**Using MySQL Workbench**

1. The connection can be edited to use a default schema (e.g., CourseDB).

**The .env file: notes, key to the entire process**

1. The name of the .env file **must be exactly .env** (including the dot at the beginning) for most libraries, like dotenv, to detect and load it correctly.
2. The .env file should typically reside in the **root directory** of your project, where your main JavaScript file (e.g., index.js, app.js) is located.
3. **Loading the .env File**:
   1. require('dotenv').config();
   2. console.log(process.env.DB\_HOST); // Should print the DB\_HOST value
4. Consider storing a template file like .env.example in your repository to help others know what environment variables are required. For example:
   1. DB\_HOST=<insert-host>
   2. DB\_USER=<insert-username>
   3. DB\_PASSWORD=<insert-password>
   4. DB\_NAME=<insert-database-name>
   5. DB\_PORT=3306

**Using MySQL – database created in Workbench, Windows EC2 instance**

1. **Install Required Libraries**: Use a library like mysql2 or knex for connecting your Node.js application to the MySQL database. For example: npm install mysql2 dotenv
2. **Configure .env File**: Create a .env file in the root of your project and include the necessary configuration:

DB\_HOST=your-rds-endpoint.amazonaws.com

DB\_USER=your-username

DB\_PASSWORD=your-password

DB\_NAME=CourseDB

DB\_PORT=3306

1. **Write the Connection Code**: Use the mysql2 library to connect:

require('dotenv').config();

const mysql = require('mysql2');

const connection = mysql.createConnection({

host: process.env.DB\_HOST,

user: process.env.DB\_USER,

password: process.env.DB\_PASSWORD,

database: process.env.DB\_NAME,

port: process.env.DB\_PORT

});

connection.connect((err) => {

if (err) {

console.error('Error connecting to the database:', err.message);

return;

}

console.log('Connected to the database!');

});

connection.end();

**Invoking MySQL – client, nix**

1. Navigate to /usr/local/mysql/bin
2. Start MySQL: ./mysql -u root -p
3. Enter the password: Vik01ing. Note the userid is root
4. To see the databases: show databases;
5. Command + K clears the terminal
6. To create a database: CREATE DATABASE game\_info300;
7. To use a database: USE game\_info300;
8. To create a table: CREATE TABLE game\_tbl ( game\_number INT NOT NULL PRIMARY KEY, number\_to\_guess INT NOT NULL);
9. To see the tables: SHOW TABLES;
10. To insert a row: INSERT INTO game\_tbl (game\_number, number\_to\_guess) VALUES (72, 70);
11. Normal select: SELECT \* FROM game\_tbl;
12. To exit: quit

To use an environment variable, to store the userid, password, etc.

1. Create a .env file
2. Install dotenv in order to read in the environment variable: npm install dotenv
3. Install mysql2 in order to access the database: npm install mysql2
4. I have a .env file and a database file in:

* /Users/mcgarrymichaeltgenworth/nodefiles/new node
* To use the AWS database: DB\_HOST should be set to the endpoint of the database.

To install MySQL on a Ubuntu instance

1. Update the system files: sudo apt update
2. Install MySQL: sudo apt install mysql-server
3. Confirm mysql is active: sudo systemctl status mysql
4. Login to mysql as root: sudo mysql
5. To update the password: ALTER USER ‘root’@’localhost’ IDENTIFIED WITH mysql\_native\_password BY ‘place-your-password-here’;
6. To update the privileges: FLUSH PRIVILEGES;