

# CS 344 – UNIX OS

## Fundamentals – Lecture #3

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### Creating Files

- We have already seen creating files using
  - output redirection with the “>” directive
  - appending a file using the “>>” direction
- Using cat and “>” directive

```
$ cat > myfile  
This is some text being entered into file – myfile  
CTRL-D  
$ cat myfile  
This is some text being entered into file – myfile  
$
```

- By default the keyboard is connected to the input stream of “cat” utility

# Editors

- Editors can be used to create new files and edit existing files
- Popular UNIX Editors
  - vi or vim
  - emacs
  - pico
- Editors are programs like other utilities
- The shell launches the editor program and passes control to it, when the program terminates the shell gets back the control

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## Creating a new file with “vi”

- Usage: vi <options> <filename>
- Example:
  - vi myfile – open myfile
  - vi +n myfile – open myfile and move cursor to line n
  - vi +/<string> – open myfile and move cursor to the line with the first occurrence of “string”
- By default you are in “command” mode
- Type “i” to enter “insert” mode
- Type in the text
- Press ESC to exit “insert” mode
- Type “:w” to save file
- Type “:q” to quit
- You can also type “:wq” to save and quit

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# Inserting text

- To insert text into an existing file, enter one of the following commands (from the command mode) and enter the required text:
  - Insert at the current cursor position – press “i”
  - Insert after the current cursor position – press “a”
  - Insert at the start of the current line – press “I”
  - Insert at the end of the current line – press “A”
  - Insert a line above the current line – press “O”
  - Insert a line below the current line – press “o”
- All of the above commands will result in a mode change (from command to insert) – see page 156
- Press ESC to exit the “insert” mode

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# Moving around, I

- Right – l (→)
- Left – h (←)
- Up – k (↑)
- Down – j (↓)
- A number before the above commands will move the cursor by the number of characters specified (4h – move cursor 4 characters to the left from current position)
- To move to a specific line use: nG where n is the specified line number
- CTRL-G will indicate the current line number and the total number of lines in the file
- To move to a specific target use: /<targetstring> and press ENTER and press n to move to next occurrence of the “targetstring”

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# Moving around, II

- Scroll
  - up by a page – CTRL-F
  - down by a page – CTRL-B
  - up by half a page – CTRL-U
  - down by half a page – CTRL-D
- Move to the
  - start of the current line – ^ or 0 (number zero)
  - end of the current line – \$
  - start of the previous line – – (minus sign)
  - start of the next line – +
- Move to the
  - start of next word – w (n words forward – nw)
  - start of previous word – b (n words backward – nb)
  - end of current word – e (end of n words – ne)

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# Other Commands

- Undo last text-change action – u
- Undo all changes made to the current line – U (assumes that you have not move the cursor from that line)
- Repeat last text-change action – . (period)
- Delete
  - Character(s) – x or nx
  - Word(s) – dw or ndw
  - Line(s) – dd or ndd
- Replace
  - Character – r
  - Word – cw (mode change)
  - Line (mode change)
    - S or cc (from the start of current line)
    - R or C (from current cursor position)
- Command summary – pages 218-226

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# Using Pico

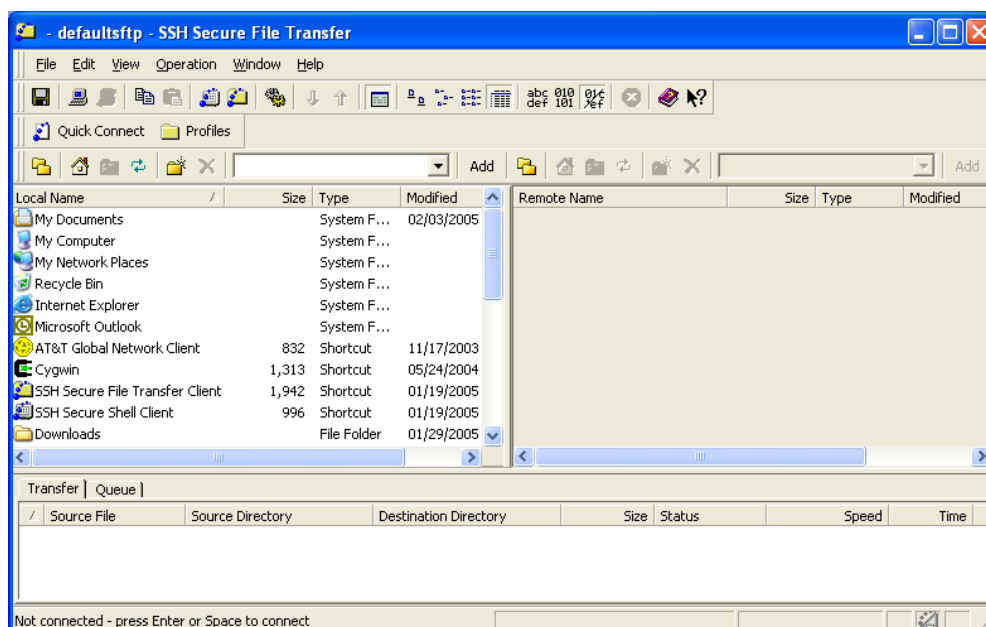
- Usage: pico <options> <filename>
- Example: pico myfile
- Editing commands:
  - Move to end of line – CTRL-E
  - Move to beginning of line – CTRL-A
  - Cut/delete current line (also puts the line in a buffer so it can be undeleted/pasted) – CTRL-K
  - Undelete/paste the most recently cut line – CTRL-U
  - Mark a block of text – CTRL-^ (hold down CTRL, SHIFT and the 6 key, then use the arrows to create the highlighted block)
  - Delete current character – CTRL-D
  - Justify/rejustify margin – CTRL-J
  - Insert existing file into file you're editing – CTRL-R
- Save and exit:
  - Type CTRL-X – Pico will ask if you want to save changes
  - Press y – Pico will show the current file name
  - Press ENTER to keep current name, or, type in new name and press ENTER
- Exit without saving:
  - Type CTRL-X – Pico will ask if you want to save changes
  - Press n

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## Copying files to a UNIX system

Double-click on the SSH Secure File Transfer Client icon



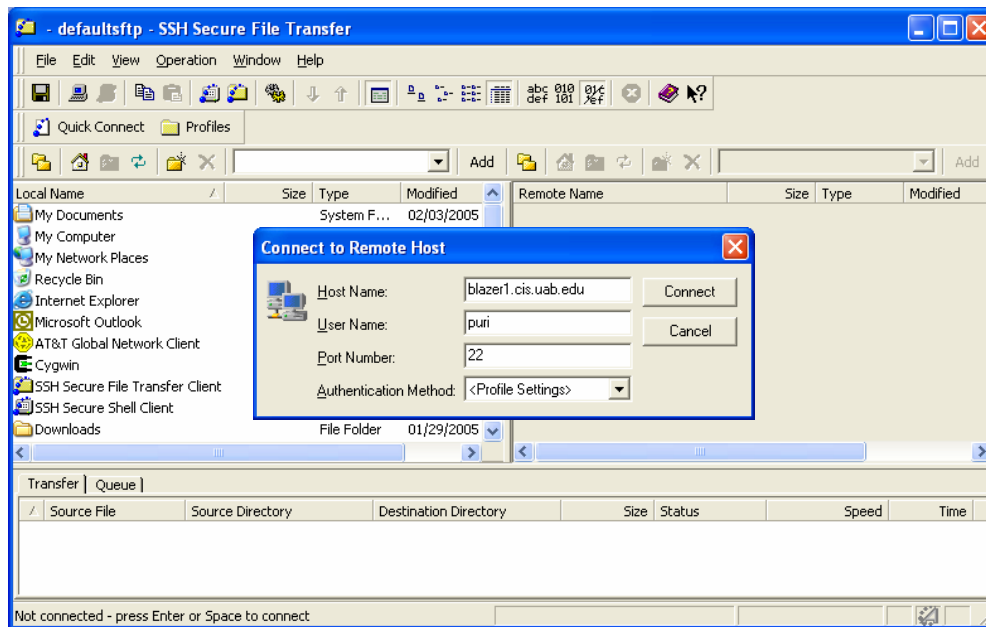
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Press ENTER or SPACEBAR

A popup window will appear

Enter the hostname and userid in the popup window and click on Connect

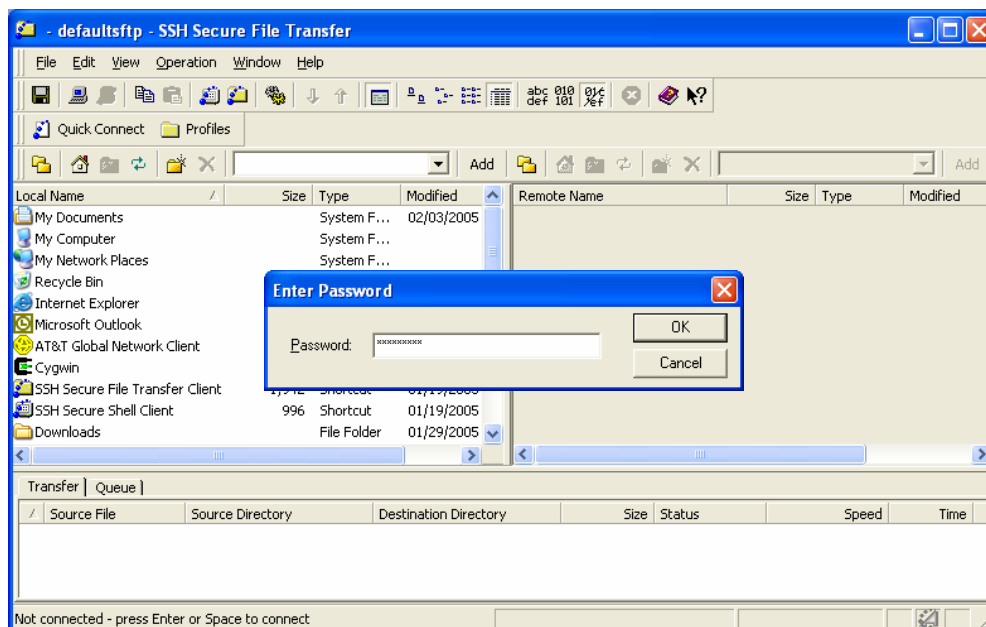


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A popup window will appear and prompt for the password

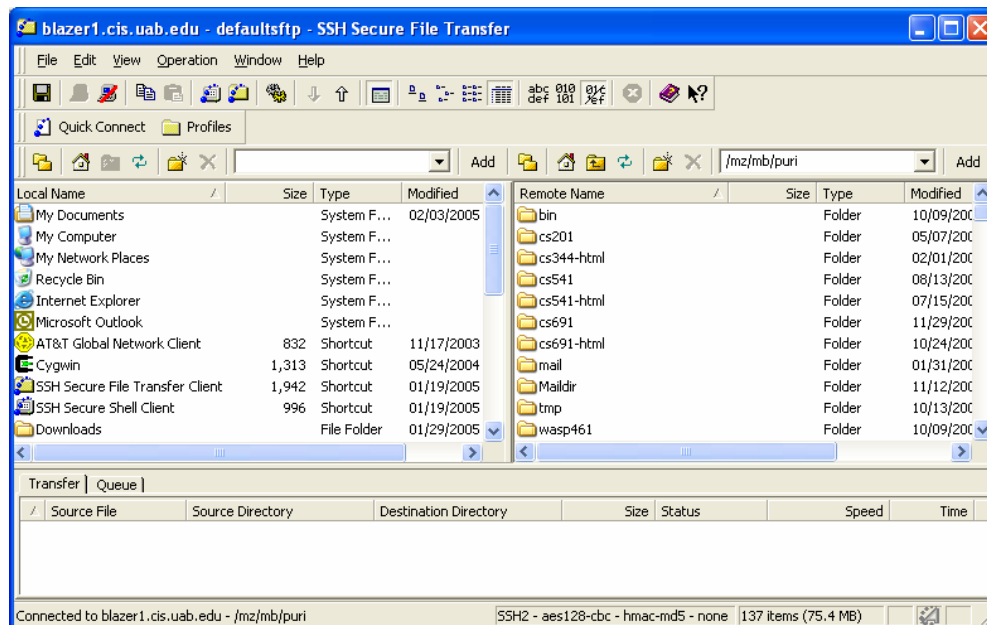
Enter your password and click on OK



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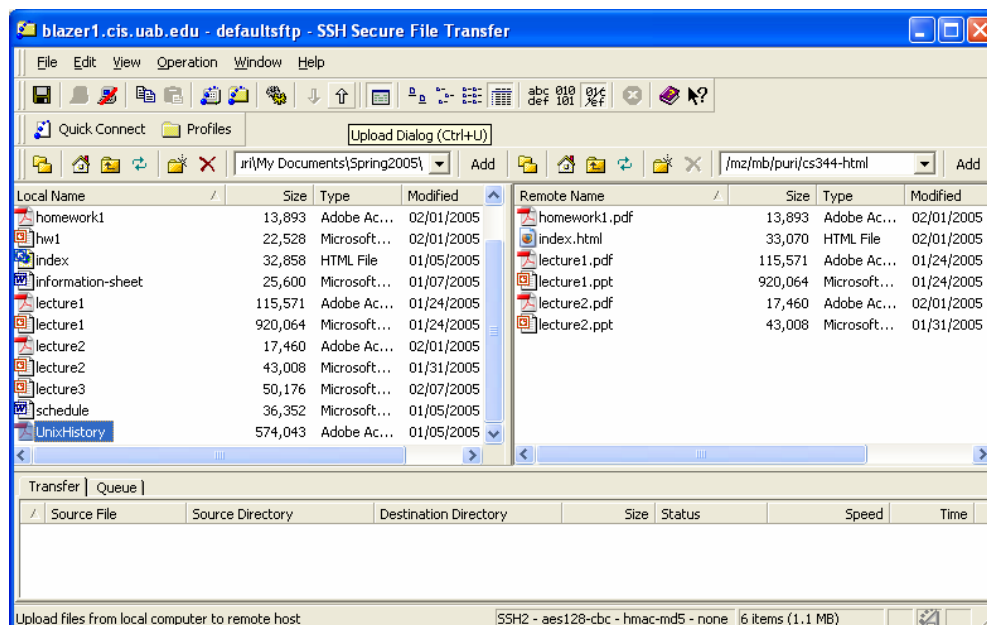
The directory structure of the host machine is displayed in the right window



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Use the left window to navigate to the directory where the source file is present  
Use the right window to navigate to the directory where you would like to copy  
Drag and drop the selected file from the left window to the right window



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The window at the bottom will indicate the progress of file transfer  
 When the file transfer is complete, the status will be indicated as "Complete"  
 After the transfer is complete the file appears in the right window and this  
 indicates successful file transfer  
 Select Disconnect from the File menu to disconnect from the remote machine

