



UNIVERSITI TEKNOLOGI MARA

CSC798: WEB ARCHITECTURE

<b>Course Name (English)</b>	WEB ARCHITECTURE <b>APPROVED</b>
<b>Course Code</b>	CSC798
<b>MQF Credit</b>	3
<b>Course Description</b>	This course introduces the notion of Web architecture and its application. It emphasizes the classification of Web architectures from the general web application to the web service-oriented computing. The techniques and methods to design and analyze the architecture are also studied. It also includes Web 2.0 as a modern Web architecture. The scalability of the Web architecture is also emphasized for dealing with a complex Web environment.
<b>Transferable Skills</b>	Knowledge about emergent technology in Web environment.
<b>Teaching Methodologies</b>	Lectures, Lab Work, Discussion
<b>CLO</b>	CLO1 Analyze understanding of software architecture fundamentals CLO2 Demonstrate understanding of methods, techniques and tools for realizing software architecture CLO3 Formulate a software architecture of a software system
<b>Pre-Requisite Courses</b>	No course recommendations
<b>Topics</b>	
<b>1. WEB ARCHITECTURE FUNDAMENTALS</b> 1.1) Software architecture as part of software engineering. 1.2) Definition of Web architecture. 1.3) Using Web architecture in practices. 1.4) Web architecture for an organization. 1.5) Benefits of providing Web architecture. 1.6) Taxonomy of Web architectures.	
<b>2. ARCHITECTURE DESIGN AND ANALYSIS</b> 2.1) Designing architectures. 2.2) Connectors. 2.3) Modeling. 2.4) Visualization. 2.5) Analysis. 2.6) Implementation 2.7) Applied architectures and styles. 2.8) Designing for non-functional properties.	
<b>3. WEB APPLICATION ARCHITECTURE</b> 3.1) WWW Overview. 3.2) Web servers 3.3) Web browsers. 3.4) Web technologies and standards. 3.5) Dynamic Web applications. 3.6) Approaches to Web application development.	
<b>4. WEB SERVICES ARCHITECTURE</b> 4.1) Web services overview. 4.2) Web services technology and standards. 4.3) Service-oriented life cycle. 4.4) Service-oriented conceptualization. 4.5) Service-oriented design model. 4.6) Service-oriented Architecture Modeling Principles	

**5. WEB 2.0 ARCHITECTURE**

- 5.1) Overview of Web 2.0.
- 5.2) Web 2.0 examples.
- 5.3) Modeling Web 2.0.
- 5.4) Web 2.0 reference architecture.
- 5.5) Specific patterns of Web 2.0.

**6. SCALABLE WEB ARCHITECTURE**

- 6.1) Architecting scalable solutions.
- 6.2) Optimizing performance.
- 6.3) Scalability techniques.

Assessment Breakdown		%		
Continuous Assessment		100.00%		

  

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	Assignment 1	15%	CLO1
	Assignment	Assignment 2	15%	CLO3
	Group Project	Project	30%	CLO2
	Test	Final Assessment	40%	CLO1

  

Reading List	Reference Book Resources
	<ul style="list-style-type: none"> <li>• Randy Connolly and Ricardo Hoar 2019, <i>Fundamentals of Web Development</i>, 2nd Edition Ed., Pearson London, UK [ISBN: 780134481265]</li> <li>• Louis Rosenfeld, Peter Morville and Jorge Arango 2015, <i>Information Architecture: For the Web and Beyond</i>, 4th Edition Ed., O'Reilly Media Sebastopol, Canada [ISBN: 1491911689]</li> <li>• Artur Ejsmont 2015, <i>Web Scalability for Startup Engineers</i>, 1st Edition Ed., McGraw-Hill Education New york, USA [ISBN: 0071843655]</li> <li>• Martin L. Abbott , Michael T. Fisher 2015, <i>The Art of Scalability: Scalable Web Architecture, Processes, and Organizations for the Modern Enterpris</i>, 2nd Edition, Ed., Addison-Wesley Professional New Jersey, USA [ISBN: 0134032802]</li> <li>• Gerardus Blokdyk 2018, <i>Modern Web App Architecture Standard Requirements</i>, 5STARCook [ISBN: 0655440135]</li> </ul>

  

<b>Article/Paper List</b>	This Course does not have any article/paper resources
<b>Other References</b>	This Course does not have any other resources