

## 2B11 Final Coursework Small Group Mini-Project

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## Project Goals

- Work in a team of 3 (or 2 if uneven numbers).
- Develop a Web-based application using Java servlets (or Java Server Pages).
- Code a working prototype.
- Test it!

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## Deadline

- Hand-in paper version by noon Friday 22<sup>nd</sup> March 2002, to departmental office.
- Also do electronic submission.
- Think carefully about the amount of time available to do the project.
- Don't get over ambitious – identify the essential elements and get them working.

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## Project Outline

- Deliberately open-ended, so you decide the details.
- Implement a web-based application with the following features:
  - Provide a web based service accessed via a web browser.
  - Must have non-trivial parser/compiler component (using John Washbrook's material).

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## Project Constraints

- All processing to be done on the server side, using Servlets or Java Server Pages (plus supporting code in classes or JavaBeans).
- Browser based interface using standard HTML.
  - Should work on any web browser.

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## Suggestions

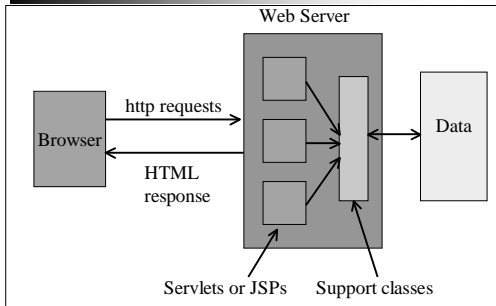
- Java (or any programming language) pretty-printing service:
  - Allow user to configure options.
- Syntax diagram generator
  - Translate grammar to diagrams.
- Parser generator
  - Interactively enter grammar and generate Java parser for grammar.
- And many more...

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## Overview



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## Marking

- Graded A-F.
- Grade is C for a satisfactory *working* application.
- B, A for progressively better work.
- D,E for less good work.

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## What to submit (on paper)

- Commented source code, properly presented.
  - Include test code.
  - Also include data files needed to run application.
- Compile and install instructions.
- User manual + details of parsing/compiling component.
- Any other supporting documentation needed to understand the design and implementation.

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## Credit is given for:

- Good testing.
- Proper identification of components, classes and interfaces.
- Good use of object-oriented design.
- Well written and properly commented code.
- Appropriate use of Java, JDK, servlets, etc.
- A reasonable parsing/compiling element.

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## Be concise

- The aim is to provide *concise* documentation of the design of your program.
- Maximum communication with minimum mass!
- Ask yourself “*if I were to be given this documentation would I understand the application?*”

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## Groups

- Hopefully all sorted out!
- Email me if any problems.

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## Group working

- The hard thing is to cooperate and put in equal effort.
  - Consider your individual commitment carefully.
  - Don't commit to more than is realistic in the time you have available.
- Be prepared to compromise.

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## Things to avoid

- Not starting immediately!
- Not being honest to yourself about what you can do or contribute.
- Your group not agreeing what your project goal actually is.
- Doing 3 different projects.
- Forming a group with your friends...

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## Group working

- All group members should put in equal effort.
- Email me if there are problems.
- No work == no mark!

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## Java Version

- Your code should be written for 1.3.1 (Java 2 Platform Standard Edition).
- And should be able to run on any networked machine (such as the lab machines).
- Will be tested on my PC.

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## Tools and Libraries

- *Use any you like* (providing they don't make the work needed trivial!).
- And don't forget you need to make sure that your code runs on any machine.

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## Questions?

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## Suggestions for Getting Started (1)

- First and foremost decide exactly what your project goals are.
- Write them down and stick to them.
  - A numbered list of requirements.
- Pull in the ideas from 1B14, 2B14 to help.

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## Suggestions for Getting Started (2)

1. Define your application architecture
  - What are the components and their organisation?
2. Define your interfaces.
3. Design the components.
4. Sub-divide the work.
5. Implement, test, debug.

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## Example Code

- The code for a simple working example application will be available via the 2b11 web page.
  - Read the comments carefully.

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## Getting Help

- There are no lectures or labs during the 2<sup>nd</sup> half of term.
- But I will be available for help.
  - Email me.
  - Or make appointment.

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## Summary

- Define a project, plan the work and implement.
- Split the work between the group members.
- *Be realistic* about the amount that can be achieved.
- Make sure you put in your fair share of effort.

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