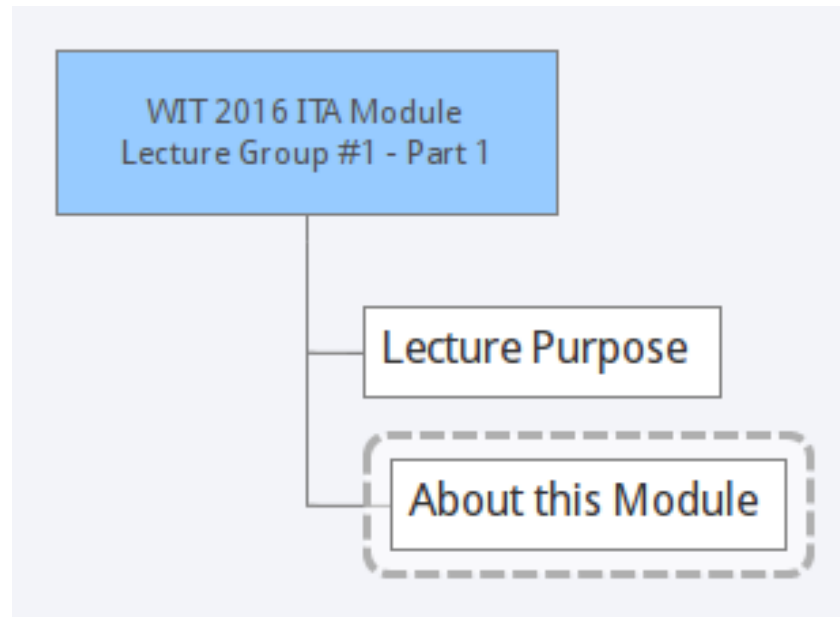

WIT 2016 ITA Module

Lecture Group #1 - Part 1 About this Module



Lecture Group #1 - Part 1



Overview

Review the course structure and objectives for the next few weeks.
Brief you about what is expected from you as the module unfolds.



About Me

The Subject of this Module.

My Subject Matter of Expertise.

Industry domain experience.

For questions or clarifications.

How to reach me (papeiclier@gmail.com).

Response time to expect.

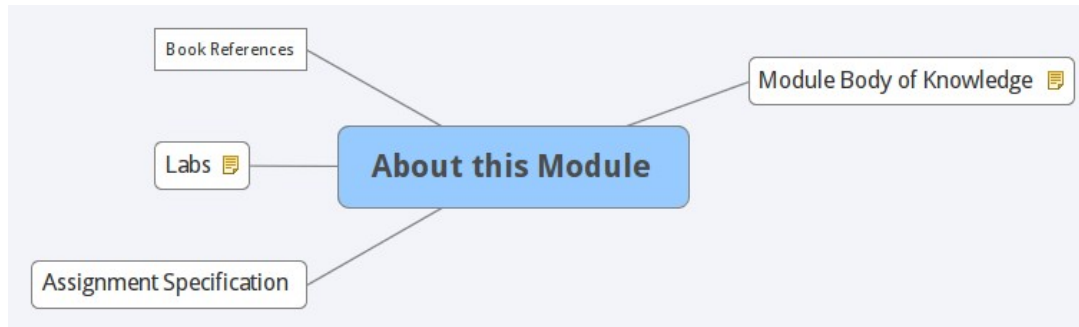
Lecture materials provided.

Access to Lectures, Labs.

Feedback.



About this Module



Module Body of Knowledge

Day 1 objective: Understanding of Enterprise Application Architecture

Day 2 objective: Tools & Techniques used by Architects

Day 3 objective: Model Architecture Solution using Archimate 2.1

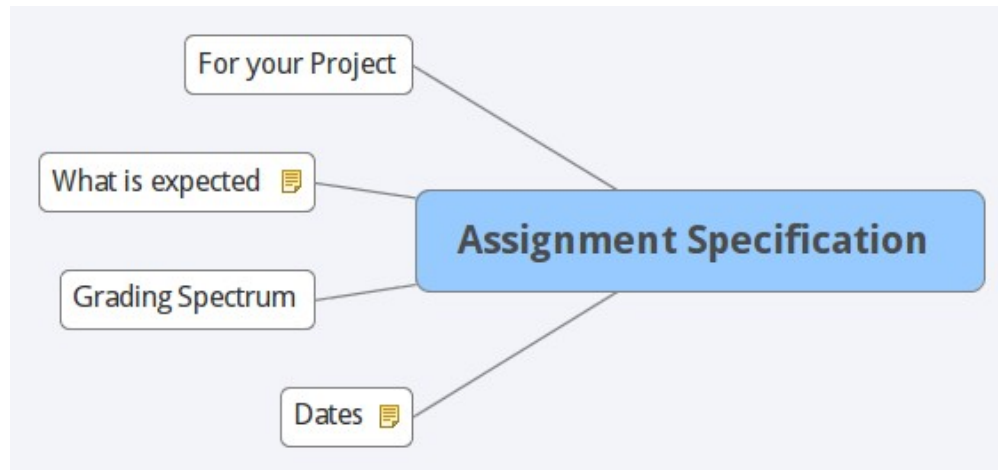
Day 4 objective: Insight on a catalog of useful Architectural Styles

Day 5 objective: Insight on a catalog of useful Architecture Patterns

Day 6 objective: Key Design Practices and Principles Architects follow



Assignment Specification



Dates

Final Deadline:

- Thursday May 12th - 11pm.

Architecture Review:

- Friday May 13th - 30 Minutes,
- schedule to be published on Moodle.



Candidate assignment rubric

Standard	Features	Patterns	Architectural Context	
	Baseline	track & log activities / basic stats ↓ <input type="text" value="Collect Data to:"/>	3-4 Patterns. Single Catalogue	design artifacts traceable to capabilities
Good	reports / progress insight / dashboards ↓ <input type="text" value="Use Data to:"/>	4-5 Patterns. Single Catalogue	demonstrate no functional gaps in architecture	3 Viewpoints mapped. Work product feature-complete. Archimate
Excellent	connect to friends / compare workouts ↓ <input type="text" value="Augment Data to:"/>	6-7 Patterns. Multiple Catalogues	solution design answers architecture requirements	3+ Visible design qualities of architecture style. Fitness for purpose proven. TOGAF AD
Outstanding	prescribe workouts / build training plans / live coaching	8+ Patterns. Multiple Catalogues + integrated patterns	design perspectives traceable to architecture constraints	3+ architectural trade-offs explained. TOGAF AD ⁵



Module assignment

An Architecture Work-product – i.e. tangible deliverable based on the TOGAF 9.1 Architecture Description (AD) document template:

- ...expressing the solution architecture of an application,
- ...answering to architectural requirements linking to solution objectives.

Composed of models representing Views and Perspectives of your solution Architecture:

- ...using the Archimate 2.1 modeling notation.
- ...making use of at least one architecture style and patterns.
- ...demonstrating traceability between components, completeness of design, and quality properties of the architecture.



Your project assignment

Option 1:

You are free to re-use examples the covered in the Labs, i.e. you can re-use the fictive Labs scenario of runkeeper.com.

If you decide to do so, you must go through a different design path to the path used during the labs.

For example, build your solution with a different architecture style/pattern to the ones used in the Lab.

Option 2:

You can architect a brand new runkeeper.com feature using any Architecture Style & related Patterns of your choice (including the Style/Patterns used during the Lab).

Option 3:

You can architect for different industry scenario altogether of course, using an Architecture Style & related Patterns of your choice (including the Style/Patterns used during the Lab).



What is expected

Not code-oriented work is expected in this Module.

No coding artifacts are required.

The smallest artifact unit in this Module is View Modeling.

Your work aims to prove your architecture's completeness, fitness for purpose using traceable model artifacts.

Build your design models using the ArchiMate® 2.1 language specification semantics.

Architect for a solution to a problem or goal end-to-end, showing all facets of your architecture from Client to Server.



Labs

Lab 1:

To become familiar with a Architecture Design Modeling environment.

Lab 2 to 5: Model the Architecture of runkeeper.com

Lab 2: Domain driven-design of a new runkeeper.com feature

Lab 3: Select and apply an architectural style

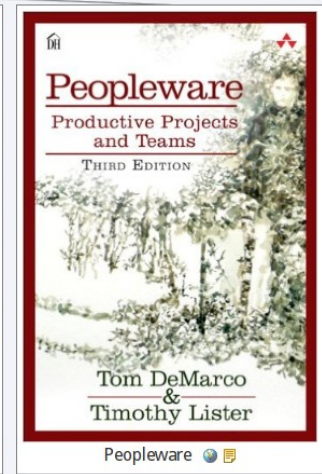
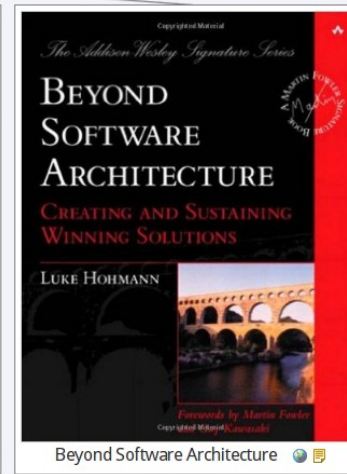
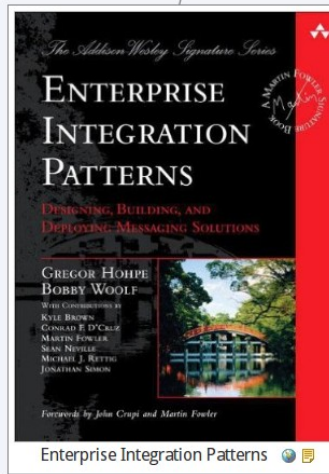
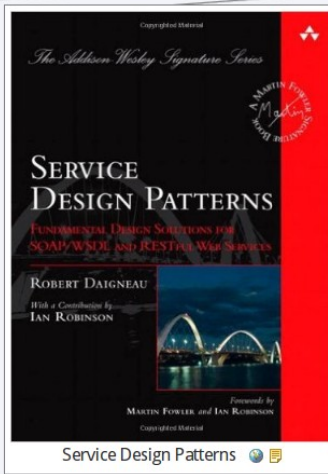
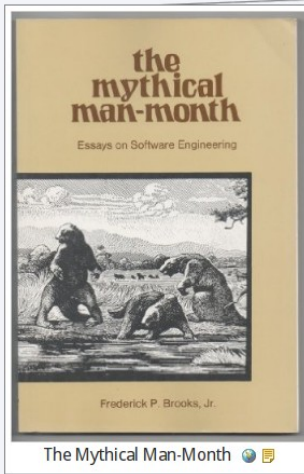
Lab 4: Select and apply an architectural pattern

Lab 5: Build a TOGAF 9.1 Architecture Description deliverable (AD)



Book References

Book References

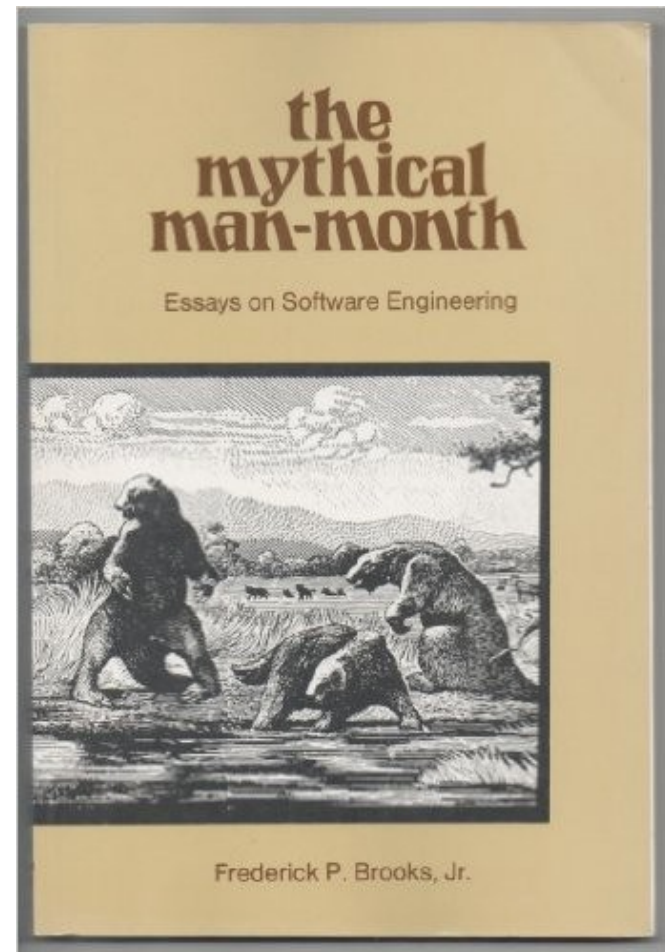


The Mythical Man-Month

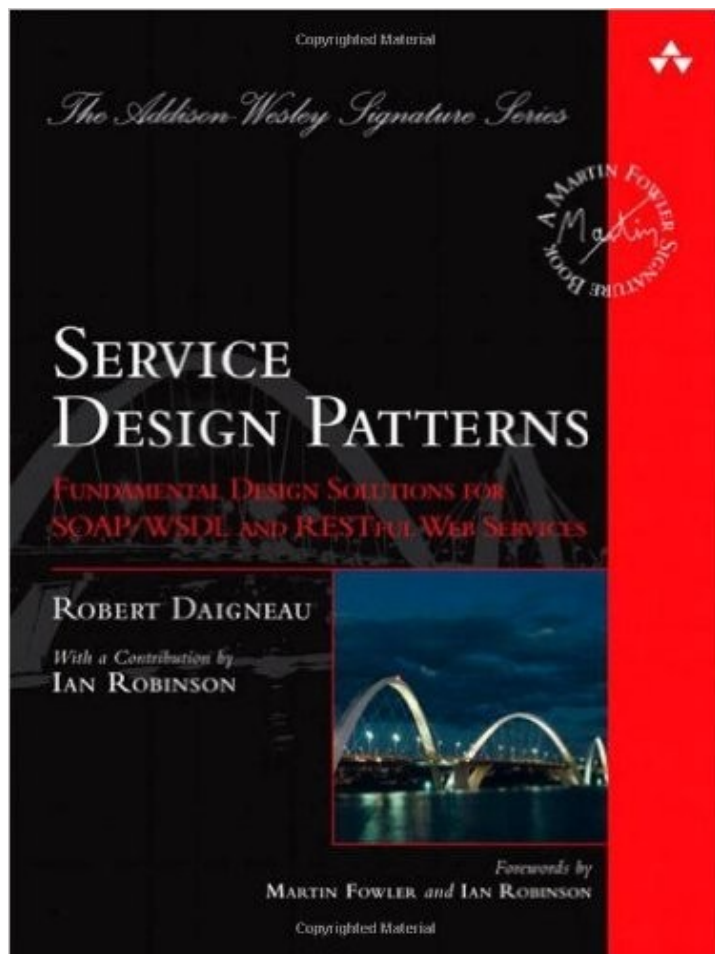
When embarking on a second system, an engineer should be mindful that they are susceptible to over-engineering it.

The argument relies on the distinction between accidental complexity and essential complexity.

Architects can act on the user's behalf, decides what goes in the system and what stays out to ensure a user-friendly system that has conceptual integrity.



Service Design Patterns



Expresses design solutions for web services that follow the REST architectural style or leverage the SOAP/WSDL specifications.

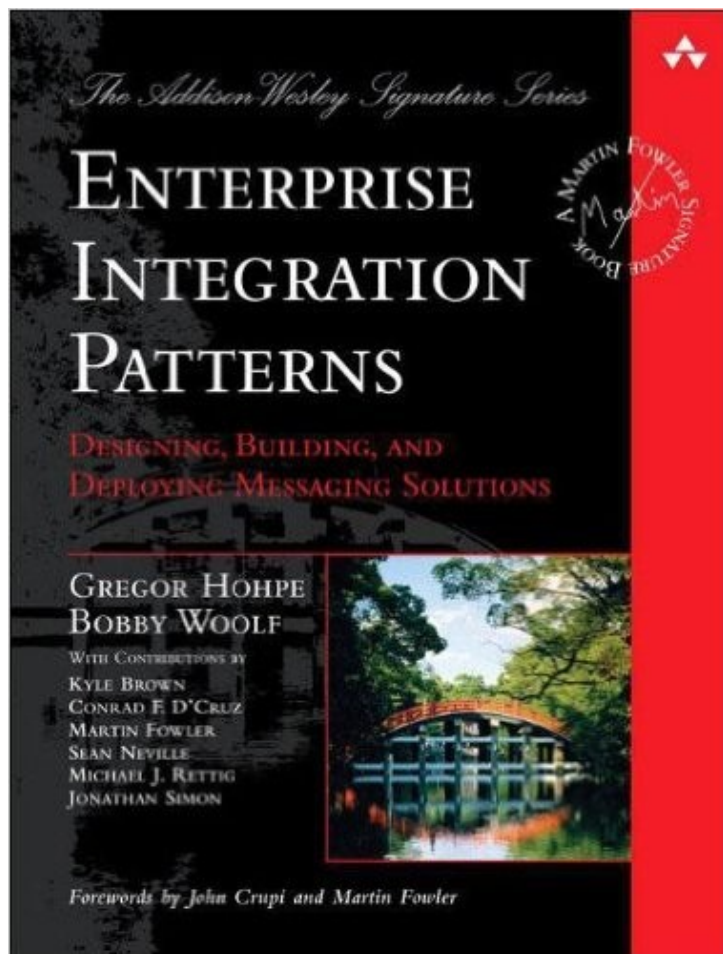
Identifies the fundamental topics in web service design and lists the common design patterns.

Explains the constituent design elements, and explore the relative strengths and trade-offs.

Covers how solutions can adapt and change over the years.



Enterprise Integration Patterns



This book describes large-scale integration solutions across many technologies.

It the advantages and limitations of asynchronous messaging architectures over RT architecture styles.

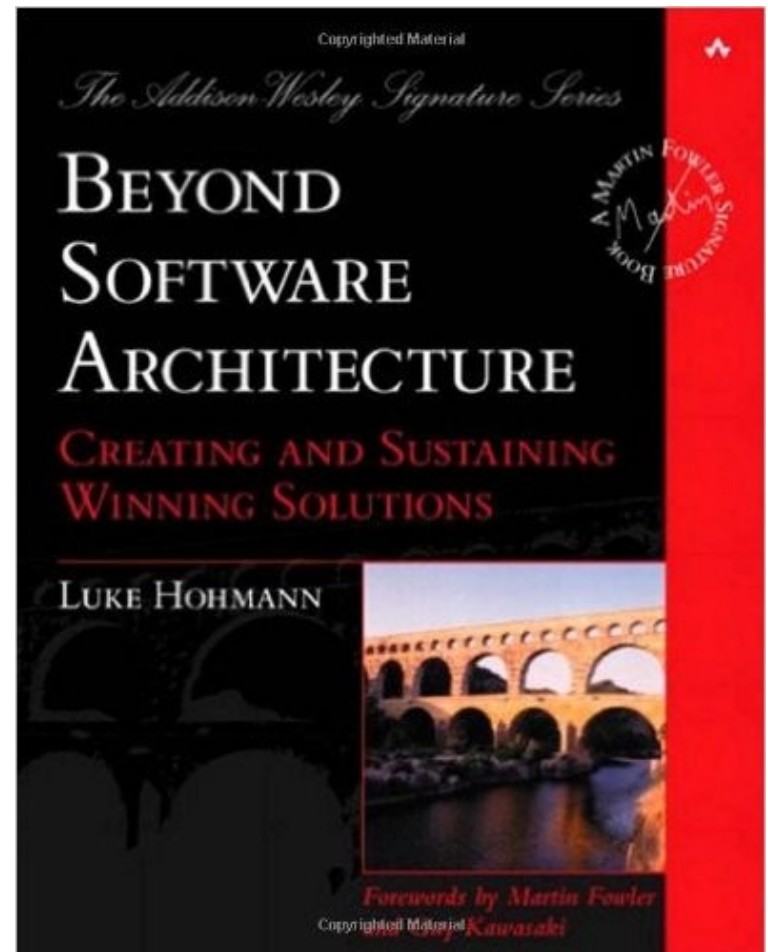
Present designs to connect an application to a messaging system, determine when to send a message, how to route it to the proper destination, and how to monitor the health of a messaging system.



Beyond Software Architecture

Provides a clear understanding of the business value of software architecture.

Addresses how to build a software architecture that aligns with a customer's overall goals.



Peopleware

The major issues of software development are human, not technical.

People organization are not easy issues to solve; but if you work at understanding them in your architecture, you will maximize your chances of success.

