// Doing stuff with a database in Node.js

var express = require('express');

// Table was created with:

// CREATE TABLE PhotoLabels (fileName TEXT UNIQUE NOT NULL PRIMARY KEY, labels TEXT, favorite INTEGER)

var sqlite3 = require("sqlite3").verbose(); // use sqlite

var dbFile = "photos.db"

var db = new sqlite3.Database(dbFile); // new object, old DB

// SERVER CODE

// Handle request to add a label

var querystring = require('querystring'); // handy for parsing query strings

function answer(query, response) {

// query looks like: op=add&img=[image filename]&label=[label to add]

queryObj = querystring.parse(query);

if (queryObj.op == "add") {

console.log("Add Function");

var newLabel = queryObj.label;

var imageFile = queryObj.img;

if (newLabel && imageFile) {

// good add query

// go to database!

db.get('SELECT labels FROM photoLabels WHERE fileName = ?', [imageFile], getCallback);

// callback for db.get

// defined inside answer so it knows about imageFile

// because closure!

function getCallback(err, data) {

console.log("getting labels from " + imageFile);

if (err) {

console.log("error: ", err, "\n");

} else {

// good response...so let's update labels

db.run('UPDATE photoLabels SET labels = ? WHERE fileName = ?', [data.labels + ", " + newLabel, imageFile], updateCallback);

}

}

// callback for db.run('UPDATE ..')

// Also defined inside answer so it knows about

// response object

function updateCallback(err) {

console.log("updating labels for " + imageFile + "\n");

if (err) {

console.log(err + "\n");

sendCode(400, response, "requested photo not found");

} else {

// send a nice response back to browser

sendCode(200, response, "added label " + newLabel +

" to " + imageFile);

}

}

}

} else if (queryObj.op == "obtain") {

// console.log("Inside Obtain Function");

var imageFile = queryObj.img;

if (imageFile) {

db.get('SELECT labels FROM photoLabels WHERE fileName = ?', [imageFile], getCall);

function getCall(err, data) {

// console.log("getting labels for " + imageFile + "\n");

if (err) {

console.log(err + "\n");

sendCode(400, response, "requested photo not found");

} else {

// send a nice response back to browser

// sendCode(200,response,"Obtained labels from " + imageFile);

// console.log("Obtained labels from database");

// console.log("Data labels = " + data.labels);

// console.log("Data labels = " );

// console.log(data.labels);

response.send(data.labels);

}

}

}

} else if (queryObj.op == "delete") {

var deleteLabel = queryObj.label;

var imageFile = queryObj.img;

console.log("Inside Delete Function");

if (deleteLabel && imageFile) {

// good add query

// go to database!

db.get('SELECT labels FROM photoLabels WHERE fileName = ?', [imageFile], getLabelsCallback);

// callback for db.get

// defined inside answer so it knows about imageFile

// because closure!

function getLabelsCallback(err, data) {

console.log("getting labels from " + imageFile);

if (err) {

console.log("error: ", err, "\n");

} else {

// good response...so let's update labels

var labelData = data.labels;

console.log("labelData = " + labelData);

console.log("DeleteLabel:" + deleteLabel);

var newLabels = data.labels.replace(deleteLabel + ",", "");

console.log(newLabels);

db.run('UPDATE photoLabels SET labels = ? WHERE fileName = ?', [newLabels, imageFile], updateCallback);

}

}

// callback for db.run('UPDATE ..')

// Also defined inside answer so it knows about

// response object

function updateCallback(err) {

console.log("updating labels for " + imageFile + "\n");

if (err) {

console.log(err + "\n");

sendCode(400, response, "Label or image not found");

} else {

// send a nice response back to browser

sendCode(200, response, "Deleted label " + newLabel +

" to " + imageFile);

}

}

}

} else if (queryObj.op == "dump") {

console.log("Dump Function");

db.all('SELECT \* FROM photoLabels', dataCallback);

function dataCallback(err, tableData) {

if (err) {

console.log(err + "\n");

sendCode(400, response, "Database information not found, cannot be dumped");

} else {

console.log("Database information sent");

var tableStr = JSON.stringify(tableData);

// console.log("tableData = " + tableStr);

sendCode(200, response, tableStr);

}

}

} else if (queryObj.op == "filter") {

var label = queryObj.label;

// console.log("in filter, label = " + label);

db.all('SELECT \* FROM photoLabels WHERE labels LIKE ?', ["%" + label + "%"], filterCallback);

function filterCallback(err, data) {

// console.log("getting labels from " + imageFile);

if (err) {

console.log("error: ", err, "\n");

} else {

// console.log("data" + data);

var dataStr = JSON.stringify(data);

console.log("dataStr = " + dataStr);

sendCode(200, response, dataStr);

}

}

}

}

function sendCode(code, response, message) {

response.status(code);

response.send(message);

}

// show just the answer function when this file is included as a module

exports.answer = answer;