

Assignment: Introduction to SQL and Databases

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Course: Database

Assignment one

1. What is SQL?

- ✓ SQL (Structured Query Language) is a programming language used to manage and manipulate **relational databases**.
- ✓ It allows users to **create, read, update, and delete data** in a database.

2. Uses of SQL

- ✓ Querying data from databases.
- ✓ Managing and updating database records.
- ✓ Creating and modifying database structures.
- ✓ Ensuring data integrity and security.

3. Benefits of SQL for Web Applications

- ✓ Efficiently stores and retrieves data for dynamic web pages.
- ✓ Supports multiple users accessing data simultaneously.
- ✓ Works with various database systems (like MySQL, PostgreSQL, SQLite).

4. Building Blocks of Databases

- ✓ Tables: Structures that hold data, similar to spreadsheets.
- ✓ Columns (Fields): Define the type of data stored (e.g., Name, Age, Email).
- ✓ Rows (Records): Individual entries in a table.
- ✓ Data Types: Define what kind of data a column can hold (e.g., INTEGER, VARCHAR, DATE).

5. Optional Example

```
CREATE TABLE Students (
    ID INT PRIMARY KEY,
    Name VARCHAR(50),
    Age INT,
    Email VARCHAR(100)
);
```