



## VIEWS IN SQL

--first row should always use this use database command

```
USE DATABASE DEMO_DATABASE;
```

--next create the required table

```
create or replace table aj_hospital_table (patient_id integer,
```

```
    patient_name varchar,
```

```
    billing_address varchar,
```

```
    diagnosis varchar,
```

```
    treatment varchar,
```

```
    cost number(10,2));
```

-- insert the data

```
insert into aj_hospital_table
```

```
    (patient_id, patient_name, billing_address, diagnosis, treatment, cost)
```

```
values
```

```
    (1, 'Mark Knopfler', '1982 Telegraph Road', 'Industrial Disease',
```

```
        'a week of peace and quiet', 2000.00),
```

```
    (2, 'Guido van Rossum', '37 Florida St.', 'python bite', 'anti-venom',
```

```
        70000.00),
```

```
    (3, 'Devin', '197 Brigade Road Texas', 'dog bite', 'Rabies Injection',
```

```
        40000.00),
```

```
    (4, 'Mark', '38 denver St Chicago', 'Dengue', 'Malaria',
```

```
        50000.00),
```

```
    (5, 'Peter', '78 New Yor City', 'Accident', 'Operation',
```

```
        340000.00);
```

--check the tablke and its contents

```
describe table aj_hospital_table ;
```

```
SELECT * FROM aj_hospital_table;
```



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--create view and --check its contents

create or replace view aj\_doctor\_view as

select patient\_id, patient\_name, diagnosis, treatment from aj\_hospital\_table;

describe view aj\_doctor\_view;

SELECT \* FROM aj\_DOCTOR\_VIEW;

create or replace view aj\_accountant\_view as

select patient\_id, patient\_name, billing\_address, cost from aj\_hospital\_table;

describe view aj\_doctor\_view;

SELECT \* FROM aj\_accountant\_view;

-- A view can be used almost anywhere that a table can be used (joins, subqueries, etc.).

-- For example, using the views created above:

-- Show all of the types of medical problems for each patient:

select distinct diagnosis from aj\_doctor\_view;

-- A view can be used almost anywhere that a table can be used (joins, subqueries, etc.).

-- For example, using the views created above:

--Show all of the types of medical problems for each patient:

select distinct diagnosis from aj\_doctor\_view;

--Show the cost of each treatment (without showing personally identifying information about specific patients):

select treatment, cost

from aj\_doctor\_view as aj\_dv, aj\_accountant\_view as aj\_av



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where aj\_av.patient\_id = aj\_dv.patient\_id;

---A CREATE VIEW command can use a fully-qualified, partly-qualified, or unqualified table name.

--For example:

--create view v1 as select ... from my\_database.my\_schema.my\_table;

create or replace view v1 AS

SELECT S\_STORE\_NAME,S\_NUMBER\_EMPLOYEES,S\_HOURS

FROM "SNOWFLAKE\_SAMPLE\_DATA"."TPCDS\_SF100TCL"."STORE";

SELECT \* FROM V1 LIMIT 30;

--FROM RESPECTIVE SCHEMAS

create view v1 as select ... from my\_schema.my\_table;

--FROM RESPECTIVE TABLE

create view v1 as select ... from my\_table;

--For example, you can create one view for the doctors, and one for the nurses,

-- and then create the medical\_staff view by referring to the doctors view and nurses view:

create OR REPLACE table employees (id integer, title varchar);

insert into employees (id, title) values

(1, 'doctor'),

(2, 'nurse'),

(3, 'janitor')

;

create view doctors as select \* from employees where title = 'doctor';



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```
create view nurses as select * from employees where title = 'nurse';
```

```
create view medical_staff as
```

```
    select * from doctors
```

```
    union
```

```
    select * from nurses
```

```
;
```

```
select *
```

```
    from medical_staff
```

```
    order by id;
```

```
/*
```

Views Allow Granting Access to a Subset of a Table

Views allow you to grant access to just a portion of the data in a table(s).

For example, suppose that you have a table of medical patient records.

The medical staff should have access to all of the medical information (for example, diagnosis) but not the financial information

(for example, the patient's credit card number).

The accounting staff should have access to the billing-related information, such as the costs of each of the prescriptions given to the patient, but not to the private medical data,

such as diagnosis of a mental health condition. You can create two separate views,

one for the medical staff, and one for the billing staff, so that each of those roles sees only the information

needed to perform their jobs. Views allow this because you can grant privileges

on a particular view to a particular role, without the grantee role having privileges on the table(s) underlying the view.

In the medical example:

The medical staff would not have privileges on the data table(s), but would have privileges on the view showing diagnosis and treatment.



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The accounting staff would not have privileges on the data table(s), but would have privileges on the view showing billing information.

### Limitations on Views

The definition for a view cannot be updated

(i.e. you cannot use ALTER VIEW or ALTER MATERIALIZED VIEW to change the definition of a view).

To change a view definition, you must recreate the view with the new definition.

Changes to a table are not automatically propagated to views created on that table.

For example, if you drop a column in a table, the views on that table might become invalid.

Views are read-only (i.e. you cannot execute DML commands directly on a view).

However, you can use a view in a subquery within a DML statement that updates the underlying base table. For example:

```
*/
```

```
delete from hospital_table
```

```
where cost > (select avg(cost) from accountant_view);
```