GUJARAT TECHNOLOGICAL UNIVERSITY

Syllabus for Master of Computer Applications, 5th Semester
Subject Name: Application Development using LARAVEL (ADL)
Subject Code: 4659307

With effective from academic year 2018-19

1. Learning Objectives:

- To understand the LARAVEL framework
- To understand how to Implement LARAVEL
- To understand how to design and develop responsive web application using LARAVEL

2. Prerequisites: HTML, CSS and Basics of PHP

3. Course Contents:

Unit	Course Content	Weightage Percentage
Unit I	**Introduction to LARAVEL** Why Use a Framework? A Short History of Web and PHP Frameworks, What's So Special About Laravel?, How It Works, Why Laravel? Setting Up a Laravel Development Environment: System Requirements, Composer, Local Development Environments, Creating a New Laravel Project, Laravel's Directory Structure, Configuration An Introduction to Artisan, Basic Artisan commands, Writing custom artisan commands, calling artisan commands in Normal code, Tinker	15%
Unit II	**LARAVEL Basics** **Router and Controllers:** Route Definitions, Route Groups, Views, Controllers, Route Model Binding, Route Caching, Form Method Spoofing, CSRF Protection, Redirects, Aborting the Request, Custom Responses **Blade Template :** Echoing Data, Control Structures (Conditionals, Loops, Or), Template Inheritance, View Composers and Service Injection, Custom Blade Directives **Front End Components:** Elixir, Pagination, Message Bags, String Helpers, Pluralization and localization	25%
Unit III	**Collecting and Validating User Data** Injecting a Request Object, Route Data, Uploaded Files, Validation, Form Requests, Eloquent Model Mass Assignment, {{ versus {!! Auth Controller **Database Eloquent:** configuration, Migration, Seeding, Query Builder, Introduction to Eloquent, Eloquent Events **User Authentication and Authorization :** The User Model and	30%

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	Migration, Using the auth() Global Helper and the Auth Facade	
Unit IV	**Advanced LARAVEL** **Request and Response:** Laravel's Request Lifecycle, The Request Object, The Response Object, Laravel and Middleware **Writing APIs :** The Basics of REST - Like JSON APIs, Controller Organization and JSON Returns, Reading and Sending Headers, Eloquent Pagination, Sorting and Filtering, Transforming Results	**15%**
Unit V	**Mail , Notifications** **Storage and Retrieval:** Basic File Uploads and Manipulation, Sessions, Cache, Cookies, Full-Text Search with Laravel Scout	**15%**

Desirable Topics:
1) GitHub - akaunting/akaunting: Free and Online Accounting Software
   (url: https://github.com/akaunting/akaunting)

4. Text Book:

1) Matt Stauffer, "LARAVEL Up and Running, A framework for building modern PHP Apps", O'REILLY , 3rd Indian Reprint (ISBN: 978-93-5213-485-4)

5. Reference Books:

1) Martin Bean, "Laravel 5 Essentials", Packet Publishing, ISBN 978-1-78528-301-7
2) Fernando Monteiro, "Hands-On Full-Stack Web Development with Angular 6 and Laravel 5 ", Packt Publishing, ISBN 9781788833912
3) Web Technologies : HTML,CSS3, JAVASCRIPT, jQUERY,AJAX, PHP,XML, MVC and LARAVEL), Black Book, 2018, Dreamtech , ISBN 9789386052490

Webliography:
1) Online Laravel 5.2 Documentation (https://laravel.com/docs/5.7)
2) Nathan Wu, Learning Laravel 5 Cookbook (https://learninglaravel.net/laravelbook)
3) https://laravel-news.com/category/laravel-tutorials
4) https://laravel.com

6. Chapter wise Coverage from Text Book(s) :

Unit	Text Books	Topics
I	Book-1	Chapter : 1,2,7
II	Book-1	Chapter : 3,4,5
III	Book-1	Chapter : 6,8, Chapter : 9 (page 197 to 205)
IV	Book-1	Chapter : 10,13(Page 283 to 295)
V	Book-1	Chapter : 14(Page 318 to 331)

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7. Accomplishments of the student after completing the course:

- Students will understand LARAVEL framework.
- Student will understand how to design and develop responsive web application using LARAVEL.

8. Laboratory Exercises

A. General Guidelines
- Group: 2-3 Person.
- The project should be free from plagiarism of any kind.
- It is mandatory that the project should be developed using LARAVEL 5.6 or later version on Linux or Windows Platform.
- This may not be a live project
- Use any database for storing data.

B. **Expected Outcome**

- The objective of the LARAVEL Project Development is to make students aware about the industry based process and workings. As a result, Project must meet with the industry standards.
- There will not be any compulsion to prepare a project report for the students but an application should be demonstrated, so that evaluator may get the detail about the Project and can evaluate the students as per the evaluation criteria.

C. **Evaluation**

Sr. No.	Particulars	Weightage
1	**Project**	**40%**
2	**Code Changes**	**40%**
3	**VIVA**	**20%**