SQLite

CSC 342 - Web Technologies

SQLite Command Line Interface

- SQLite is a DBMS that stores the database in a single file
- SQLite has a command line interface CLI to interact with a database file
- The command to start the CLI on the Unix server is:

```
$ sqlite3
SQLite version 3.6.20
Enter ".help" for instructions
Enter SQL statements terminated with a ";"
sqlite>
```

- Note that the dollar sign indicates the Unix command line prompt.

SQLite commands

- `.show`: displays the current settings for various paramters
- `.quit`: quit the CLI program
- `.tables`: show the tables in the database
- `.schema`: display the table schema
- `.header`: display or hide the column headers
- `.mode`: select the mode for output
- `.dump`: dump the database as SQL text

SQLite Datatypes

- **NULL**: the value is NULL
- **INTEGER**: the NULL value
- **REAL**: the value is a floating point number
- **TEXT**: the value is a text string
- **BLOB**: the value is a blob of data

Create a New Database File

- Create a database file named example.db

  ```
  $ sqlite3 example.db
  ```

- Note that the dollar sign indicates the Unix command line prompt.

Import Data from a CSV File

- Import data from a file named data.csv into a table named example_table (this assumes that the table exists)

```
sqlite> .mode csv
sqlite> .import data.csv example_table
```

Execute SQL Statements From a File

- Execute a SQL statement stored in a file named example.sql

```
sqlite> .read example.sql
```

Dump the Database to a File

- Dump the SQL statements to recreate the database to a file

```
sqlite> .output example.sql
sqlite> .dump
sqlite> .exit
```

- Dump a specific table

```
sqlite> .output example.sql
sqlite> .dump users
sqlite> .exit
```

- Dump the schema

```
sqlite> .output example.sql
sqlite> .schema
sqlite> .exit
```

Print Columns with Headers

- Print SQL query results in tabular form with column headers

```
sqlite> .header on
sqlite> .mode column
```