CSE 336

Introduction to Programming

for Electronic Commerce

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General Class Issues

- Dr. R. Kelly (contact info on class Web site)
- Hands-on class - Trans lab
- Text
  - www readings (list on a page in class Web site)
  - Course text - Basham, Sierra & Bates, Head First Servlets & JSP, 2nd Edition
  - On-line text - Sun Java Web Services Tutorial and Designing Web Services (pdf)
  - Safari Books Online-XML in a Nutshell, etc.

Note that we are using the 2nd edition

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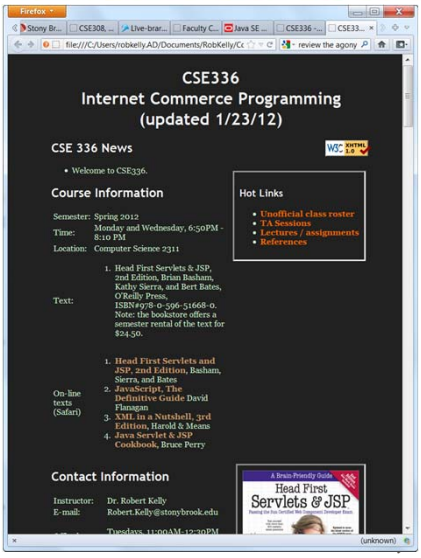
Class Web Site

- www.cs.sunysb.edu/~cse336
- Check it regularly for
  - Syllabus
  - Office hours / location / e-mail addresses
  - Assignments and lecture code
  - Class notes (pdf) - Print notes before each class
  - References
  - Lots more



Purpose

- Understand Web technologies (so that at the end of the course you will be able to learn specific vendor solutions in great detail)
- Learn the Java abstractions for those technologies (the essential concepts, not all the classes, interfaces, properties, or methods)
- Learn to design complex (multi-language) solutions
- Emphasis on thinking (not memorization)
- Emphasis on enterprise style systems

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Course Objectives

- Investigate issues in software architecture design for Internet Commerce applications.
- Implement Internet applications using industry standard technologies such as HTML page templates (i.e., JSPs) and related objects (e.g., servlets and Java Beans).
- Investigate aspects of XML useful in the development of Web Services applications.

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Grading

- A, B, C ... grades
- Grade basis
  - Exams (and quizzes)
  - Assignments (regular and extra credit)
  - Class questions
- Exam questions will be "easy" if you have carefully completed the assignments
- In-progress grades will be available on the class Web site, make sure that you check it regularly
- Grade distribution resembles College overall grade distribution

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Grading Formula

- All final grades are determined by a formula – applied equally to all students
- Sample:

CSE336	Assignments													Tot.	Mid-Term Exam # 1				Final Exam			Exams	Final	Final
ID	1	2			3	4	5	6			7	8	9	10	11	12	HW	Score	+	Grade		Score	+	Adj.	Wgt. Avg.	Avg. (+HW)	Grade
		a	b	c				a	b	c																	
1	S	S	S	1	L		S	S	S	S	S	S	S	S	S		3	59		59	B	78		78	71	74	B+
2	S	S	S	3	S		S	S	S	S	S	S	S	S	S		5	52		52	C	78	1	79	69	74	B+
5	S	S	S		S												-7	56		56	B-	44		44	45	38	F
6	S	S	U		S		L	L	L	S	S				S		-2	55		55	C+	58		58	57	55	C
7	S	S	S	2	S		S	S	S	S	S	S	S	S	S		4	82	2	84	A	95	1	96	94	98	A
8		S			S			S	S	S		S				3	-2	73		73	A	85		85	82	80	A

You will get your CSE336 ID in an e-mail from your TA

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Grading

- Final grades are calculated based on a formula (no subjective grading)
- Formula weights all the components of the class
  - Exams
    - mid-term#1 (30%), mid-term#2 (30%), final (30%), and quizzes (10%)
  - In-class exercises – points will be added to your next exam score if your team is the first to complete the exercise correctly
  - Class questions – points will be added to your exam scores for a correct answer to a class question
  - Assignments
    - Each assignment is graded S/U. Late submissions (up to 3) are scored as S.
    - There may be some extra credit assignments. If there are, the score will be added to your weighted exam score
- Final grade is based on your total score (the higher the score, the higher the grade)

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Assignments

- Submit programming assignments to your assigned TA
  - To receive credit there must be a reasonable attempt and at a minimum, the code must compile
- You may develop the solution to assignments by working in groups (max of 3), and submitting once for the group
- You must register the group so that you have the same assignment TA (register the group with an e-mail to me)
- Make sure that all names are listed in HW submission
- Assignments are S/U graded, but
  - You will get feedback from TAs (time permitting)
  - Submitting on-time counts to your grade
  - Components of the assignment problems will be used in exams

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Assignment Groups

- You may work in a group of up to 3 students (for the entire semester)
- Make sure that all 3 students in your group are assigned to the same TA by:
  - Sending me an e-mail with the names and IDs of all the students in the group before you submit your first assignment
  - Verifying (on the unofficial class roster) that you are all assigned to the same TA

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Assignments

- There is one major project in the course, but you will develop the solutions in multiple parts over the semester
- The project cover most of the important concepts covered in the course
  - Form-processing project

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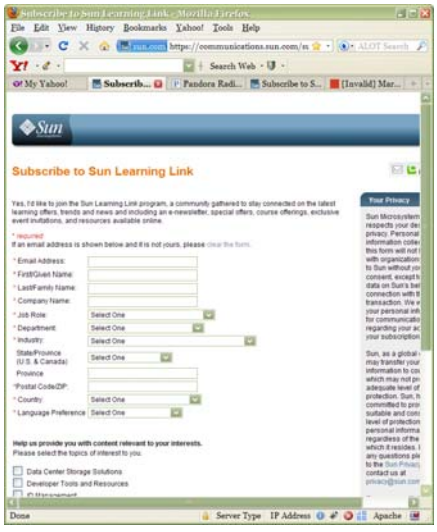
Form Processing Project

- Reverse engineer a form Web site (given during the second week of class)
- Pass form data to the server
- Validate form data (Ajax)
- Repopulate a form with the previously provided data
- Share data among server code modules (servlets, Java beans, and JSPs)
- Populate from XML document
- Connect to a DB (optional)
- Re-Implement with JSF (optional)



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TA Sessions

- Scheduled TA sessions in 2129 (80 minutes)
- Cover major hands-on topics
- Problem assigned at the start of session
- TAs will work with you to complete the problem
- Problems will be similar to a HW assignment or an exam questions

Trans Lab

- Software for the course should be available to you for your own computer
- Or - if you need to use a University computer for assignments, studies, etc. you can use the Trans Lab
  - Your Id and password will be automatically generated
  - Door combination will be given next week

Trans Lab will run related software systems
(NetBeans, XML Spy, and Amaya)

Trans Lab Accounts

- Your account is set up automatically
- Your username is the first nine letters of your last name (name > = 9 characters) or your last name concatenated with the first letter of your first name or your username concatenated with a 2 digit number (e.g., smithj02).
- Password is your student ID #
- If you are having difficulty logging in please send an e-mail to ntadmin@cs.sunysb.edu. The body of your message should contain your student ID number, your full name, and a brief description of the problem
- If you need an account created quickly, you should stop by room 1309 (bring ID)

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Approach to Java

- We will use Java for most of the assignments, exams, lectures, etc.
- Java 7 assumed for assignments and exams
- We will also cover some essential Java concepts not thoroughly covered in 214/219 (e.g., collections)

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Java Development Environment

- You can use any Java development environment (e.g., NetBeans and Eclipse) you are comfortable with, but your IDE
  - Should be compatible with Java 7
  - Should support servlet and JSP 2.1 execution
- NetBeans 7.0.1 - available as a free download
- It is a good idea to download and bookmark the HTML Java SDK documentation if you have your own computer (link on the class Web site)

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How to Get Help

- Don't get stuck on a Java / IDE problem - ask for help
- TAs
  - TAs will be able to help you use the IDE and answer some programming questions (usually at assigned times in the Trans Lab)
  - For questions, you can contact any TA
  - Your TA for assignment submission can be found on the unofficial class roster (next to your ID number)
- Send me general e-mail if you are having trouble
- See me during office hours (or by appointment or just stop by)

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How to Learn the Material

- Don't plan on memorizing material - plan on learning to think about the material
- Code, code, code (plan on at least 2-5 hours per week in developing software
  - Run class/text examples
  - Complete assignments
- Work on the assignments in a small group (1-3 students)
  - Be sure to constantly refer to the Java API documentation
- Attend class / review the on-line class notes
- Attend TA sessions in CS teaching lab (use NetBeans, XML Spy, Amaya, etc.)
- Read the reading assignments

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Lectures

- Lecture slides will be available at the class Web site before each lecture
- Print a copy of the slide handout before class and use it to make notes
- Be sure to review the slides before each exam

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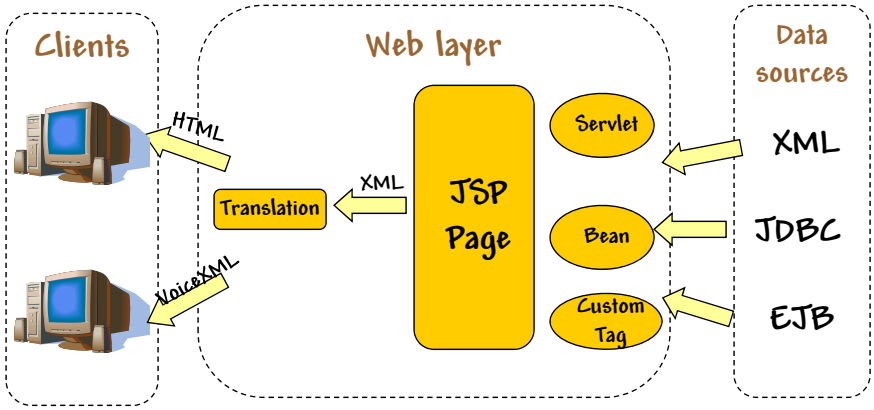
Extended Web Architecture



Ajax architecture also considered

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Topics

- URL, Network, DNS
- MIME types
- Web servers, browsers
- HTML
- Style sheets
- Servlets
- HTTP, cookies, sessions
- JSP
- JSTL
- JavaBeans
- JavaScript
- DOM
- Ajax
- XML
- JSF

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Optional Topics

- Java Persistence (JPA)
- XML Schema
- XML tag library (JSTL-X)
- XSLT
- Internet Mail

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Limited Emphasis on

- Applets
- Web page design
- Frames
- Animation
- Windows interface

We will not cover PHP because most companies are interested in programmers who understand J2EE or .NET

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Assignment # 1

- Part 1
  - Send me an e-mail (Hi!, name id#, "I can't (or can) read the class notes", etc.)
  - Put "CSE336 - HW#1" in the subject line of the e-mail message
- Part 2 (no submission necessary for this part)
  - If you have your own computer, install Amaya and the Java IDE (e.g., NetBeans 6.9)
  - Download reference material (Sun Tutorial, language reference, etc.) mentioned in Web site
  - Details of assignments are in the class Web site

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