



UNIVERSITI TEKNOLOGI MARA

CSC570: XML PROGRAMMING

Course Name (English)	XML PROGRAMMING APPROVED
Course Code	CSC570
MQF Credit	3
Course Description	This course provides basic principles of XML that are designed to separate mark-up from related content. It also prepares the student the typical and important uses for XML-based mark-up languages. In addition, it also covers the grammatical rules in order to work with XML.
Transferable Skills	Computer skills Problem Solving skills Team work skills Communication & Presentation skills Time Management skills
Teaching Methodologies	Lectures, Lab Work
CLO	CLO1 Apply concepts and methods in XML documents and applications. CLO2 Demonstrate communication skills in a group project on topics related to XML applications. CLO3 Demonstrate lifelong learning skills in assignments related to application based on XML.
Pre-Requisite Courses	No course recommendations
Topics	
1. Introduction to XML 1.1) Description of the XML 1.2) Differences between XML, SGML, HTML 1.3) Uses of XML 1.4) Standard XML Applications	
2. XML Documents 2.1) Creating Well-Formed XML Documents 2.2) Adding Elements to the Documents 2.3) Adding Attributes to Elements 2.4) Namespaces 2.5) Adding Comments, Processing Instructions and CDATA Sections	
3. Document Type Definitions (DTD) 3.1) Basic Criteria for Valid XML Document 3.2) Advantages making an XML Document Valid 3.3) Document Type Declarations 3.4) Declaring Element Types 3.5) Declaring Attributes 3.6) Using Namespace in Valid Documents 3.7) Notation, Entities, XML Content Models 3.8) External DTD 3.9) Building Document Structures	
4. XML Path Language (XPATH) 4.1) Location Path 4.2) Using Axes 4.3) Using Node Test 4.4) Using Predicates 4.5) XPath Abbreviations and Default Rules	

5. XML Stylesheets Language (XSL)

- 5.1) Basic of XSL Transformations (XSLT)
- 5.2) Using XSLT Template
- 5.3) Using Multiple Templates
- 5.4) Using Select and Match Expression
- 5.5) Filtering and Sorting XML Data
- 5.6) Accessing XML Attributes
- 5.7) Using Conditional Structure

6. XML Document Object Model (DOM)

- 6.1) Introduction to the DOM
- 6.2) XML DOM Nodes
- 6.3) XML DOM Node Tree
- 6.4) XML DOM Access Nodes
- 6.5) XML DOM Node Information

7. XML Schemas

- 7.1) Basic of XML Schemas
- 7.2) Creating XML Schemas
- 7.3) The Built-in XML Schemas Elements
- 7.4) Creating Element and Types
- 7.5) Simple types
- 7.6) Complex types
- 7.7) Specifying a Number of Elements
- 7.8) Specifying Element default Values
- 7.9) Creating Attributes
- 7.10) Building Document Structure

8. XML Application In Databases Environment

- 8.1) Solving the Basic Problem
- 8.2) Presenting XML in the Client-Server
- 8.3) Group Project Presentation

Assessment Breakdown	%
Continuous Assessment	60.00%
Final Assessment	40.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Group Project	Present the application based on XML technology.(Group Project)	10%	CLO2
	Lab Exercise	Lab exercises	10%	CLO3
	Quiz	4 Quizzes	10%	CLO1
	Test	Test1	15%	CLO1
	Test	Test2	15%	CLO1

Reading List	Recommended Text	Patrick Carey,Sasha Vodnik 2014, <i>New Perspectives on XML, Comprehensive</i> , Cengage Learning [ISBN: 9781305175945]
	Reference Book Resources	<ul style="list-style-type: none"> • Smart Brain Training Solutions 2014, <i>XML Fast Start: A Quick Start Guide for XML</i> [ISBN: 9781499233780] • Bernard Prost 2014, <i>Publishing with XML</i>, Manasta Publishing [ISBN: 9791091056007] • Elizabeth Drake 2013, <i>Introduction to JavaScript Programming with XML and PHP</i>, Pearson Higher Ed [ISBN: 9780133252330] • Joe Fawcett, Danny Ayers, Liam R. E. Quin 2012, <i>Beginning XML</i>, 5th Ed., Wiley U.S.A [ISBN: 1118162137] • David Hunter,Jeff Rafter,Joe Fawcett,Eric van der Vlist,Danny Ayers,Jon Duckett,Andrew Watt,Linda McKinnon 2011, <i>Beginning XML</i>, 4 Ed., John Wiley & Sons [ISBN: 9781118169353] • Jeff Friesen 2016, <i>Java XML and JSON</i>, Springer [ISBN: 978-1-4842-19]
Article/Paper List	This Course does not have any article/paper resources	
Other References	This Course does not have any other resources	