

## Topics for Midterm F2015:

1. Architecture - define uses, activities, partitions, events, interactions, views, critical issues
2. Software structure – client/server, components, program tasks
3. .Net Threads and Tasks – expect to write a code fragment that has to create one or more threads
4. Synchronization
5. Queues – when and why to use
6. C# object model
7. Simple reflection
8. Lambdas, delegates and .Net event model
9. When, why do we need Dispatcher.Invoke?
10. XML – what is it? What is it used for?
11. LINQ for collections and XML – expect to write code
12. Files – how to read/write (may need this to write a bit of code)
13. WCF – Contracts, Endpoints, Activation models
14. WPF – Panels, Controls, event routing
15. Expect to write code fragments similar to the code used in projects

Text material to review:

C# 6.0 in a Nutshell

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|---|-------------------------------|
| 1. Types and class relationships                              | Chapters 2-3                  |
| 2. Delegates, Lambdas   | Chapter 4                     |
| 3. .Net Framework Class Library                               | Chapters 5-7                  |
| 4. XML  | Chapter 8-11                  |
| 5. Reflection   | Chapter 19                    |
| 6. Multithreading   | Chapter 14, 22                |
| 7. WCF  | Class notes and code examples |
| 8. WPF  | Class notes and code examples |
| 9. Diagrams for processes, virtual memory, and windows events |                               |
| 10. Notes on UML diagrams                                     |                               |
| 11. C# syntax and semantics that we have emphasized in class  |                               |

1. Project #5 architecture
2. Project #4 design
3. Project #2 design