FIT5042
Enterprise application development for the web

Unit Guide

Semester 2, 2014
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FIT5042 Enterprise application development for the web - Semester 2, 2014

This unit provides students with an understanding of the design and development of systems that support the large enterprise in a web-based environment. Students will learn of the theoretical issues that need to be considered by the enterprise and how they can affect the development of the enterprise application. A number of techniques will be introduced as the technological means to build such an application with specific emphasis on the Java EE technology.

Mode of Delivery

Caulfield (Day)

Workload Requirements

Minimum total expected workload equals 12 hours per week comprising:

(a.) Contact hours for on-campus students:

- Two hours of lectures
- One 2-hour laboratory

(b.) Additional requirements (all students):

- A minimum of 8 hours independent study per week for completing lab and project work, private study and revision.

Unit Relationships

Prohibitions

CSE5060

Prerequisites

Recommended knowledge: Students undertaking this subject are expected to have a sound understanding of the concepts of the object oriented programming language, Java.

Chief Examiner

Dr Chris Ling

Campus Lecturer
Caulfield

Eddie Leung

Consultation hours: By appointment.

Your feedback to Us

Monash is committed to excellence in education and regularly seeks feedback from students, employers and staff. One of the key formal ways students have to provide feedback is through the Student Evaluation of Teaching and Units (SETU) survey. The University’s student evaluation policy requires that every unit is evaluated each year. Students are strongly encouraged to complete the surveys. The feedback is anonymous and provides the Faculty with evidence of aspects that students are satisfied and areas for improvement.

For more information on Monash’s educational strategy, see:

www.monash.edu.au/about/monash-directions/ and on student evaluations, see:
www.policy.monash.edu/policy-bank/academic/education/quality/student-evaluation-policy.html

Previous Student Evaluations of this Unit

Over the years in which the unit has been running, students have reported an overall satisfaction with the content and presentation of the unit's material.

The unit's content has been updated from last semester in keeping with evolving web technologies. In particular, the materials have been extended to cover the Java EE 7 platform.

As a result of student feedback the following decisions were made:

1. To change the assignment weighting.
2. To focus on enterprise application design and programming skills rather than the implementation of prototype features in all practical assignments.
3. To align the assessment requirements with students' understanding of enterprise application design and programming concepts rather than prototype features. The alignment was done by making individual labs assessed, and this assessment based on weekly learning objectives.

If you wish to view how previous students rated this unit, please go to https://emuapps.monash.edu.au/unitevaluations/index.jsp
Academic Overview

Learning Outcomes

At the completion of this unit students will:

- understand various issues pertaining to enterprise software architecture on the web;
- acquire techniques to develop enterprise applications using the Java programming language;
- discover various advanced Java technologies used to build web applications for the enterprise;
- learn to competently use the advanced Java libraries to build a medium-size web application for the enterprise.
Unit Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Activities</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td>No formal assessment or activities are undertaken in week 0</td>
</tr>
<tr>
<td>1</td>
<td>Unit Overview and Java Revision</td>
<td>Note: Tutorial classes commence in Week 1</td>
</tr>
<tr>
<td>2</td>
<td>Enterprise Architecture Concepts and Java EE Application Architecture</td>
<td>Week 1 exercise due</td>
</tr>
<tr>
<td>3</td>
<td>Graphical User Interface</td>
<td>Week 2 exercise due</td>
</tr>
<tr>
<td>4</td>
<td>Introduction to JavaServer Faces</td>
<td>Week 3 exercise due</td>
</tr>
<tr>
<td>5</td>
<td>Developing Web Interfaces with JavaServer Faces</td>
<td>Week 4 exercise due</td>
</tr>
<tr>
<td>6</td>
<td>Working with Web Services</td>
<td>Week 5 exercise due</td>
</tr>
<tr>
<td>7</td>
<td>Introduction to Enterprise JavaBeans</td>
<td>Week 6 exercise due</td>
</tr>
<tr>
<td>8</td>
<td>Advanced Applications of Enterprise JavaBeans</td>
<td>Week 7 exercise due</td>
</tr>
<tr>
<td>9</td>
<td>Introduction to Java Persistence</td>
<td>Week 8 exercise due</td>
</tr>
<tr>
<td>10</td>
<td>Advanced Applications of Java Persistence</td>
<td>Week 9 exercise due</td>
</tr>
<tr>
<td>11</td>
<td>Securing Enterprise Web Applications</td>
<td>Week 10 exercise due</td>
</tr>
<tr>
<td>12</td>
<td>Unit Revision</td>
<td>Practical assignment due Friday 24 October 2014</td>
</tr>
<tr>
<td></td>
<td>SWOT VAC</td>
<td>No formal assessment is undertaken in SWOT VAC</td>
</tr>
<tr>
<td></td>
<td>Examination period</td>
<td>LINK to Assessment Policy:</td>
</tr>
</tbody>
</table>

*Unit Schedule details will be maintained and communicated to you via your learning system.

Teaching Approach

Lecture and tutorials or problem classes

This teaching and learning approach helps students to initially encounter information at lectures, discuss and explore the information during tutorials, and practice in a hands-on lab environment.

Assessment Summary

Examination (3 hours): 50%, In-semester assessment: 50%

<table>
<thead>
<tr>
<th>Assessment Task</th>
<th>Value</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tutorial Exercises</td>
<td>20%</td>
<td>Each weekly exercise will be due for assessment in the following week's tutorial.</td>
</tr>
<tr>
<td>Practical Assignment - Enterprise Web Application</td>
<td>30%</td>
<td>Week 12, Friday 24 October 2014</td>
</tr>
<tr>
<td>Unit Schedule</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>-----------</td>
<td>-------</td>
</tr>
<tr>
<td>Examination 1</td>
<td>50%</td>
<td>To be advised</td>
</tr>
</tbody>
</table>
Assessment Requirements

Assessment Policy

Faculty Policy - Unit Assessment Hurdles

Academic Integrity - Please see resources and tutorials at
http://www.monash.edu/library/skills/resources/tutorials/academic-integrity/

Assessment Tasks

Participation

• Assessment task 1

  Title:  Tutorial Exercises

  Description:
  Weekly programming tasks designed around that week's lecture material.

  Weighting:
  20%

  Criteria for assessment:
  ♦ The exercises are individual assessments and are to be entirely your own work.
  ♦ The exercises will be marked against criteria of correctness and clarity.
  ♦ Further detailed criteria will be available with the exercise specifications.

  Due date:
  Each weekly exercise will be due for assessment in the following week's tutorial.

• Assessment task 2

  Title:  Practical Assignment - Enterprise Web Application

  Description:
  This assignment will require students to design and implement a web application using Java enterprise technologies.

  Weighting:
  30%

  Criteria for assessment:
  ♦ This is an individual assignment and is to be entirely your own work.
  ♦ The assignment will be marked against criteria of correctness and clarity.
  ♦ Further detailed assessment criteria will be available with the assignment specification.

  Due date:
  Week 12, Friday 24 October 2014
Assessment Requirements

Examinations

- Examination 1
  
  **Weighting:**
  50%
  
  **Length:**
  3 hours
  
  **Type (open/closed book):**
  Closed book
  
  **Electronic devices allowed in the exam:**
  None

Learning resources

Monash Library Unit Reading List (if applicable to the unit)
http://readinglists.lib.monash.edu/index.html

Faculty of Information Technology Style Guide

Feedback to you

Examination/other end-of-semester assessment feedback may take the form of feedback classes, provision of sample answers or other group feedback after official results have been published. Please check with your lecturer on the feedback provided and take advantage of this prior to requesting individual consultations with staff. If your unit has an examination, you may request to view your examination script booklet, see
http://intranet.monash.edu.au/infotech/resources/students/procedures/request-to-view-exam-scripts.html

Types of feedback you can expect to receive in this unit are:

- Informal feedback on progress in labs/tutes
- Graded assignments with comments
- Interviews
- Solutions to tutes, labs and assignments

Extensions and penalties

Submission must be made by the due date otherwise penalties will be enforced.

You must negotiate any extensions formally with your campus unit leader via the in-semester special consideration process: http://www.monash.edu.au/exams/special-consideration.html

Returning assignments

Students can expect assignments to be returned within two weeks of the submission date or after receipt, whichever is later.
Assignment submission

It is a University requirement for students to submit an assignment coversheet for each assessment item. Faculty Assignment coversheets can be found at http://www.infotech.monash.edu.au/resources/student/forms/. Please check with your Lecturer on the submission method for your assignment coversheet (e.g. attach a file to the online assignment submission, hand-in a hard copy, or use an online quiz). Please note that it is your responsibility to retain copies of your assessments.

Online submission

If Electronic Submission has been approved for your unit, please submit your work via the learning system for this unit, which you can access via links in the my.monash portal.

Required Resources

Please check with your lecturer before purchasing any Required Resources. Limited copies of prescribed texts are available for you to borrow in the library, and prescribed software is available in student labs.

You will need access to:

- Java SE 7
- NetBeans IDE with Java EE 7 support and Glassfish application server

This software is freely available online to download and also be available in University computer labs. Appropriate download resources will be made accessible via Moodle.

Recommended Resources

The Java EE 7 Tutorial:

This is the official Java EE 7 Tutorial from Oracle. We will use a number of chapters and example code from the tutorial to demonstrate core concepts in the Java EE platform.

The tutorial is accessible at http://docs.oracle.com/javae7/tutorial/doc/home.htm
Other Information

Policies

Monash has educational policies, procedures and guidelines, which are designed to ensure that staff and students are aware of the University’s academic standards, and to provide advice on how they might uphold them. You can find Monash’s Education Policies at: www.policy.monash.edu.au/policy-bank/academic/education/index.html

Key educational policies include:

- Student Academic Integrity Policy and Student Academic Integrity: Managing Plagiarism and Collusion Procedures; http://www.policy.monash.edu/policy-bank/academic/education/conduct/student-academic-integrity-policy.html
- Special Consideration; http://www.policy.monash.edu/policy-bank/academic/education/assessment/special-consideration-policy.html
- Grading Scale; http://www.policy.monash.edu/policy-bank/academic/education/assessment/grading-scale-policy.html
- Discipline: Student Policy; http://www.policy.monash.edu/policy-bank/academic/education/conduct/student-discipline-policy.html
- Academic Calendar and Semesters; http://www.monash.edu.au/students/dates/
- Orientation and Transition; http://intranet.monash.edu.au/infotech/resources/students/orientation/

Faculty resources and policies

Important student resources including Faculty policies are located at http://intranet.monash.edu.au/infotech/resources/students/

Graduate Attributes Policy

http://www.policy.monash.edu/policy-bank/academic/education/management/monash-graduate-attributes-policy.html

Student Charter


Student services

The University provides many different kinds of support services for you. Contact your tutor if you need advice and see the range of services available at http://www.monash.edu.au/students. For Malaysia see http://www.monash.edu.my/Student-services, and for South Africa see http://www.monash.ac.za/current/.
Monash University Library

The Monash University Library provides a range of services, resources and programs that enable you to save time and be more effective in your learning and research. Go to www.lib.monash.edu.au or the library tab in my.monash portal for more information. At Malaysia, visit the Library and Learning Commons at http://www.lib.monash.edu.my/. At South Africa visit http://www.lib.monash.ac.za/.

Disability Liaison Unit

Students who have a disability or medical condition are welcome to contact the Disability Liaison Unit to discuss academic support services. Disability Liaison Officers (DLOs) visit all Victorian campuses on a regular basis.

- Website: http://www.monash.edu/equity-diversity/disability/index.html
- Telephone: 03 9905 5704 to book an appointment with a DLO; or contact the Student Advisor, Student Community Services at 03 55146018 at Malaysia
- Email: dlu@monash.edu
- Drop In: Equity and Diversity Centre, Level 1, Building 55, Clayton Campus, or Student Community Services Department, Level 2, Building 2, Monash University, Malaysia Campus

Other

Various web resources will be made available on Moodle.