

# Project Workshop – CPRG 210 (Node.js)

## Topic:

Server-side processing with Node.js, MySQL, and MongoDB.

## Description:

Your team will develop Node.js scripts which will provide dynamic generation of the web pages developed earlier, as well as capturing form data from customers. The scripts will store and retrieve data using either a MySQL or a MongoDB database server.

A MySQL import script has been provided to set up a pre-built database for you to use. You are free to make any adjustments to the database that your application requires. Depending on how much detail you want to display about each travel package, you may need to use the following documents to enhance the web pages you developed earlier:

1. Packages
2. Products
3. Suppliers
4. Products\_suppliers
5. Packages\_products\_suppliers
6. Agencies
7. Agents
8. Customers
9. Bookings

To install the database, use the phpMyAdmin import function and select the TravelExperts.sql file that has been provided for you. This script will generate the entire database including test data so you can focus on programming and not on DBA tasks during this module.

If your team wants to use MongoDB instead, or both MySQL and MongoDB you can use a tool like Studio 3T to import the MySQL database into Mongo, generating collections for the MySQL tables.

## Assumptions:

1. Customers make a booking for only one package per booking
2. When a package is set up the price is never changed

## Suggested features you can build:

1. Modify the web page that lists the packages available. Instead of providing package data that is statically coded in the HTML, insert code that will read the database and generate the package list from the travel package table. Each package should display a description, start and end

- dates, and price. Before including a package on the page, make sure that the package end date is greater than (or equal to) the current date, so only valid packages are listed. Also, check whether the package start date is less than the current date, and if it is, write out some CSS to make the start date bold and red.
2. Re-design the contact page so that it is generated from the database and lists all the agencies, showing the agency address and phone number, followed by the contact information for each agent at that agency.
  3. When the package list is being generated, create an order button next to each package which will go to an order page that has a customer order form for that package. Customers will enter their data and submit the order which will result in creation of a customer record and a booking record. We know this is overly simplified, but at this point we are demonstrating that we can capture remote orders into the database to demonstrate the concept to the Travel Experts managers.
  4. If your team has 4 members, design an additional feature that you feel would be useful for the site.

Note: There are several design issues to be discussed – what if the customer is buying the package for more than one person? What if the customer is already on the system? Should we create a login account and let the customer log on if they have an existing account? How could we prevent fake customers from being entered by malicious Internet users? This is a prototype, so you don't have to build a solution to these issues, but you can propose some solutions in your presentation.

### **Evaluation:**

Each student will be assigned a grade for the workshop based on their individual work plus the evaluation of the rest of their team. Work should be divided among the team members so that each person has a similar workload.

**You can hand in your source code as a group, but the files should have internal comments that identify the author of each file, as part of your individual mark is based on your programming work.**

Factors included in the marking include code neatness and readability, documentation, functionality, and design. In cases where more than one person collaborated on a single program, each person can hand in a copy of the code with internal comments indicating which portions were written by which person. There will be many tasks that do not result in program code such as project management and testing. Please list the ones you did in a documentation file so you can be given credit for your work.

## **Class Time Guideline:**

This is to be done as a homework assignment after 3pm.

## **Project Deliverables:**

1. Source code – your Node.js scripts, CSS, JavaScript, HTML and any other files should be zipped into one file, clearly named to indicate the team members and placed in the drop folder on the Monday following the presentation day.
2. Documentation file (e.g. Word, Notepad, or Excel) that provides details of each team member's contribution

## **Due:**

The project deliverables described above are due at 8:00 a.m. on the Monday following the date scheduled for the first Project Presentation, unless otherwise indicated by the instructor.