

CS 344 - Unix Operating System Fundamentals

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Office: CH138 & Undergrad Lab

Office Hours: Wed 2-4PM &

Fri 10 AM-12 PM

Other times only by appointment

<http://www.cis.uab.edu/cs344>

Based on slides created by
Dr. Bangalore for the
Spring 2005 offering of the
course

Objectives

1. Introduce UNIX OS principles.
2. Provide hands-on experience using UNIX through assignments.

Grading Policy

Homework	50%
Mid Term Exam	20%
Final Exam	30%

Operating System

- ❑ Acts as an interface between the user and the computer hardware
- ❑ A program that controls the execution of other programs
- ❑ Responsible for managing different computer resources (CPU, memory, disk, display, keyboard, etc.)

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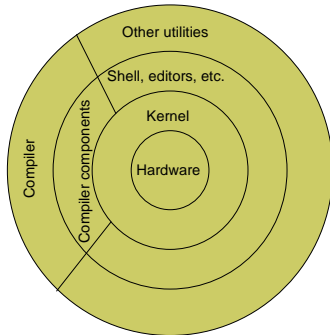
History

- ❑ Bell Laboratories in Murray-Hill New Jersey
- ❑ Developed by Ken Thompson in 1969
- ❑ Multi-user/Multitasking OS
- ❑ Many "flavors" (System VII, BSD, Solaris, Ultrix, Linux, ...)

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UNIX OS



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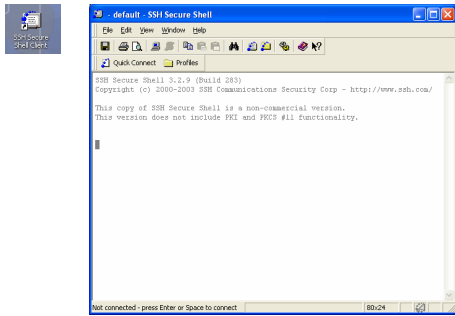
Accessing UNIX systems

- Using client programs on Windows machines
 - PuTTY - <http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>
 - SSH Secure Shell Client - <http://www.icrew.org/mirror/ssh/SSHSecureShellClient-3.2.9.exe>
- Other options:
 - Login to one of the SUN desktops in the lab
 - Install Linux on your computer (dual boot)
 - Use Knoppix Live CD (no need to install anything)
 - Use Cygwin/VM Ware (runs as a windows process)

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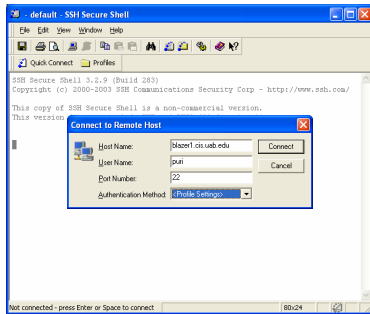
Double click on the SSH Secure Shell Client, the following window will appear



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1. Press ENTER key, another pop-up window will appear
2. Enter the hostname and username
3. Click on "Connect" button



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Some sample commands

```

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notice contained herein and which may be found at
/opt/legal/license and /opt/legal/legal_notice.

puz1@blazer1:~$ date
Fri Aug 21 11:03:46 CDT 2005
puz1@blazer1:~$ who
puz1 pts/2      2005-08-21 09:28      (bzidp01)
puz1      pts/3      2005-08-21 11:03      (puz1pc)
puz1@blazer1:~$ ps
February 2005
S  M Tu W Th F S
1
2 3 4 5 6 7 8
9 10 11 12 13 14 15
16 17 18 19 20 21 22
23 24 25 26 27 28 29
30 31
puz1@blazer1:~$ ls abc
hello abcrc owned not found
puz1@blazer1:~$
Connected to blazer1.cis.uab.edu.
9342 - ssh222-ssh - hmac-md5 - none - 80x24
  
```

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Interacting with the Shell

- ❑ Type a command and press ENTER
- ❑ Shell starts a new process for executing the requested command (utility)
- ❑ The new process executes the command and the shell displays any output generated by the command
- ❑ When the process completes, the shell displays the prompt and is ready to take the next command
- ❑ Additional arguments after the command are used to pass specific information to the command
- ❑ The command "exit" or CTRL-D kills the shell

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