CSUS
COLLEGE OF ENGINEERING AND COMPUTER SCIENCE
Department of Computer Science

CSc 196P
Ouyang

CSc 196 Final Study Guide

1. Understand the logical steps required to deploy a .NET application with data-tier component in AWS.
2. Understand how to enable HTTPs for a mobile cloud application:
    a. How to write the client-side Android code to initiate an HTTPs connection?
    b. How to configure HTTPs in IIS to accept HTTPs requests?
    c. Why can't a self-signed certificate be used in a production system?
3. Understand how to enable transaction processing in a .NET application using "TransactionScope" and "CommittableTransaction".
    a. What does transaction processing enable? (ACID properties)
    b. Why is transaction processing essential in most of business applications? (Use an example to explain)
    c. How to write, debug, and test source code?
    d. Understand the differences between the two methods as well as the pros and cons of each method.
4. Understand how to configure a load balancer that distributes client requests to a group of application servers.
    a. Three types of load balancers.
    b. The key logical steps to configure an application-level load balancer.
    c. Behind an application-level load balancer, must each server be exactly the same—play the same role? Or can they each different perform tasks but collaborate to collectively enable a business service? (Use a travel booking service as an example)
5. Understand the basics of mobile-cloud application development.
    a. Android application development framework (e.g. activity, fragment, service, intent, adapter, etc.)
    b. .NET Web API framework.
    c. Understand at the source level what you did in "MobileCloudApp—Documentation of Design and Implementation". Specifically, you are required to understand the following:
        - The mapping between a UI event and the corresponding source code action (e.g. an invocation of a method in an activity).
        - When communicating with the server, how is an Android method mapped to a Web service request that is then sent to and processed by the corresponding controller of the .NET server in AWS?