Midterm Examination Makeup
Version 2.0
Due December 16, 2015

If you complete both parts carefully and correctly, your midterm exam grade will be raised to 85, but no higher.

Part A. – Critically analyze your Midterm submission, question by question, discussing all errors of commission and omission you find. Please do not feedback my solutions to each problem. Instead, discuss problems with your submission. I would expect you to use my solutions to help you do that, but you are analyzing your errors, not my solutions.

Part B. – Provide solutions for each of the requests, below:

1. Write an Executive Summary for your Project #5 OCD, e.g., summarize the concept, structure, and critical issues you expect to discuss in the body of the report.
2. Describe in concrete detail how the CommPrototype-08-Nov-2015 communication system provided in the Project4HelpF15 folder works. You will need to discuss the interfaces, classes, and important methods.
3. Create a list of at least seven messages needed by Project#5 communication between Clients, Repository, Build Server, and Test Harness. Please list the name of the message, its destination, source, and contents.
4. Describe the NoSqlDB DBElements used for the data services in the Clients, Repository, TestHarness, and Collaboration servers. The structure[1] of these elements should match the data storage needs of each server.
5. Write the code for an event logger that stores log items in a NoSqlDB and, on command, persists its contents to an XML file. This could be one of the required prototypes you supply with the Project #5 OCD. You may choose any processing event from Project #5 as a model for the data being logged. Can you make the logger work for any Project #5 event?
6. Convert your logging facility to accept log messages asynchronously.
7. Draw a class diagram for file caching on the Project #5 Clients and Repository server. Explain the responsibilities of each class.
8. Enumerate issues associated with the logging facility of B.5 and suggest solutions.
9. Where would you expect to use C# tasks in an implementation of the Code Repository Data Management Service as described in the Project #5 statement.
10. Write code to list all the Repository packages depending on a specific named package using a NoSqlDb query.

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[1] In some cases the DBElements metadata will change. For others, the structure needs can be handled by structuring the payload.