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CHAPTER 9

Other SQL operations





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AGENDA

- UNION / UNION ALL
 - CREATE, ALTER and DROP
Table
 - INSERT, UPDATE and DELETE
Records
-

UNION / UNION ALL



UNION

- UNION and UNION ALL are SQL keywords to glue data on multiple tables together vertically
- UNION will return **unique rows (distinct)** on the combined table
- UNION ALL will return **all the row data regardless of duplications**

```
SELECT year  
FROM movies  
UNION  
SELECT year  
FROM tv_shows
```

```
SELECT year  
FROM movies  
UNION ALL  
SELECT year  
FROM tv_shows
```



UNION / UNION ALL Examples

movies

year	title
1978	Star Wars
2004	Harry Potter
1998	Toy Story
2005	Up

tv_shows

year	title
2002	The Wire
2004	House
2008	Breaking Bad
1998	Cowboy Bebop

```
SELECT year
FROM movies
UNION
SELECT year
FROM tv_shows
```

UNION result

year
1978
2004
1998
2005
2002
2008

UNION ALL result

year
1978
2004
1998
2005
2002
2004
2008
1998

```
SELECT year
FROM movies
UNION ALL
SELECT year
FROM tv_shows
```

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CREATE, ALTER and DROP Table



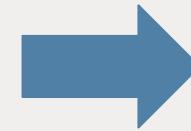
Create table

- Provide **table name**, **column name**, and **data type** of the column
- Syntax:

```
CREATE TABLE table_name (  
  column_name_1 data_type,  
  column_name_2 data_type,  
  ...  
)
```

- Example:

```
CREATE TABLE movies (  
  id INTEGER,  
  name TEXT,  
  year INTEGER  
)
```



movies

id	name	year
xxx	xxx	xxx
...		
...		
...		

ALTER Table

- Provide table name, the operation to the table
- Common syntax examples

```
ALTER TABLE table_name  
ADD column_name datatype;
```

```
ALTER TABLE table_name  
DROP COLUMN column_name;
```

```
ALTER TABLE table_name  
RENAME COLUMN current_name TO new_name;
```

```
ALTER TABLE table_name  
RENAME TO new_table_name;
```



DROP Table

- Provide `table name` to be dropped
- ***** use with caution ***** as you will be delete the whole table along with the data in it.
- Example

```
DROP TABLE movies
```



Insert, Update and Delete Records



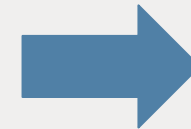
Insert records into a table

- Provide **table name**, **column name**, and **data values** of the column
- Syntax:

```
INSERT INTO table_name  
(column_name_1, column_name_2)  
VALUES  
(data_value_1, data_value_2)
```

- Example:

```
INSERT INTO movies  
(id, name, year )  
VALUES  
(1, 'Toy Story', 2005)
```



movies

id	name	year
1	Toy Story	2005
...		
...		
...		

Update records

- Provide table name, column name, data values and update condition

```
UPDATE table_name  
SET column1 = value1, column2 = value2 ...  
where condition
```

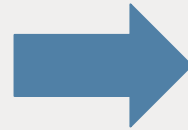
```
UPDATE movies  
SET name = Star Wars, year = 1978  
where id = 1
```



UPDATE Example

movies

year	title
	Star Wars
2004	Harry Potter
1998	Toy Story
	Up



```
UPDATE movies  
SET year = 0000  
where year is null
```



movies

year	title
0000	Star Wars
2004	Harry Potter
1998	Toy Story
0000	Up



Delete records

- Provide `table name`, `delete condition`
- Syntax:

```
DELETE FROM table_name WHERE condition
```

- Example:

```
DELETE FROM movies where id = 1
```



Summary

- We've learnt various additional operation of SQL
 - Combining Tables
 - UNION
 - UNION ALL
 - Making Changes to Tables
 - CREATE TABLE
 - ALTER TABLE
 - DROP TABLE
 - Making Changes to Records
 - INSERT INTO
 - UPDATE
 - DELETE

