CS-322
Compiler Design II

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Course Materials for Today

Hardcopy:

CS-322 Checklist
Syllabus
Paul - Chapter 2 (35 pages)
SPARC Instruction Formats (1 page)
SPARC Demo Programs (2 pages)
ASCII Byte Encoding Chart (2 pages)

Online:

Project 7 (4 pages)
HW #1
Coding Style for Java Programs (8 pages)
PCAT Reference Manual
Overview of SPARC Architecture (40 pages)
Lecture Notes

Please Print These

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<u>Organization</u>

Syllabus / Webpage
    `cs.pdx.edu/~harry/compilers/syllabus.html`

Office Hours
Grader
Textbook
    Required (from last term):
            Kenneth C. Louden, *"Compiler Construction: Principles and Practice"*
    Optional (not ordered):
            Richard P. Paul, *"SPARC Architecture, Assembly Language, and C"*
Exams
    Closed book, same format

Grading *(tentative!!!)*
    10% Homework
    29% Programs
    29% Midterm Exams (2)
    29% Final
    3%   Attendance

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<u>Programming Projects</u>

<u>Four Programming Projects</u>

    Project 7:   SPARC Assembly Language
    Project 8:   Generating Intermediate Code (part 1)
    Project 9:   Generating Intermediate Code (part 2)
    Project 10:   Generating Intermediate Code (part 3)
    Project 11:   Final Code Generation

    Optional: Peephole Optimizer

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Last Term

Covered first 6 chapters in textbook
    Lexical
    Parsing
    Attribute Grammars
    Types / Type Checking
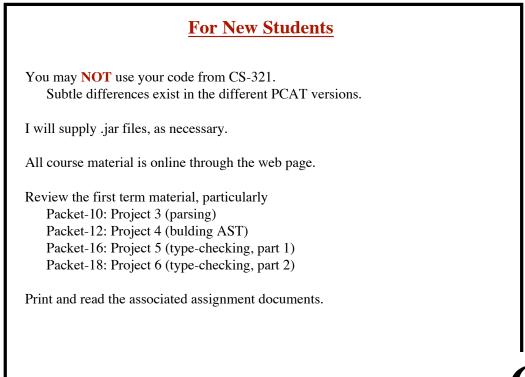   Abstract Syntax Trees

We are writing a compiler for the PCAT language.

You may use your code from CS-321, last term.
    (Note: subtle differences exist in the different PCAT versions.)

I will supply .jar files, as necessary.

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For New Students

You may **NOT** use your code from CS-321.
    Subtle differences exist in the different PCAT versions.

I will supply .jar files, as necessary.

All course material is online through the web page.

Review the first term material, particularly
    Packet-10: Project 3 (parsing)
    Packet-12: Project 4 (bulding AST)
    Packet-16: Project 5 (type-checking, part 1)
    Packet-18: Project 6 (type-checking, part 2)
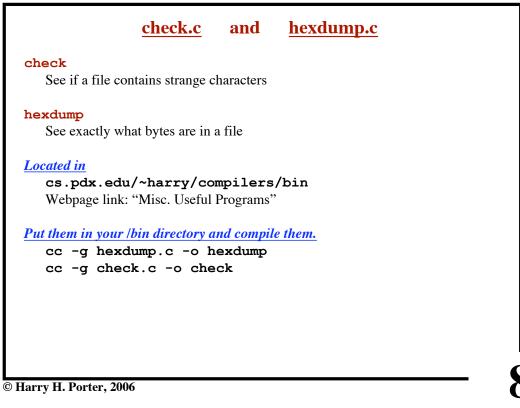
Print and read the associated assignment documents.

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Misc Organization

MailMan E-Mail List
    Subscribe to the mailing list named cs321-001

Class Account
    E-mail projects to cs321-01
        Subject: Project 7 - John Doe
    The code should be in a plaintext attachment
    Do not submit multiple times! (Unless instructed to do so.)

Make sure your files comform to my "style" guidelines.
Do not modify any of the other java files.

Work independently
Write the code yourself
    ...or come to my office for help!

Take roll.

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check.c   and   hexdump.c

check
    See if a file contains strange characters

hexdump
    See exactly what bytes are in a file

Located in
    `cs.pdx.edu/~harry/compilers/bin`
    Webpage link: "Misc. Useful Programs"

Put them in your /bin directory and compile them.
```
cc -g hexdump.c -o hexdump
cc -g check.c -o check
```

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Example

```
% more temp
Now is the time        for all good men to
abc^A^B^K^L^Ndef
come to the aid of their party.

% check < temp
The maximum line length is 36
The number of TAB characters is 6
The number of CR characters is 0
The number of LF characters is 3
The number of BS characters is 0
The number of DEL characters is 0
The number of other non-printable characters is 5

% hexdump < temp | more
00000000:  4E6F 7720  6973 2074  6865 2074  696D 6520     Now is the time
00000010:  0966 6F72  2061 6C6C  2067 6F6F  6420 6D65     .for all good me
00000020:  6E20 746F  0A61 6263  0102 0B0C  0E64 6566     n to.abc.....def
00000030:  0A63 6F6D  6520 746F  2074 6865  2061 6964     .come to the aid
00000040:  206F 6620  7468 6569  7220 7061  7274 792E      of their party.
00000050:  0909 0909  090A                                ......
```

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