CRUD: INSERT

Database Development 2021
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Using the database

- Create
  - Make databases and tables
- Read
  - Get data – all the SELECT queries we have been doing
- Update
  - Add data to the table
  - Replace existing data
- Delete
  - Act like a Dalek!

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Adding Data

- Need to know the structure of the table
- Look for the DDL or ER diagram
- Must know:
  - Field type
  - Required or not
  - Foreign Key Integrity
  - Field order doesn't matter

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Single INSERT structure

```
INSERT INTO table_name
    (fields, separated, via, commas)
VALUES
    ('make', 'sure', 'the types', 'match');
```

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INSERT student

```
INSERT INTO student
(
    student_id,
    salutation,
    first_name,
    last_name,
    street_address,
    zip,
    phone,
    employer,
    registration_date,
    created_by,
    created_date,
    modified_by,
    modified_date
)
VALUES
(
    999,
    'Ms',
    'Quax',
    'Quackers',
    '987 Database Ln',
    '10015',
    '987.654.3210',
    'CTEC',
    SYSDATE,
    'database students',
    SYSDATE - 120,
    'mr h',
    SYSDATE + 123
);
```

Make sure you maintain integrity with ALL FK data

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INSERT products

```
INSERT INTO products
(
    unit_price,
    product_name,
    product_id
)
VALUES
(
    6.32,
    'yam',
    42
);
```

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Multiple INSERT

- Oracle has a special way to do compound INSERT statements
- Start with the standard INSERT INTO table_name (fields)
- Then you combine subqueries from the DUAL table into a derived table using the UNION ALL operator
- Then you select everything from that derived table

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Insert MANY Demo

```
INSERT INTO sales (sales_id, export_id, sales_date)
WITH demo AS
(
  SELECT 1, 3, TO_DATE('2021-02-18', 'YYYY-MM-DD') FROM dual UNION ALL
  SELECT 2, 4, TO_DATE('2021-02-10 13:03', 'YYYY-MM-DD MI:HH') FROM dual UNION ALL
  SELECT 23, 1, TO_DATE('2021-01-12 13:10', 'YYYY-MM-DD MI:HH') FROM dual UNION ALL
  SELECT 24, 12, TO_DATE('2021-01-10 13:22', 'YYYY-MM-DD MI:HH24') FROM dual

)
SELECT
  *
FROM
  demo;
```

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