Views

Database:

The database stores the sample data of an e-commerce aplication.

Here, the database consists of

`user` , `order_details` and `product` tables that store the information of products, orders placed, and the products on the platform.

Refer the tables in the code playground for a better understanding of the database.

View

A view can simply be considered as a name to a SQL Query

Create View

To create a view in the database, use the

`CREATE VIEW` statement.

Example

Create

`user_base_details` view with id, name, age, gender and pincode.

SQL

```sql
CREATE VIEW user_base_details AS
SELECT id, name, age, gender, pincode
FROM user;
```

Note

In general, views are read only.

We cannot perform write operations like updating, deleting & inserting rows in the base tables through views.

Try it Yourself!

Create

`order_with_products` view with order_id, product_id, no_of_units, name, price_per_unit, rating, category, brand.

Querying Using View

We can use its name instead of writing the original query to get the data.

SQL

```sql
SELECT *
FROM user_base_details;
```

Output

id	name	age	gender	pincode
1	Sai	40	Male	400068
2	Boult	20	Male	30154
3	Sri	20	Female	700009
...	...	...	...	...

We can use same operations which are used on tables like WHERE clause, Ordering results, etc.

If we try to retrive data which is not defined in the view it raises an

`error` .

Example

SQL

```sql
SELECT name, address
FROM user_base_details
WHERE gender = "Male";
ORDER BY age ASC;
```

Output

SQL

```
Error: no such column:address
```

Try it Yourself!

From the

`order_with_products` view created above, get the name and no_of_units ordered in order_id = 802.

Expected Output

name	no_of_units
Oneplus 8 Pro	1
Gorilla Glass	1

List All Available Views

In SQLite, to list all the available views, we use the folowing query.

SQL

```sql
SELECT
  name
FROM
  sqlite_master
WHERE
  TYPE = 'view';
```

Output

name
order_with_products
user_base_details

Delete View

To remove a view from a database, use the

`DROP VIEW` statement.

Syntax

```sql
DROP VIEW view_name;
```

Example

Delete

`user_base_details` view from the database.

```sql
DROP VIEW user_base_details;
```

Advantages

- Views are used to write **complex queries** that involves **multiple joins**, **group by**, etc., and can be used whenever needed.
- **Restrict access** to the data such that a user can only see limited data instead of a complete table.

MARKED AS COMPLETE