



2. sql-data-analysis.pdf

Title: SQL for Data Analysis

1. Introduction to SQL

SQL (Structured Query Language) is used to **store, retrieve, and analyze data** from databases.

2. Basic SQL Commands

- **SELECT** – retrieve data
 - **INSERT** – add data
 - **UPDATE** – modify data
 - **DELETE** – remove data
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3. Filtering Data

```
SELECT * FROM employees WHERE salary > 50000;
```

4. Sorting Data

```
SELECT * FROM employees ORDER BY salary DESC;
```

5. SQL Joins

- INNER JOIN
- LEFT JOIN
- RIGHT JOIN

Example:

```
SELECT e.name, d.department  
FROM employees e  
JOIN department d ON e.dept_id = d.id;
```

6. Aggregate Functions

- COUNT()
 - SUM()
 - AVG()
 - MAX()
 - MIN()
-

7. Grouping Data

```
SELECT department, COUNT(*)  
FROM employees  
GROUP BY department;
```

8. Importance in Data Analytics

SQL is used in:

- Business intelligence
- Reporting
- Dashboard creation

9. Conclusion

SQL is a **must-have skill for every data analyst**.