

9 Find orders between 25 and 100 inclusive, ordered by customerId

```sql
SELECT customerId, order_date FROM orders WHERE
        order_value BETWEEN 25 AND 100
        ORDER BY customerId;
```

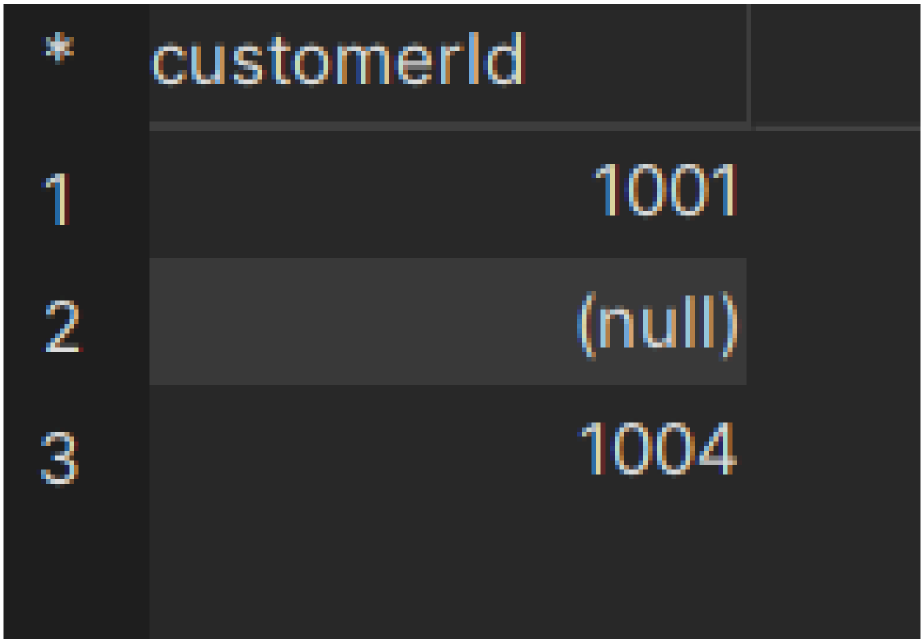


*	customerId	order_date
1	1001	2026-01-03
2	1001	2026-01-12
3	1003	2026-01-01
4	1004	2026-01-07

Figure 15: Selecting orders with value between 25 and 100 inclusive, ordered by customerId

10 Find distinct customerIds with orders on or after 2026-01-03

```sql
SELECT DISTINCT customerId FROM orders
        WHERE order_date >= '2026-01-03';
```



*	customerId
1	1001
2	(null)
3	1004

Figure 16: Selecting distinct customerIds with orders on or after 2026-01-03