Summer Study Guide form CMPS 3420 (Database Systems)
for Class Offered in Fall or Winter
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I: Web Technology

HTML5, Dynamic HTML, XML, CSS (Cascaded Style Sheet)
AJAX,   JSON,   Web-Socket, JQuery,
Resource: "W3Schools" – online free courses.

II: Client-side Scripting language

JavaScript Language
Resource: "W3Schools" – online free courses.

III: Application Development Platforms (or IDE – Integrated Development Environment)
or Web Delopment IDE

- **https://vaadin.com/ (free)**
- **Atom https://atom.io/ (free)**
- **Brackets http://brackets.io/ (free)**
- **Bootstrap : The most popular HTML, CSS and JS Framework for Web-based applications for Mobile and desktop computers, Downloadable from Internet.**

- **NetBeans: An IDE supporting multi-language application for web, mobile and regular devices and computers.**

- **Microsoft Visual Studio.Net: Free downloadable internet,**

Report Generator: Report generating tools come with NetBeans (Jasper report), MS Visual Studio Dot Net, and Google company.

IV: Server-Side Scripting Language

Java, C# or PHP

Resource: Digital books on CSUB library
Java – Java : How to Program by Deitel, published by Pearson
C#   - Any book that has database connectivity.

Notice that
- I prefer Java or C# since it is hard to connect from PHP to Oracle database.

- When learning Java/C#, study the following advanced topics
    - Multi-threading and synchronization (monitor)
    - Network programming (Sockets) and Remote Method Invocation (RMI).
    - Database connectivity

V: Other Requirements

1. Get familiar with a company which belongs your relatives, friends or which you have worked for.
2. Form a team of two members for one project.
3. Integrated Development Environment (IDE):
    a. NetBeans is good tool for building applications for traditional and web-based applications and apps for devices in Java, C/C++, PHP, coming in with Apache HTTP server.
    b. Microsoft Visual Studio.NET is also a good and popular tool to develop application. Combined with IIS (Internet Information) Server, you can learn and develop web-based application.