

Select with Aggregate functions

Spoken Tutorial Project

<http://spoken-tutorial.org>

National Mission on Education through ICT

<http://sakshat.ac.in>

Nirmala Venkat

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Learning Objectives

- More clauses that can be used with the `SELECT` statement



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- More clauses that can be used with the `SELECT` statement
 - **Distinct**



Learning Objectives

- More clauses that can be used with the `SELECT` statement
 - Distinct
 - Between



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System Requirements



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- **pgAdmin 1.18**



Pre-requisites

- **Basic understanding of database and tables**



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- Basic understanding of database and tables
- For more details, refer to the **RDBMS-PostgreSQL** series on <http://spoken-tutorial.org>



DISTINCT



DISTINCT

- **DISTINCT** keyword is used in the SELECT statement to list distinct unique values



DISTINCT

- **DISTINCT** keyword is used in the SELECT statement to list distinct unique values
- It removes the duplicate rows or column values from the query result.



Syntax: DISTINCT



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- **SELECT DISTINCT**
column-names FROM table-name
WHERE [condition];



BETWEEN



BETWEEN

BETWEEN operator is used to retrieve values within a given range



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BETWEEN operator is used to retrieve values within a given range

- Syntax:

```
SELECT column-names FROM  
table-name WHERE column-name  
BETWEEN value1 and value2;
```



LIKE



LIKE

- **LIKE** operator is used to match text values against a given pattern



LIKE

- **LIKE** operator is used to match text values against a given pattern
- It allows wildcard characters to be used within the **WHERE** clause



LIKE



LIKE

- Percent (%):
The percent sign matches any sequence of string of any length



LIKE

- Percent (**%**):
The percent sign matches any sequence of string of any length
- Underscore (**_**):
The underscore matches a single character





IN

- Use **IN** operator in the WHERE clause to check if the value matches any value in a given list



IN

- Use **IN** operator in the WHERE clause to check if the value matches any value in a given list
- Syntax:
SELECT column-names FROM table-name WHERE column-name IN (value1, value2, ...);



Aggregate function



Aggregate function

- **Aggregate functions** are PostgreSQL built-in functions



Aggregate function

- **Aggregate functions** are PostgreSQL built-in functions
- It operates on several rows of a query and returns a single result



List of Aggregate function



List of Aggregate function

- **Count** - Returns the number of rows



List of Aggregate function

- **Count** - Returns the number of rows
- **Sum** - Returns the sum of a selected column



List of Aggregate function

- **Count** - Returns the number of rows
- **Sum** - Returns the sum of a selected column
- **Max** - Returns the largest value of a specified column



List of Aggregate function



List of Aggregate function

- **Min** - Returns the smallest value of a specified column



List of Aggregate function

- **Min** - Returns the smallest value of a specified column
- **Avg** - Returns the average value of a specified column



Summary

- More clauses that can be used with the `SELECT` statement
 - Distinct
 - Between
 - Like
 - In
 - Is Null
- Aggregate functions



Assignment

Write **SELECT** statements to

- 1 Display all columns from **students** table where the student name ends with 'a'
- 2 Display the minimum and average of the **cgpa** column



About the Spoken Tutorial Project

- Watch the video available at http://spoken-tutorial.org/What_is_a_Spoken_Tutorial
- It summarises the Spoken Tutorial project
- If you do not have good bandwidth, you can download and watch it



Spoken Tutorial Workshops

The Spoken Tutorial Project Team

- Conducts workshops using spoken tutorials
- Gives certificates on passing online test
- For more details, please write to contact@spoken-tutorial.org



Forum for specific questions

- Do you have questions in THIS Spoken Tutorial?
- Please visit <http://forums.spoken-tutorial.org>
- Choose the minute and second where you have the question
- Explain your question briefly
- Someone from our team will answer them



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- More information on this Mission is available at

<http://spoken-tutorial.org/NMEICT-Intro>

