WEB322 Test 4 Name: Nishit Shah

# Instructions: Complete all questions in the spaces provided. This quiz is worth 10% of your final mark and you will have exactly 30 minutes to complete it.

# Question 1 (2 Marks):

Using the ORM framework Sequelize, write code to specify a new **"Student" Model** that will correctly capture the following data (represented as a **JavaScript Object**). **NOTE:** Any special details about the data will be listed as **comments** beside the **related property**:

let data = {

studentNum: 012345678, // **primary key**

fullName: 'Christina Jeffers',

semester: 3,

registrationDate: 01/09/2015,

fullTime: true,

grantTotal: 8200.00

};

const Sequelize = require('sequelize');

var sequelize = new Sequelize('…', '…', '…', {… …});

var Student = sequelize.define(‘Student’, {

    studentNum: Sequelize.INTEGER,

    fullName: Sequelize.TEXT,

    semester: Sequelize.INTEGER,

    registrationDate: Sequelize.DATE,

    fullTime: Sequelize.BOOLEAN,

    grantTotal: Sequelize.DOUBLE

});

# Question 2 (2 Marks):

Using the ORM framework Sequelize, write valid code (method call only) to work with the "**Student**" Model defined in **Question 2** according to the following specifications:

1. Read all Student Numbers (studentNum) and Full Names (fullName) of the data in the "Student" model whose current Semester is 2. Once the operation completes successfully, write the full result to the console: [1 marks]

sequelize.sync().then(function() {

            Student.findAll({

                attributes: ['studentNum', 'fullName'],

                where: {

                    semester: 2

                }).then(function(data) {

                    for (var i = 0; i < data.length; i++) {

                        console.log(data[i].studentNum);

                        console.log(data[i].fullName);

                    });

            });

1. Update all **Full Time** (fullTime) Students whose current **Semester** is **1** and set their Grant Total (**grantTotal**) to **300.00**. Once this operation completes successfully, write the confirmation message "**update complete**" to the console: [1 marks]

sequelize.sync().then(function() {

        Student.update({

            grantTotal: 300

        }, {

            where: {

                fullTime: true,

                semester: 1

            }

        }).then(function() {

                console.log('update complete');

            )

        };

    )

};

# Question 3 (2 Marks):

Using the framework Mongoose in Node.js, write code to specify a new **"Vehicle" schema** and create a **model** that will correctly capture the following data (represented as a **JavaScript Object**). **NOTE:** Any special details about the data will be listed as **comments** beside the **related property**:

let data = {

VIN: 1HGBN45JXMN585, // **Unique indexes**

make: 'Honda',

model: 'Civic',

year: 2016,

used: true,

price: 9800.00

};

**const mongoose = require("mongoose");**

**let Schema = mongoose.Schema;**

let vehicleSchema = new Schema({

  VIN: {

    Type: String,

    Unique: true,

    Required: true,

  },

  make: {

    type: String,

    required: true,

  },

  model: {

    type: String,

    required: true,

  },

  year: {

    type: Number,

    required: true,

  },

  used: {

    type: Boolean,

    default: false,

  },

  price: {

    type: Number,

    required: true,

  },

});

let VehicleModel = mongoose.model("Vehicle", VehicleSchema);

module.exports = VehicleModel;

# Question 4 (4 Marks):

Using the framework Mongoose to work with the "**Vehicle**" Model defined in **Question 3** based on the following specifications.

1. Create a new Vehicle with the property values of the Vehicle object “data” in the Question 3. Save the created Vehicle and console log error message if error happens. [1.5 marks]

let VehicleModel = mongoose.model("Vehicle", VehicleSchema);

var newvehicle = new vehicle({

  VIN: "1HGBN45JXMN585", // Unique indexes

  make: "Honda",

  model: "Civic",

  year: 2016,

  used: true,

  price: 9800.0,

});

vehicle

  .save()

  .then(() => {

    console.log("Vehicle saved to vehicles collection");

  })

  .catch((err) => {

    console.log("Error: The vehicle was not saved to vehicles collection");

  });

1. Retrieve all used car and console log the results or error message. [1.5 marks]

var findUsedCar = VehicleModel.find({used: true});

findUsedCar.exec().then((car) =>{

if(!car){

console.log('No car found');

}

else{

console.log(findUsedCar);

}

}).catch((err)=>{

console.log('There was an error: ${err}');

});

1. Update the created Vehicle’s price to 8800.00. [1 marks]

Vehicle.update({ $set: { price: 8800.0 } });