Online Dictionary Project

Note: The configurations for the port number, database, localhost can be changed in the .env file of the project. I used npm module called sequelize a promise-based Node.js ORM which works with mysql for the database connection and operations. I also created the schema and class for the database thereby giving the application control over database related changes. The database is automatically created if it has not yet been created and automatically updates tables if there are any changes when the application launches. Note this was done purposely for the production environment can be disabled when using the application in a production environment.

The structure of the project is attached below

Text

Description automatically generated

PROJECT SCREENSHOTS

1. Index page

Graphical user interface, application, Word

Description automatically generated

1. Search for a term

Graphical user interface, text, application

Description automatically generated

1. Search for non-existent term

Graphical user interface, application, Word

Description automatically generated

1. Empty search term

Graphical user interface, application

Description automatically generated

CODE SNIPPETS

1. Database.js

const { Sequelize } = require('sequelize');

const config = require('../config');

const Entries = require('../models/entries');

const sequelize = new Sequelize(config.mysql\_db.database, config.mysql\_db.user, config.mysql\_db.password, {

    host: 'localhost',

    pool: {

        max: 5,

        min: 0,

        acquire: 30000,

        idle: 10000

      },

    dialect:'mysql' */\* one of 'mysql' | 'mariadb' | 'postgres' | 'mssql' \*/*

  });

  sequelize

  .authenticate()

  .then(() => {

    console.log('Connection to MYSQL Database established successfully.');

  })

  .catch(err => {

    console.error('Unable to connect to MYSQL database:', err);

  });

  module.exports=sequelize;

1. Dictionary.js

const morgan = require('morgan');

const express = require('express');

const app = express();

const config = require('./config');

const dict = require('./routes/dict');

const cors=require('cors');

const port = config.port || 3005;

app.set('views', \_\_dirname + '/views');

app.engine('html', require('ejs').renderFile);

*// app.set('view engine', 'html');*

*// parse requests of content-type - application/json*

app.use(express.json());

app.use(morgan("combined"));

*// parse requests of content-type - application/x-www-form-urlencoded*

app.use(express.urlencoded({ extended: false }));

app.use(cors());

*//import routes*

app.use('/',dict);

app.use(express.static('public'));

app.listen(port,()=>console.log(`Server running at http://${config.host}:${port}...`));

1. routes/dict.js

const words = require('../controller/word');

const router = require('express').Router();

router.get('/',(req, res)=>{

    res.redirect('/index');

});

router.get('/search',words.searchTerm);

router.get('/index', (req, res)=>{

res.render('dict.html');

});

module.exports=router;

1. controller/word.js

const Entries = require('../models/entries');

const helper = require('../util/helper');

const respBody = require('../util/response');

const path = require('path');

let wordDefinitions = [];

*async* function searchTerm (req, res) {

    let word = req.query.word;

    wordDefinitions = [];

    await Entries.findAll({ where: { word: word } })

        .then(data => {

            data.forEach(createResponseObject);

            res.json(respBody.ResponseBody('200', wordDefinitions, ' '));

        })

        .catch(err => {

            res.send(respBody.ResponseBody('400', '', 'Input field validation error' + helper.parseError(err.message)));

        });

}

*async* function createResponseObject(value, index) {

    let definition = `${index + 1}(${value.wordtype}) :: ${value.definition}`;

    wordDefinitions.push(definition);

}

module.exports={

    searchTerm,

};

1. models/entries.js

const { Sequelize, DataTypes } = require('sequelize');

const sequelize = require('../util/database');

const Entries = sequelize.define("entries", {

    word: DataTypes.STRING(25),

    wordtype: DataTypes.STRING(20),

    definition: DataTypes.TEXT

  });

  (*async* () => {

*// await sequelize.sync({ force: true });*

  await  Entries.sync({ alter: true });

*// Code here*

  })();

  module.exports=Entries;