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CIT 4302: Advanced Web Programming

Introduction

With the growing use of Internet and web Technologies in various critical applications, it is important for Bachelor of Science in Information Technology and Bachelor of Technology in Information students to gain experience in developing multi-tier and Service oriented Web based applications. These applications provide access to data and services from a remote server, which may in turn access databases distributed across the enterprise network over the Internet. The fact that the internet and the web has become the next-generation computing platform makes the course quite important and relevant to these student's curriculum.

Contact Hours: 45 hours

Prerequisites: CIT 4103 Introduction to Web Programming, CCI 4201 Database Systems

Purpose: This unit provides the skills to design and implement multi- tier applications web based applications using PHP and MYSQL.

Expected Learning Outcomes:

At the end of this unit of study the student should be able:

   i.   Distinguish between a web application, a web service and Service Oriented Architecture
  ii.   Classify the various web application development platforms
 iii.   Demonstrate the basing understating and knowledge of PHP and MYSQL in web programming
  iv.   Design a basic 3 tier web application using the Model View Controller design pattern and implement the design using a PHP software framework

Course Plan

Week	Topic	Sub Topics	Activities
1	Introduction to: Web Applications ,web services and service oriented architecture	• Web application • Web services • Service oriented architecture	▪ Discussions
2	Web app development platforms	• PHP and Laravel • Ruby and Rails • Java and Springs • ASP ,C# and razor VIEW	▪ Discussions
3	Introduction to PHP scripting language	• Variables; data,types;arrays;functions;loops;conditional statements; object oriented PHP: Clases;objects;inheritance;polymorphism	▪ PHP & exercises.
4	PHP Web Form Handling	• Connect • Create • Select • Update • Delete	▪
5	CAT 1	• Covers topics 1-4	Cat 1
6	PHP-MYSQL-SELECT statements	• Creating a database • Creating a table • Linking to table • Displaying table content •	Programming exercises
7	PHP-MYSQL-INSERT statements	• Creating a database • Creating a table • Linking to table • Inserting and Displaying content	Programming exercises
8	PHP-MYSQL-UPDATE statements	• Creating a database • Creating a table • Linking to table • Updating and Displaying content	Programming exercises
9	PHP-MYSQL-DELETE statements	• Creating a database • Creating a table • Linking to table • Deleting and Displaying content	Programming exercises
10	Setting up an MVC design environment with PHPs Laravel Framework	• Creating views • Creating Controllers • Creating Routes • Creating Models	Basic Laravel project Exercises

11	CAT 2	▪ Covers topics 6-10	▪ Cat 2

Course Assessment

Lab Exercises: 10 %
Project: 10 %
CAT: 10 %
Final Exam: 70 %