

# CS 333 - Unix Operating System Fundamentals

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Thu 10 AM-12 PM

Other times only by appointment

Website: <http://www.cis.uab.edu/cs333/fall2006>

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%

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## 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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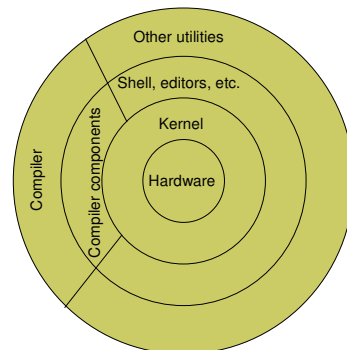
## History

- 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



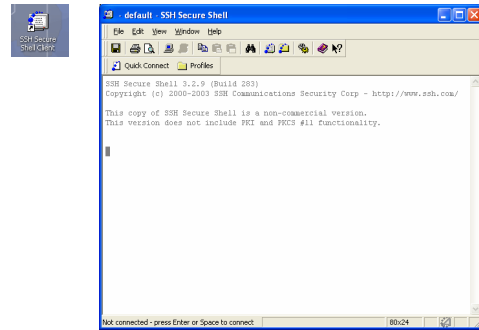
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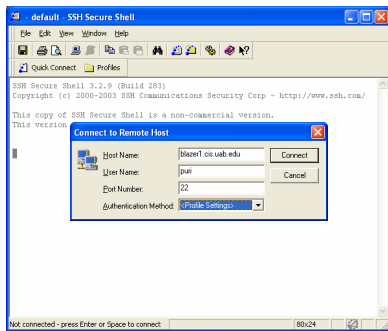
## Accessing UNIX systems

- Using client programs on Windows machines
  - PuTTY - <http://www.chiark.greenend.org.uk/~sgtham/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)

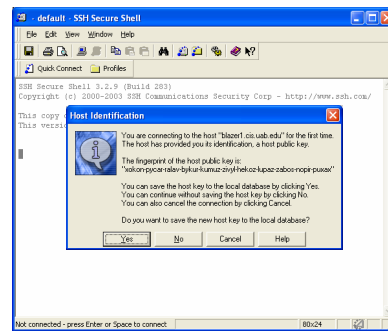
Double click on the SSH Secure Shell Client, the following window will appear



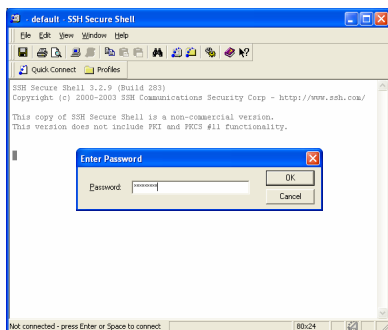
1. Press ENTER key, another pop-up window will appear
2. Enter the hostname and username
3. Click on "Connect" button



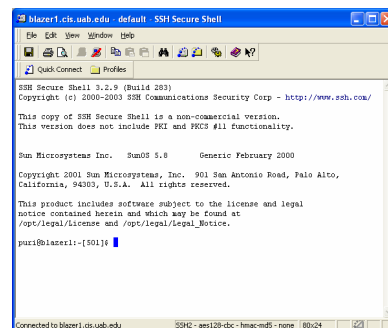
Click on Yes



Enter password



Now you are ready to enter commands at the UNIX Shell prompt



## Some sample commands

```

blazer1.cts.uab.edu: default - SSH Secure Shell
[File Edit View Window Help]
[Quick Connect Profiles]
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puzi@blazer1:~$ date
Fri Jan 21 11:05:42 CST 2005
puzi@blazer1:~$ who
user pts/2 Jan 17 09:28 (bridge1)
puzi pts/0 Jan 21 11:03 (puzi)
puzi@blazer1:~$ cal
January 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
puzi@blazer1:~$ abc
bash: abc: command not found
puzi@blazer1:~$

```

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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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