

# README Report

## Database Table

A user table has been created in the given database, consisting of three columns:

1. **Id** (PrimaryKey, AutoIncrement,NotNull)
2. **Firstname**
3. **Lastname**

## Server Setup

To run the server, execute the following file:

- **File:** dbconnect.ts
- **Description:** This file is responsible for starting the server. Run it to establish a connection to the database.

Run the server:

```
Unset  
node dbconnect.ts
```

## User Operations

### 1. Create User

- **File:** insertdata.js
- **Description:** This feature allows the creation of new user records by inserting user data into the database. Upon successful insertion, it provides a unique identifier (ID) for the created record. If any errors occur during the insertion process, it will throw an appropriate error message.

Run:

Open another terminal window and run:

```
Unset  
npm run insertdata http://localhost:3000
```

## Server Response:

```
(base) kelly@tejaswis-mbp 24G_Project % node dbconnect.ts
Server is running on port 3000
Connected to the database
Created User ID: 9
Created User ID: 10
Created User ID: 11
Created User ID: 12
```

## 2. Retrieve User by ID

- **File:** retrieve.js
- **Description:** This functionality enables the retrieval of specific user records from the database by providing their respective IDs. Upon running the script, the user is prompted to input an ID, and the system fetches and displays the full user record, including the ID, first name, and last name.

### Run:

Execute the following command to retrieve a user by ID:

```
Unset
npm run retrieve http://localhost:3000
```

## Server Response:

```
(base) kelly@tejaswis-mbp 24G_Project % node dbconnect.ts
Server is running on port 3000
Connected to the database
User data retrieved for ID: 10
RowDataPacket { id: 10, firstName: 'Johnny', lastName: 'Depp' }
User data retrieved for ID: 1
RowDataPacket { id: 1, firstName: '24G', lastName: 'Backend' }
User not found for ID: 7
```

## 3. Update User Information

- **File:** userPatch.js
- **Description:** This feature allows the update of user information for a specific user by their ID. The user is prompted to enter the ID of the user whose data needs modification. Once the ID is provided, the system guides the user through updating the first name and last name for that particular user.

Run:

To update user information, execute the following command:

```
Unset  
npm run userPatch http://localhost:3000
```

## Server Response:

For id:10, the update was successful.

For id:90, there is an error that says the User not found to perform updation in the database.

```
Updated User Data: RowDataPacket { id: 10, firstName: 'Hollywood', lastName: 'Actor' }  
User not found for update: 90
```

## 4. Delete User

- **File:** deleteUser.js
- **Description:** The Delete User functionality allows users to remove user records from the database. Similar to other features, the user is prompted to enter the ID of the user record they want to delete. After entering the ID, the system deletes the corresponding user record from the database.

Run:

To delete a user, execute the following command:

```
Unset  
npm run deleteUser http://localhost:3000
```

## Server Response:

For id:11, the deletion was successful.

For id:8, there is an error that says the ID not found for deletion in the database.

```
ID not found for deletion: 8  
User deleted successfully for id: 11
```

## Validation on the test file:

- **File:** test.js (No changes made)
- **Description:** The file is used to validate the code. No modifications were made to this file. The server-side results of the validation are as follows:

Run:

Unset

```
npm run test http://localhost:3000
```

Output:

```
Created User ID: 13
User data retrieved for ID: 13
RowDataPacket { id: 13, firstName: 'Test', lastName: 'User' }
Updated User Data: RowDataPacket { id: 13, firstName: '24G', lastName: 'Backend' }
User data retrieved for ID: 13
RowDataPacket { id: 13, firstName: '24G', lastName: 'Backend' }
User deleted successfully for id: 13
User not found for ID: 13
```

**Note:** No changes were made to the test.js file. Package.json is modified. And the modifications were to run the scripts (insertdata.js, retrieve.js, userPatch.js, deleteUser.js).