ISDS 372: Java for Business Applications

Syllabus

CSUF, Fall 2001
Schedule #17186
Lecture: Tu 11:30-12:45 pm. MH 502
Lab: Th 11:30-12:45 pm. LH 317

http://ecommerce.cbe.fullerton.edu/~rburke/courses/f01/isds372/

Prof. Robin Burke
Office: LH 502A;
Office phone: (714) 278-5513
Hours: Tu 12:45-2:15, 4:30-5:30, 6:45-7:00 pm
Th 6:45-7:00 pm and by appointment
Office phone: (714) 278-5513
rburke@fullerton.edu

Course Prerequisites:
ISDS 309, Upper division CBE standing

Course Corequisite
ISDS 310 (co-requisite)

Course Description
ISDS 372 is an introduction to the Java programming language and its applications for business. The course will concentrate on programming fundamentals including data types, control structures and object-oriented programming.

Course Required Readings

Course Organization
The course is divided into lab and lecture time. There will be seven programming assignments: six individual assignments and one group project.

Learning Objectives
This course calls on you to demonstrate: (1) knowledge of programming techniques and the Java language and libraries in particular, (2) the ability to reason through analysis, evaluation and design of Java programs, and (3) the ability to effectively apply this knowledge to the construction of such programs. Students will be expected to use the course texts and readings as well as outside references and documentation to supplement lecture material.

Assessment Measures
Students will be assessed by their performance on the homework assignments, periodic quizzes, a comprehensive final exam and attendance/participation. Points given to homework assignments will limited not to exceed test grades by more than 1 grade point. In other words, a homework average that would ordinarily earn an A would earn a C if accompanied by D-quality final and quiz scores. This measure is a precaution against plagiarism. Do your own work!

Course Grade Calculation
- Homework (25%) (see Assessment above)
- Final (35%)
- Quizzes (30%)
- Attendance/Participation (10%)
Attendance/Participation
I expect you to come to class every meeting day, arrive on time, and participate fully in class discussions and exercises. Attendance will not be taken, but students should be aware of the participation portion of the grade indicated above. In addition to in-class participation, the participation grade will also include contributions to the course forum.

Late Assignments
Deliverables and other assignments are due at class time on the assigned date, unless another time is explicitly authorized. Presentations cannot be made up and team members should be prepared to make the entire presentation in the event of the absence of any member.

Incompletes
If for some reason you need extra time to complete the course, you must submit a written request for an Incomplete (either in person or by e-mail). Such a request should be made in advance of the final exam date and should include 1) an explanation of why you are unable to meet your obligation, and 2) a completion proposal including a statement of work and the date on which you agree to submit it. Except in cases of documented emergency, I will not issue a grade of Incomplete if you ask for one on or after the date of the final.
I will handle requests for Incompletes on a case-by-case basis. If I approve your request, I will sign a copy and return it to you. Please be aware that your Incomplete is not approved until you receive the signed copy. Also, please be aware that I will not accept your work if you submit it after the date you yourself set for completion of the course.

Intellectual Honesty
It is expected that each student will do their own work and in group projects, perform a fair share. It is reasonable, even encouraged, that students discuss the problems presented in the homework assignments and possible solutions. It is also encouraged that students help each other with details of the Java programming language and the programming environment. However, all of the actual program code that you submit should be your own programming effort. You should not copy code from other students or from other sources.

Classroom Etiquette
- Please turn off pagers and cell phones before coming to class.
- Please do not tape lectures or discussions. If you have a documented need, please let me know.
- Please do not get up and walk out in the middle of class. Such behavior is discourteous and disruptive. If you need to leave early, please let me know ahead of time.
- Please do not chit chat or eat loud food in class.
- Please be mindful that you are part of a learning community. Treat others with respect even if you do not agree with their positions or they with yours.

Important Note
I reserve the right to modify this syllabus at any time during the course of the term. The most current course information will be available on the course web site.

Course Resources
The course website can found at http://ecommerce.cbe.fullerton.edu/~rburke/courses/f01/isd372/. This will be an important resource throughout the semester. Updated syllabus information, assignments, supplementary readings, lecture notes and links to other materials will be posted here. In addition, the course site hosts a discussion forum for the course. Please use this forum to ask course-related questions (other than those of a personal nature) rather than using email so that other students will get the benefit of the answer.

Assignments for this classroom should be performed using JBuilder 3 or later and/or JDK 1.2.1 or later. These tools are available on the CD-ROM included with Java: How to Program. The classrooms and labs
are equipped with JBuilder 4 Foundation and JDK 1.3. Students may also use the latest version of JBuilder, which is available from Borland (http://www.borland.com/jbuilder/).

## Schedule of Class Meetings & Assignment Due Dates

<table>
<thead>
<tr>
<th>Date</th>
<th>Type</th>
<th>Topic</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/21</td>
<td>(Lec)</td>
<td>Introduction</td>
<td>Introduction to the class. Discussion of the syllabus.</td>
</tr>
<tr>
<td>8/23</td>
<td>(Lab)</td>
<td>Lab Introduction</td>
<td>Introduction to JBuilder and the JDK.</td>
</tr>
<tr>
<td>8/28</td>
<td>(Lec)</td>
<td>Java</td>
<td>Introduction to Java programming.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reading: D&amp;D, Ch. 1 &amp; 2</td>
<td></td>
</tr>
<tr>
<td>8/30</td>
<td>(Lab)</td>
<td>Compilation and Execution</td>
<td>The JBuilder and javac compilers. Class files, the class path. Due: Homework #1</td>
</tr>
<tr>
<td>9/4</td>
<td>(Lec)</td>
<td>Java Applets</td>
<td>Applets and mobile code. Jar files and the applet context.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reading: D&amp;D, Ch. 3.1-3.7</td>
<td></td>
</tr>
<tr>
<td>9/6</td>
<td>(Lab)</td>
<td>Appletviewer</td>
<td>HTML for applet embedding. Quiz #1</td>
</tr>
<tr>
<td>9/11</td>
<td>(Lec)</td>
<td>Control Structures 1</td>
<td>If/then/else structures. Structured programming. Data types and operators. Due: Homework #2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reading: D&amp;D, Ch. 4.1-4.13</td>
<td></td>
</tr>
<tr>
<td>9/13</td>
<td>(Lab)</td>
<td>Debugging 1</td>
<td>Debugging techniques for Java. Execution tracing.</td>
</tr>
<tr>
<td>9/18</td>
<td>(Lec)</td>
<td>Control Structures 2</td>
<td>for loops. The switch statement. Logical operators. Quiz #2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reading: D&amp;D, Ch. 5.1-5.10</td>
<td></td>
</tr>
<tr>
<td>9/20</td>
<td>(Lab)</td>
<td>Debugging 2</td>
<td>Using the JBuilder debugger.</td>
</tr>
<tr>
<td>9/25</td>
<td>(Lec)</td>
<td>Methods</td>
<td>Java API packages. Defining methods. Scope and extent. Due: Homework #3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reading: D&amp;D, Ch. 6.1-6.11, 6.15</td>
<td></td>
</tr>
<tr>
<td>10/2</td>
<td>(Lec)</td>
<td>Arrays</td>
<td>Array structures. Reference variables.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reading: D&amp;D, Ch. 7.1-7.6</td>
<td></td>
</tr>
</tbody>
</table>
10/4.... (Lab) Testing
   Unit tests. Testing frameworks.
   Due: Homework #4

10/9.... (Lec) Object-Oriented Programming 1
   Class scope. Instances and constructors. Methods vs. members.
   Quiz #3
   Reading: D&D, Ch. 8.1-8.16

10/11.. (Lab) Overloading
   Method overloading.

10/16.. (Lec) Object-Oriented Programming 2
   Class hierarchies. Rules for subclassing. Composition and inheritance.
   Reading: D&D, Ch. 9.1-9.9

10/18.. (Lab) Information Hiding
   Access control keywords

10/23.. (Lec) Object-Oriented Programming 3
   Reading: D&D, Ch. 9.10-9.22

10/25.. (Lab) Polymorphism
   Interfaces and polymorphism
   Due: Homework #5

10/30.. (Lec) Strings
   String and StringBuffer objects.
   Reading: D&D, Ch. 10.1-10.18

11/1.... (Lab) String Formatting
   Handling string data. Internationalization issues.
   Quiz #4

11/6.... (Lec) User Interfaces 1
   Swing UI components. Basic widgets. Layout management. Event handling
   Reading: D&D, Ch. 12.1-12.15, Skim Ch. 11

11/8.... (Lab) UI Layout 1
   Using the JBuilder design interface

11/13.. (Lec) User Interfaces 2
   Reading: D&D, Ch. 13.1-13.16

11/15.. (Lab) UI Layout 2
   Using the JBuilder design interface.
   Due: Homework #6

11/20-11/22
   No class. Thanksgiving break.
11/27.. (Lec) Exception Handling
   The need for exception handling. Try/Catch/Throw clauses.
   Quiz #5
   Reading: D&D, Ch. 14

11/29.. (Lab) Error Tracing
   Error dispatching in applications. Recovering from exceptions.

12/4.... (Lec) Files and Streams
   java.io classes. Streams vs Readers/Writers.
   Reading: D&D, Ch. 16

12/6.... (Lab) Buffers and Pipes
   Buffered and piped streams.
   Due: Homework #7

12/13.. Final Exam (5:00-6:50 pm)