

# Session 6-12 Views

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# Views

- Permanent objects that store no data
- Store a query
- Two purposes
  - **Reduce complex query requirements**
  - Restrict users' access to sensitive data



# Creating a View

- Simple view: Only references one table – no group functions, GROUP BY clause, or expressions
- Complex view: A view may contain data from multiple tables or data created with the GROUP BY clause, functions, or expressions
- Type of DML operations allowed depends on various factors

```
CREATE VIEW inventory  
AS SELECT isbn, title, retail price  
FROM books  
WITH READ ONLY;
```



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# Create View to Replace Subquery

```
CREATE VIEW avgcat  
AS SELECT category, AVG(cost) averagecost  
FROM books  
GROUP BY category;
```

Execute

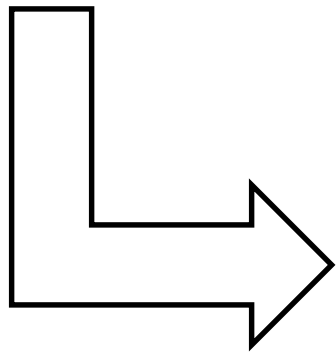
Load Script

Save Script

Cancel

View created.

Check the  
user\_views  
table



```
SELECT *  
FROM user_views;
```

Execute

Load Script

Save Script

Cancel

```
SELECT table_name  
FROM user_tables;
```

VIEW_NAME	TEXT_LENGTH	TEXT	TYPE_TEXT_LENGTH	TYPE_TEXT
AVGCAT	97	SELECT category, AVG(cost) averagecost FROM books		



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# Create View to Replace Subquery (cont'd)

```
SELECT a.title, b.category, a.cost
FROM books a, (SELECT category, AVG(cost) averagecost
FROM books
GROUP BY category) b
WHERE a.category = b.category
AND a.cost < b.averagecost;
```

Execute Load Script Save Script Cancel

TITLE	CATEGORY
HANDCRANKED COMPUTERS	COMPUTER
DATABASE IMPLEMENTATION	COMPUTER
COOKING WITH MUSHROOMS	COOKING
BIG BEAR AND LITTLE DOVE	CHILDREN
REVENGE OF MICKEY	FAMILY LIFE

```
SELECT a.title, b.category, a.cost
FROM books a, avgcat b
WHERE a.category = b.category
AND a.cost < b.averagecost;
```

Execute Load Script Save Script Cancel

TITLE	CATEGORY	COST
HANDCRANKED COMPUTERS	COMPUTER	21.8
DATABASE IMPLEMENTATION	COMPUTER	31.4
COOKING WITH MUSHROOMS	COOKING	12.5
BIG BEAR AND LITTLE DOVE	CHILDREN	5.32
REVENGE OF MICKEY	FAMILY LIFE	14.2

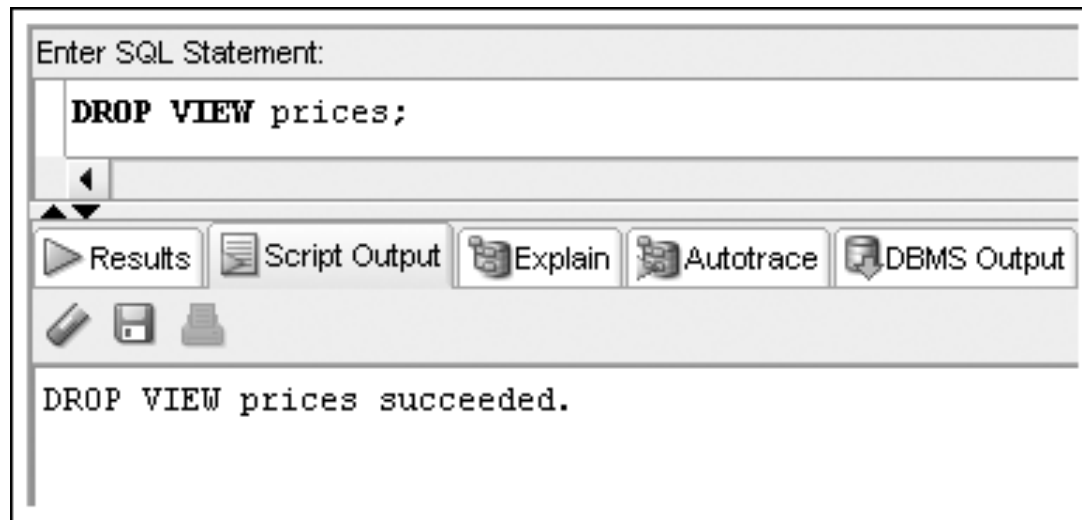


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# Dropping a View

- Use DROP VIEW command



# Wrap-up

- View = virtual table
- CREATE VIEW
- DROP VIEW

