Introduction

CMSC 104
section 301
Problem Solving and Computer Programming
Fall 05

Am I in the Right Class?

- CMSC 104
  - Assumes NO programming experience
  - Does NOT count towards your CS major
  - Prepares you for CMSC 201

- CMSC 201
  - Assumes some programming experience
  - First CMSC course for CS majors
  - Also required for IFSM majors
  - More challenging

What Will We Cover?

- General computer hardware and software concepts
- Basic computer use
- Problem solving
- Basic computer programming in the C programming language

General Hardware and Software Concepts

- Introduction to computer architecture
- Data representation and memory usage
- Introduction to operating systems
  - Linux

Basic Computer Use

- Basic use of:
    - an operating system (Linux)
    - e-mail (pine)
    - a text editor (xemacs)
    - the Internet (Netscape and/or Internet Explorer)

Problem Solving

- Problem solving and algorithm development
    - general vs. specific solution to a problem
    - use of top-down design
    - use of pseudocode

Basic Computer Programming in the C Programming Language

- Compiling, linking, and executing a computer program

- Testing a computer program

- C programming language basics

Syllabus

- On the Web:

- www.csee.umbc.edu/courses/undergraduate/104

- Follow links to syllabus

- Refer to it throughout the semester

Getting a GL Account at UMBC

- You MUST have a GL account
- Go to room ECS 020 (in the basement) and ask at the desk, <u>OR</u>
- Using the Internet, go to:

  accounts.umbc.edu   (<u>NO</u> www.)
- Your account can be used in approximately ½ hour

Changing Your Linux Password

- Log in by entering your id and password given on the sheet.
- At the Linux prompt type:

  passwd

  and press the Enter key.
- You will be prompted for your new password; type it in and press the Enter key.
- You will be asked to type the new password again.

Changing Your Linux Password

- ☐ You will be given a message that the password has been changed,
- ☐ OR you will be given a message that rejects your new password,
- ☐ Passwords should be at least 5 characters long and should be something you will remember.
- ☐ Your password will be rejected if it is a commonly used word or name.

Computer Science at UMBC

- ☐ CSEE Offices
  - ■ ITE325
- ☐ CSEE Advising
  - ■ ITE202-206
- ☐ CSHC (Computer Science Help Center)
  - ■ ECS 332 In the Mechanical Engineering Dept.
- ☐ Linux Users Group (LUG)
  - ■ http://linux.umbc.edu

OIT Labs

- The Office of Information Technology is responsible for all lab computers.
- On Web at: www.umbc.edu/oit
- Labs:
  - ECS 021 -- PCs, MACs, SGI Workstations
  - ECS 104 -- PCs
  - ECS 104A -- SGI Workstations
  - ECS 122/122A -- PCs
  - ECS 333 -- PCs
  - ECS 336 – MACs
- Labs may be on reserve so plan ahead!

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OIT Labs (cont'd)

- Print Dispatch -- ECS 019 (? cents/page)
- Hours of Operations
  - Before 2/17,
    - Monday – Saturday   8:00am – midnight
    - Sunday   12:00 noon – midnight
  - 2/17 – end of semester,
    - Selected labs will be open 24 hours. Check OIT Web site for exact lab locations or see signs posted outside of labs.

Aug-31-2005

Consultants vs. Tutors

OIT labs are staffed by consultants

  using software (pine, Netscape, etc.)
  some text editors (xemacs, pico)
  operating system commands (Linux)
  cleaning floppy disks (viruses)
  communicating with UMBC computers

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Consultants vs. Tutors (con't)

CSHC is staffed by student tutors

  Help with homework and projects
  xemacs and Linux questions
  ECS 332 -- Hours to be announced

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Hardware and Software Needs

- Do I need my own computer?
  - No, but it is more convenient for you.
- If I have my own computer, can I use it?
  - Sure, but you will use it mostly to log in to your GL account or for word processing.
- Do I need a C Compiler?
  - No, and you probably shouldn't buy one. All programming should be done in your GL account.

Aug-31-2005

Lecture Notes

- Portable Document Format (PDF) files can be viewed by *Adobe Reader*

- Power Point (PPT) files could be viewed by *PowerPoint Viewer 2003*
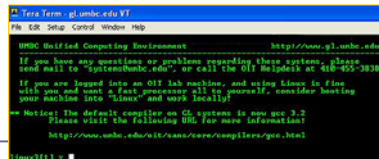
Aug-31-2005

Using Your Own Computer: telnet

- Connect to your Internet Service Provider (ISP)

- If using Windows 95/NT/98,
  - Click Start
  - Click Run
  - Type: ssh linux.gl.umbc.edu

- Consult OIT for help

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ssh

- SSH is a command line interface used to securely access a remote computer.
- UMBC has disabled telnet as a way of communicating with our computers.
- Now you must use ssh instead.
- If you don't have it, get the UMBC CD and install **Tera Term** on your Windows based computer.

http://www.umbc.edu/oit/sans/desktopsupport/downloads/

- Or Google for --- umbc Tera Term

Step 1: Opening TeraTerm
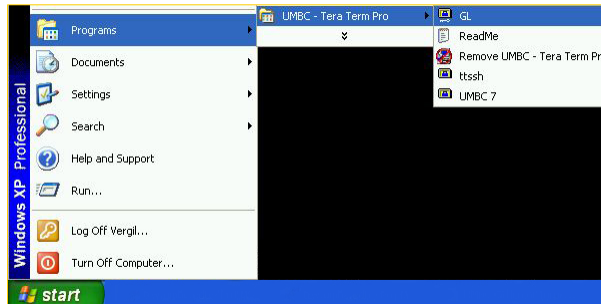
Aug-31-2005

SSH-ing into the GL
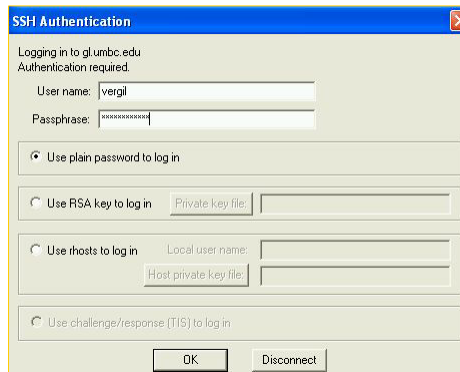
Aug-31-2005

SSHing to a Specific Server using the ttssh Icon
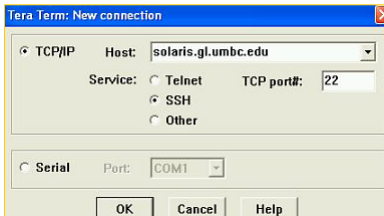
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SSH Connection Established

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