



# Welcome to CST8218 Web Enterprise Application Programming

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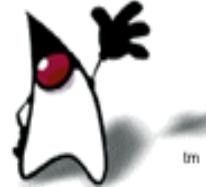
Office Hours: By Email Appointment

# Agenda



- Course Overview
- Enterprise Applications
- Java Enterprise Edition

# Course Overview



- Hybrid Course Format
- Each week there will be
  - Two hours of lecture (like this one)
  - roughly one hour of online hybrid activities
    - watch video, do online tutorial, blackboard quizzes, etc
  - two hours of lab time
    - mixture of exercises and assignments
    - team project



# Evaluation

- Hybrid Activities/Quizzes 5%
- Assignments 35%
- Lab Activities 5%
- Practical Assessments 10%
- Midterm Test 15%
- Final Examination 30%

# Assignments



- See the Submission Requirements beside the Course Outline on Brightspace
- You will demonstrate your work, as well as submit it before the deadline
- Missing or skipping the demonstration incurs a large penalty, up to 100% of the entire assignment mark
- Late assignments incur a large penalty, up to 100% of the entire assignment mark

# Tips for Success



- Assignments are large bodies of work that cannot reasonably be completed in one or two sessions, even long sessions
- Get started early
- Get clarification and help early
- Make good use of Lab Periods

# Tips for Success (cont'd)



- Rule One: 15 minute rule
  - if you are banging your head against the wall and not making progress for 15 minutes, you need to
    - take a break, move on to another part of the assignment, switch to other course work, come back to it later
    - sleep on it
    - seek help from a peer
    - seek help from the instructor

# Tips for Success (cont'd)



- Rule Two: Don't leave it to the last few days before the due date
  - Rule One is not feasible without Rule Two
  - Get started early, read through and understand the focus of the assignment and the tasks, as soon as you can
  - Keep up with the course pace (every week, you're expected to put in about 5 hours of time in addition to Hybrids Activities, Lectures, and Labs)

# Tips for Success (cont'd)



- Like anything else, to become competent in the programming domain, you need to put in time, preferably on a daily basis, working with the material.
- Ques -- Who do you want doing your brain surgery: a person who has taken pride in spending many hours practising the craft and learning, or the person who figured out how to minimize the time and effort required to get their credentials?

# Excessive Help



- Beware of receiving excessive help
- Getting the right amount of help when it's needed is important
- It's just as important to not get too much help
- Do it yourself: reading documentation, figuring out how to apply what you read, and solving apparent inconsistencies/problems

# Don't take shortcuts in Labs



- Like excessive help, shortcuts are bad
- Suppose you are training for a marathon
  - your coach wants you to run a ten kilometer training route
  - You feel overloaded and find a shortcut on the route to reduce it to one kilometer
  - You saved so much time doing it your way!
  - The short cut took so much less time and effort: where's the problem?



# Plagiarism

- Cheating is unacceptable
- Exchange ideas, but not code or text: don't plagiarize
- The person you copy from is in just as much trouble as you
- Adherence to acceptable standards of academic honesty is an important aspect of the learning process at Algonquin College. Academic work submitted by a student is evaluated on the assumption that the work presented by the student is his or her own, unless designated otherwise. For further details consult Algonquin College Policies

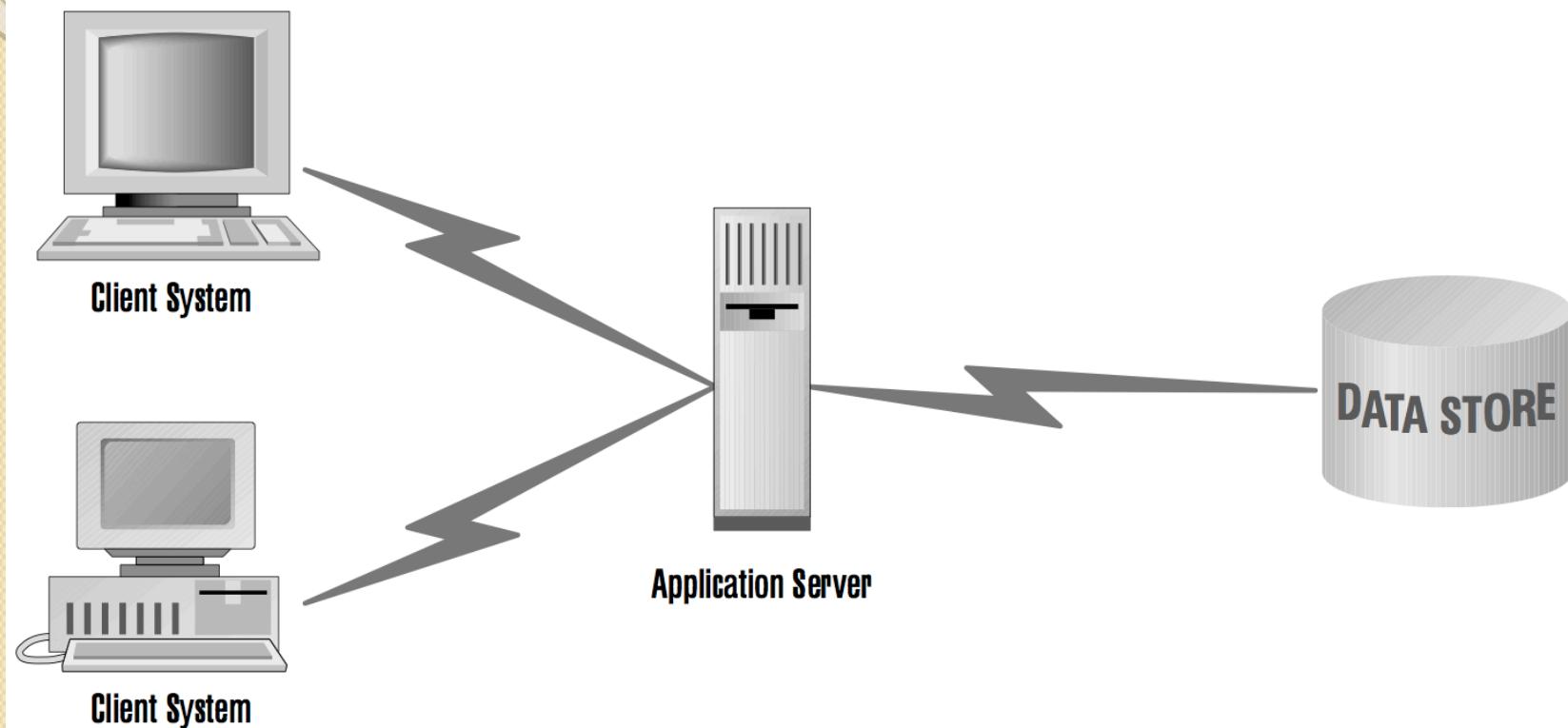
AA18([http://www2.algonquincolllege.com/directives/files/2011/01/AA-18-Academic-Dishonesty-and-Discipline.PEC\\_.Approved.-Oct.27.2010.pdf](http://www2.algonquincolllege.com/directives/files/2011/01/AA-18-Academic-Dishonesty-and-Discipline.PEC_.Approved.-Oct.27.2010.pdf)) and E43 (<http://www2.algonquincolllege.com/directives/files/2011/05/E431.pdf>)

# Enterprise Applications

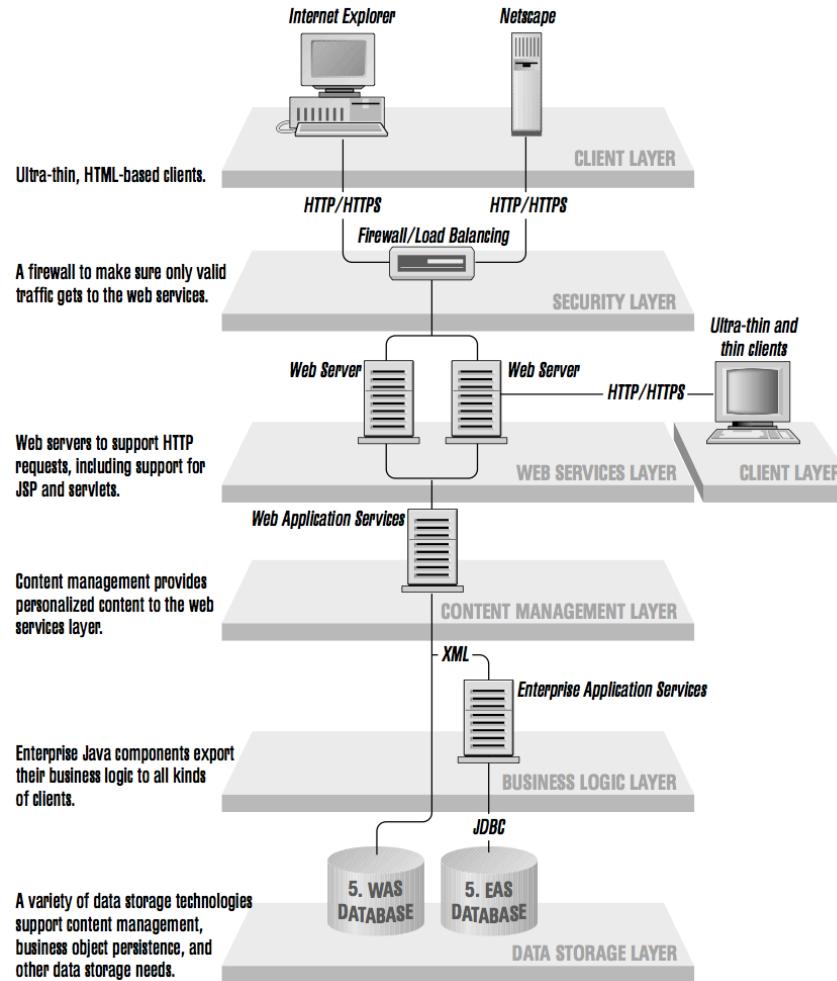


- What is an Enterprise Application?
  - Microsoft Excel?
  - Microsoft Outlook?
  - Google?
  - Facebook?
  - Gmail?

# Enterprise Architecture



# Enterprise Architecture



# Enterprise Applications



- Many simultaneous users
  - Multithreading
- Ten thousand simultaneous users won't be in the same place
  - Networking
  - Remote Method Invocation (RMI)
- Deal with Persistent Data
  - Databases
  - Concurrent Database Access
  - Object Relational Mapping (ORM)

# Enterprise Programming Technologies and Techniques



- Java EE (Java Enterprise Edition)
  - Includes Java Standard Edition
  - Includes Application Server
    - Glassfish (free and Oracle versions)
    - JBoss (Redhat)
    - many others
  - An Application Server is something like a template for an Enterprise Application
  - When we deploy our application to an Application Server, our Java code fills in the blanks in the template (very roughly speaking)

# Enterprise Programming Technologies and Techniques Cont'd



- **Tomcat**
  - Web Container
  - Needs JAVA\_HOME (JRE)
  - Can run servlets and JSP
  - Cannot run Enterprise Java Beans (in other words, it's not a JEE Application Server)
  - Can run Javabeans
    - A Javabean is a POJO that follows naming conventions for properties