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BATCH: DATA ENGINEERING
TOPIC: VIEWS IN SQL

VIEWS IN SQL: a view is a virtual table based on the result of a SELECT query. It does not store the data itself but provides a way to represent the result of a query as if it were a table.

```
mysql> -- Creating the ExampleTableView
mysql> CREATE VIEW ExampleTableView AS
    -> SELECT ID, Name, Age
    -> FROM ExampleTable
    -> WHERE Age IS NOT NULL;
Query OK, 0 rows affected (0.13 sec)

mysql>
mysql> -- Querying the original ExampleTable
mysql> SELECT * FROM ExampleTable;
+----+-------+------+---------------+
| ID | Name  | Age  | City          |
+----+-------+------+---------------+
|  1 | John  |   25 | New York      |
|  2 | Alice |   30 | Los Angeles   |
|  3 | Bob   |   22 | NULL          |
|  4 | Alice |   30 | Chicago       |
|  5 | Mary  | NULL | Boston        |
|  6 | John  |   25 | Miami         |
|  7 | NULL  |   28 | San Francisco |
|  8 | Bob   |   22 | NULL          |
|  9 | Alice |   30 | Los Angeles   |
| 10 | Mary  | NULL | NULL          |
+----+-------+------+---------------+
10 rows in set (0.01 sec)
```

```
mysql> -- Querying the ExampleTableView
mysql> SELECT * FROM ExampleTableView;
+----+-------+------+
| ID | Name  | Age  |
+----+-------+------+
|  1 | John  |   25 |
|  2 | Alice |   30 |
|  3 | Bob   |   22 |
|  4 | Alice |   30 |
|  6 | John  |   25 |
|  7 | NULL  |   28 |
|  8 | Bob   |   22 |
|  9 | Alice |   30 |
+----+-------+------+
8 rows in set (0.01 sec)
```

```
mysql> select * from emp_dimension;
+-------------+----------+------------+---------------+
| employeer_id | emp_name | department | department_id |
+-------------+----------+------------+---------------+
|         301 | Employee 1 | HR       |            10 |
|         302 | Employee 2 | Finance  |            20 |
+-------------+----------+------------+---------------+
2 rows in set (0.00 sec)

mysql> select * from city_dimension;
+---------+-------------+-------+---------+
| city_id | city_name   | state | country |
+---------+-------------+-------+---------+
|       1 | New York    | NY    | USA     |
|       2 | Los Angeles | CA    | USA     |
+---------+-------------+-------+---------+
2 rows in set (0.00 sec)

mysql> select * from Product_category_dimension;
+------------+------------+-----------------+------------+
| product_id | name       | pro_description | unit_prize |
+------------+------------+-----------------+------------+
|          1 | Category A | Description A   |         30 |
|          2 | Category B | Description B   |         40 |
+------------+------------+-----------------+------------+
2 rows in set (0.00 sec)

mysql> select * from department_dimension;
+---------------+------------+-------------+
| department_id | department | location    |
+---------------+------------+-------------+
|            10 | HR         | New York    |
|            20 | Finance    | Los Angeles |
+---------------+------------+-------------+
2 rows in set (0.00 sec)
```