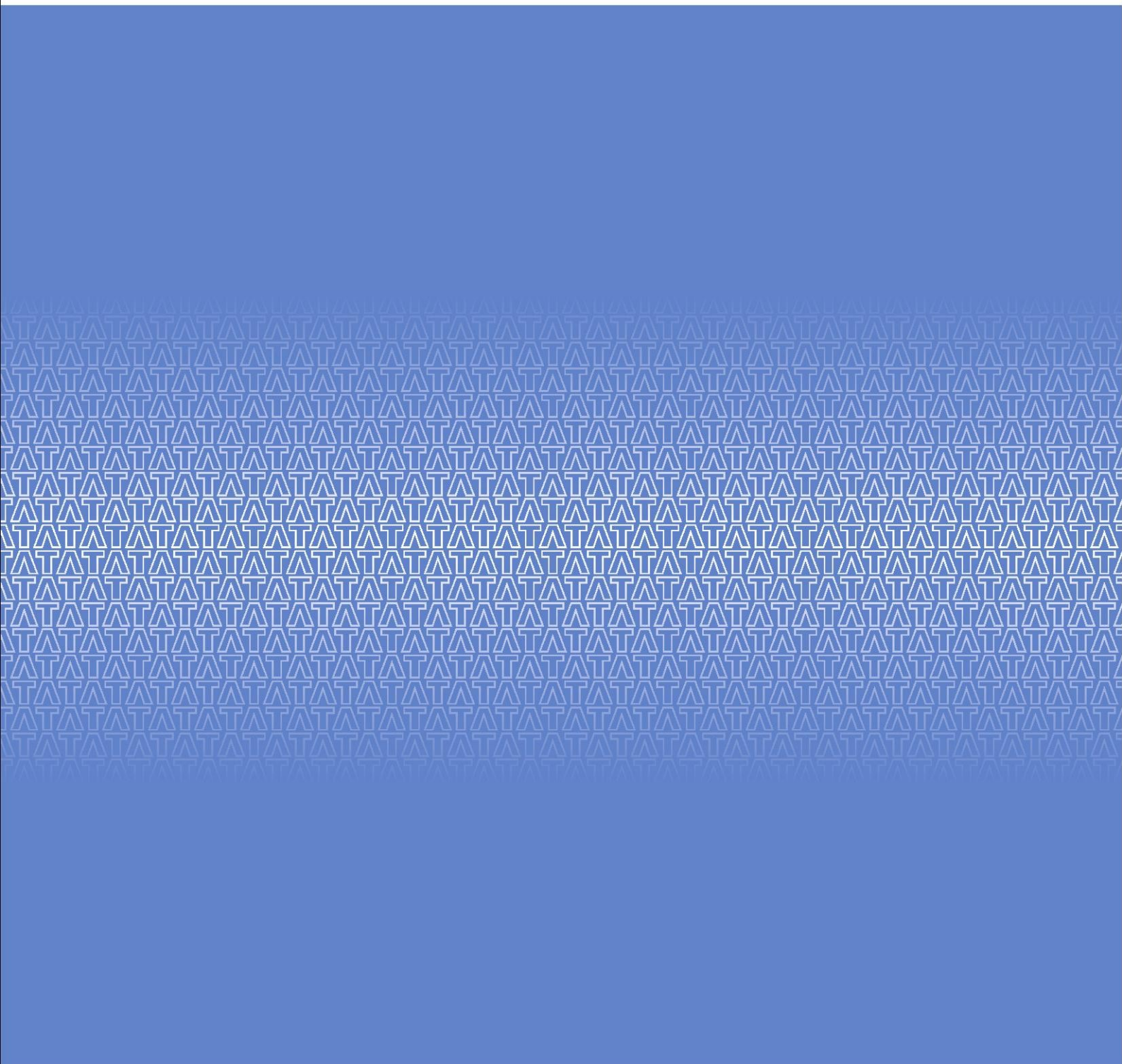


Pre-Initial Learning Program

Version 1.1

Course Plan, July, 2009

Phase III



1 Pre-ILP Schedule and Curriculum

The Pre-ILP phase enables the participants to learn about the basics of Computers, Programming, Software Engineering, Web Technologies and Relational Database Management Systems.

Table 1: Pre-ILP Schedule

		Week1	Week2- Week6	Week7- Week 8	Week9 – Week 11	Week12
Pre-ILP						
	Basics of Computers					
	Basics of Programming					
	Software Engineering and Database Concepts					
	Web Technologies Exercises					
	Databases – SQL and Exercises					

Towards the end of Pre-ILP, the participants should be able to

- Find solutions for any given problem using programming concepts.
- Solve computational logic and record processing problems in C.
- Write simple queries to access data from multiple tables in a database
- Design web pages and build websites with images, text content, forms and basic validations using CSS, Java script , HTML and XML
- Understand Software Engineering, Operating Systems and Data Structures

Participants are expected to follow the timelines as per the phases mentioned in the following sections.

1.1 Pre-ILP Phase III

The objective of this phase is to ensure that participants have a sound understanding of the Web Technologies and Database Systems prior to the start of the ILP phase.

During this phase, participants are expected to read and understand the basics of Web Technologies including HyperText Markup Language (HTML), Cascading Style Sheet (CSS), eXtensible Markup Language (XML) and Javascript (JS).

Following are the details of the topics that participants need to familiarise themselves with during the Pre-ILP phase.

1.1.1 Web Technologies

Participants are expected to gain an in depth understanding of Web technologies including HTML, CSS, XML and JS.

Participants are expected to read each tutorial, and work out all examples and use the try-it-yourself kits and references as provided in <http://www.w3schools.org> (HTML, CSS, XML and JS)

HTML		
Elements	Lists	CSS
Attributes	Forms	Entities
Headings	Colours	Head
Paragraphs	Colournames	Meta
Formatting	Colourvalues	URLs
Styles	Quick List	Scripts
Links	Layout	Attributes
Images	Frames	Events
Tables	Fonts	URL Encode

CSS		
CSS Basic	CSS List	CSS Image Gallery
CSS Background	CSS Table	CSS Image Opacity
CSS Text	CSS Advanced	CSS Media Types
CSS Font	CSS Dimension	CSS Don't
CSS Border	CSS Classification	CSS Summary
CSS Outline	CSS Positioning	
CSS Margin	CSS Pseudo	
CSS Padding	CSS Pseudo-element	

XML		
XML Basic	XML CSS	XML Advanced
XML Tree	XML XSLT	XML Namespaces
XML Syntax	XML JavaScript	XML CDATA
XML Elements	XML Parser	XML Encoding
XML Attributes	XML DOM	XML Server
XML Validation	XML to HTML	XML DOM Advanced
XML Validator	XML HTTP Request	XML Editors
XML Viewing	XML Application	XPath and XQuery

JavaScript		
JS Basic	JS For Loop	JS HTML DOM
JS Statements	JS While Loop	JS Advanced
JS Comments	JS Break Loops	JS Browser
JS Variables	JS For...In	JS Cookies
JS Operators	JS Events	JS Validation
JS Comparisons	JS Try...Catch	JS Animation
JS If...Else	JS Throw	JS Image Maps
JS Switch	JS Special Text	JS Timing
JS Statements	JS Guidelines	JS Create Object
JS Comments	JS Objects	JS Summary
JS Variables	JS Objects Intro	JS Advanced
JS Operators	JS String	
JS Comparisons	JS Date	
JS If...Else	JS Array	
JS Switch	JS Boolean	
JS Popup Boxes	JS Math	
JS Functions	JS RegExp	

Participants are expected to complete all the practice exercises provided in W3Schools <http://www.w3schools.com> and one of the following books:

- Internet and World Wide Web – How to Program, Deitel, 3rd Edition
 - Chapter 1 - Introduction to Computers and the Internet
 - Chapter 2 - Microsoft Internet Explorer 6
 - Chapter 3 - Adobe Photoshop Elements: Creating Web Graphics
 - Chapter 4 - Introduction to XHTML: Part 1
 - Chapter 5 - Introduction to XHTML: Part 2
 - Chapter 6 - Cascading Style Sheets™ (CSS)
 - Chapter 7 - JavaScript: Introduction to Scripting
 - Chapter 8 - JavaScript: Control Statements I
 - Chapter 9 - JavaScript: Control Statements II
 - Chapter 10 - JavaScript: Functions
 - Chapter 11 - JavaScript: Arrays
 - Chapter 12 - JavaScript: Objects
 - Chapter 13 - Dynamic HTML: Object Model and Collections
 - Chapter 14 - Dynamic HTML: Event Model
 - Chapter 20 - Extensible Markup Language (XML)
 - Chapter 21 - Web Servers (IIS and Apache)
 - Chapter 22 - Database: SQL, MySQL, DBI and ADO.NET
- Internet and World Wide Web – How to Program, Deitel, 4rd Edition
 - Chapters 1 & 2
 - Chapters 4 to 13
 - Chapters 21 & 22
 - Chapter 3

1.1.2 Relational Database Management System (RDBMS) and SQL

Participants are expected to practice queries using MySQL database.

Participants are expected to use SQLyog (Open-source Freeware) to write queries.

SQL		
SQL Basic	SQL Joins	SQL Drop
SQL Intro	SQL Inner Join	SQL Alter
SQL Syntax	SQL Left Join	SQL Increment
SQL Select	SQL Right Join	SQL Views
SQL Distinct	SQL Full Join	SQL Dates
SQL Where	SQL Union	SQL Nulls

SQL And & Or	SQL Select Into	SQL isnull()
SQL Order By	SQL Create DB	SQL Data Types
SQL Insert	SQL Create Table	SQL Functions
SQL Update	SQL Constraints	SQL avg()
SQL Delete	SQL Not Null	SQL count()
SQL Top	SQL Unique	SQL first()
SQL Like	SQL Primary Key	SQL last()
SQL Wildcards	SQL Foreign Key	SQL max(), min(), sum()
SQL In	SQL Check	SQL ucase(), lcase(), mid(), len()
SQL Between	SQL Default	SQL Group By

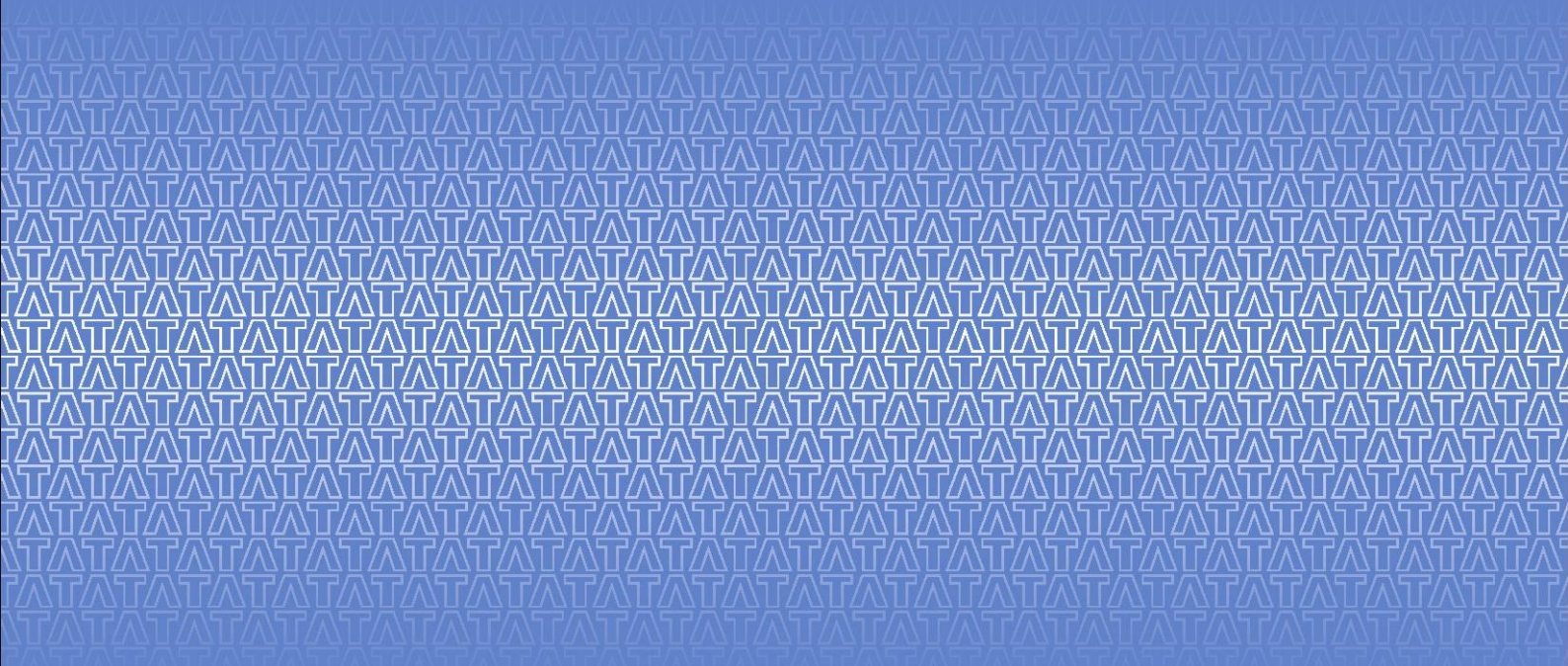
Participants are expected to complete all the practice exercises provided in W3Schools (<http://www.w3schools.com>)

As a part of the evaluation, participants will be asked to write queries in a MySQL environment (<http://www.mysql.com/>) using SQLyog editor (<http://www.webyog.com/>).

1.1.3 Phase III Learning Schedule

Participants are expected to learn:

- Web Technologies between Week 9 – Week 11 of the Pre-ILP phase
- RDBMS & SQL Exercises in Week 12 of the Pre-ILP phase



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