UECS3294 Advanced Web Application Development

PRACTICAL ASSESSMENT PAPER C

Name: Student ID: Marks: /100

Instruction: This is an open book assessment. Answer all questions. You have 2 hours & 30 minutes to complete this assessment.

1. Managing Application Dependencies, Database Migration & Assets

   (a) Create a new Laravel Project named **paperc<*your-student-id*>**, for example, if your student ID is *1501234*, your project shall be named ***paperc1501234***. (5 marks)

   (b) Configure JavaScript scaffolding to use *React* scaffolding. You will need to use the updated **webpack.mix.js** file with Laravel Mix to compile your JavaScript code that you will develop in Q3. (5 marks)

   (c) Using Laravel's database migration, create the following tables:

id	code	name	created_at	updated_at
104	P104	Subang	2018-03-30 11:20:12	2018-03-30 11:20:12
105	P105	Petaling Jaya	2018-03-30 11:20:56	2018-03-30 11:20:56
106	P106	Damansara	2018-03-30 11:30:55	2018-03-30 11:30:55
107	P107	Sungai Buloh	2018-03-30 11:32:51	2018-03-30 11:32:51

Table Name: *seats*

id	code	name	seat_id	created_at	updated_at
1123	106/37/4	Bukit Lanjan	106	2018-04-21 09:45:01	2018-04-21 09:45:01
1124	106/36/18	Sunway Damansara	106	2018-04-21 09:48:03	2018-04-21 09:48:03
1125	106/36/14	Bandar Utama BU 3 - BU 10	106	2018-04-21 09:58:02	2018-04-21 09:58:02
1126	106/36/4	SS 23	106	2018-04-21 09:58:11	2018-04-21 09:58:11
1127	106/35/11	Sungai Way Tengah Dua	106	2018-04-21 09:59:13	2018-04-21 09:59:13

Table Name: *districts*

(5 marks)

   (d) Build an Artisan command to insert four (4) rows of data to *seats* and five (5) rows of data to *districts.* (5 marks)

2. Creating Models, Resources & Controllers

   (a) Create Eloquent model classes for the tables you have created in Q1. Define the necessary *mass-assignable* attributes and *relationship* methods in the model classes. (10 marks)

   (b) Define resources and resource collections for both *Seat* and *District* models. Exclude the timestamp attributes and include related data if the relationship is loaded. (15 marks)

   (c) Develop a RESTful API for the resource **districts** as follows:

      i. **GET /api/districts**: Returns all districts including the seat's resource in JSON format.

      ii. **GET /api/districts/{district}**: Returns the district including the seat's resource specified by the parameter **id** in JSON format.

      iii. **POST /api/districts**: Inserts a new district record.

      iv. **PUT /api/districts/{district}**: Updates the district record.

   (15 marks)

3. Client-side Scripting *React* JavaScript Library

   (a) Develop client-side code using *React* JavaScript library to fetch JSON data from the endpoint **GET /api/districts** and display the records in HTML Table format. You will need to create a Blade view file to specify a placeholder element for React to render the component. (20 marks)

   (b) Develop client-side code using *React* JavaScript library to fetch JSON data from the endpoint **GET /api/districts/{district}** and display the selected record in any appropriate format. You will need to create a Blade view file to specify a placeholder element for React to render the component. (20 marks)