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# CSE 390

## Lecture 10

Do anything from anywhere – tools to free your choice of  
OS

slides created by Marty Stepp, modified by Josh Goodwin

<http://www.cs.washington.edu/390a/>

# The Final Assignment

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- Will be posted after lecture today
- Due Thursday of Finals week at 1:30pm
- A list of “Linux Achievements”
  - Everyone must complete 10 achievements
  - IF you still need one more regular assignment credit for the quarter, you must do an additional 5 achievements to earn that credit, for a total of 15
  - Some ask for physical artifacts, slip those under the door of my office, CSE212, before the turnin deadline

# Lecture summary

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- Remote connections – get to your application or resource from anywhere
- Local options – get your application or resource to work on your setup
- Figure out how to do what you want to do in a new environment
- Wrap up discussion

# Remote Connections

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- You've seen remote connections to a Linux machine in action
  - Departmental attu.cs.washington.edu Linux server
  - Can ssh from anywhere – independent of location and OS
- What about Windows?
  - RDP – Remote Desktop Protocol
  - Enables remote connections to a Windows box from anywhere
  - Also independent of OS
    - Linux – rdesktop command
    - Windows – Remote Desktop Connection
  - Departmental aria.cs.washington.edu Windows server
    - Need to use the right domain: CSEPCLAB\

# Non-remote options

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- Cygwin: unix style environment within Windows
  - “package manager” is part of the install file
  - Provides the unix-like directory structure
    - Home directory is /home/<WindowsUsername>
  - Your actual windows directory structure is located at /cygdrive/<driveletter>
- Enables: quick use of linux style tools in a terminal environment in Windows
- Doesn't enable: magic
- Compare to: Windows cmd interface

# Wine

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- One barrier to switching to Linux: lots of apps are built for Windows
  - <Insert app here> that I use all the time isn't ported to Linux! ☹️
- Wine is an attempt at solving this
  - Provides an environment to run Windows applications in Linux
    - <http://www.winehq.org/>
  - Open source
  - Not perfect, but many people have good success with major programs
    - Many successfully run WoW, MS Office, TextPad...
- Lots of online tutorials / message boards / instructions to get your favorite app working in Linux

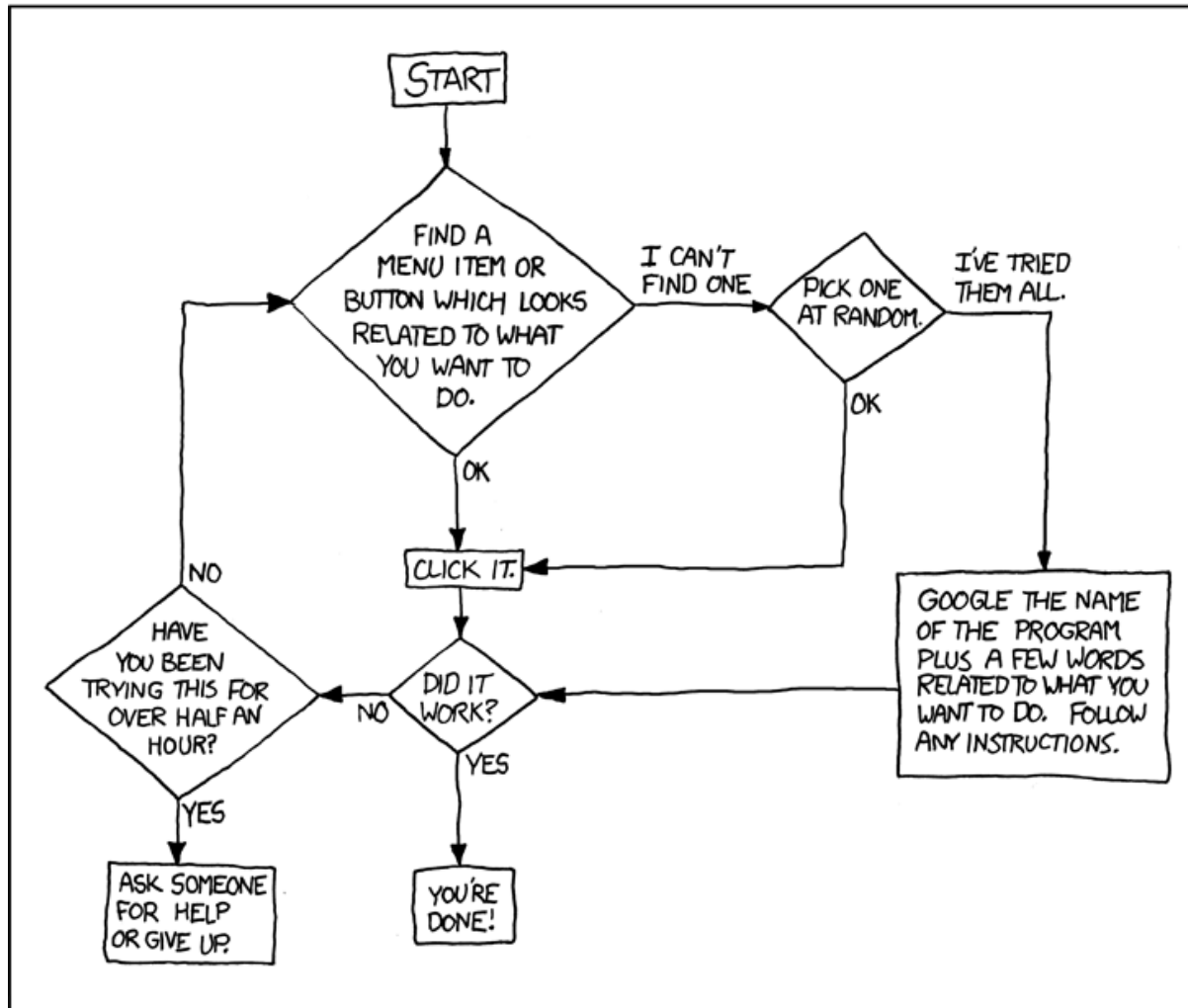
# The More You Know™

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- Another barrier to using Linux as your main Desktop OS: “I don’t know how to do <X> in Linux”
  - Imagine you had never seen or used Windows before. Would you somehow intuitively know how to:
    - Change your desktop background/resolution?
    - Install new graphics card drivers?
    - Change system settings? (Control Panel? What’s that?)
    - Etc etc...
  - So how do you figure it out?
    - Ever read the Windows manual? (hint: no “the” manual)
      - “Windows 7 Product Guide” -- 140 pages, considered very high level
      - “Windows 7 for Dummies” -- 432 pages
      - “Windows 7 Bible” -- 1248 pages
  - What do **you** do when you don’t know how to do something?

DEAR VARIOUS PARENTS, GRANDPARENTS, CO-WORKERS,  
AND OTHER "NOT COMPUTER PEOPLE."

WE DON'T MAGICALLY KNOW HOW TO DO EVERYTHING IN EVERY  
PROGRAM. WHEN WE HELP YOU, WE'RE USUALLY JUST DOING THIS:



PLEASE PRINT THIS FLOWCHART OUT AND TAPE IT NEAR YOUR SCREEN.  
CONGRATULATIONS; YOU'RE NOW THE LOCAL COMPUTER EXPERT!

Courtesy XKCD



# The More You Know™

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- Step 1: Try and explore intuitively
  - Hey, you're CSE majors. Where would \*you\* put that setting if you were designing the system?
- Step 1.5: Look in short, directly relating references
  - Man pages, quick start guides, the TOC in the manual (if exists...)
- Step 2: If that fails, search online!
  - Likely someone else has wanted to do what you want, and \*also\* couldn't figure it out
    - And, likely they've posted to a discussion board and had some guru give a detailed response
    - Or, a FAQ has been written somewhere that tells you how
- *Exercise: Watch a DVD in Fedora*

# Mix and match

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- Don't think of Linux/Windows as a binary choice
- These tools provide a continuum of options
  - Windows
  - Windows + Cygwin
  - Windows + Cygwin + Linux VM
  - Linux + Windows VM + Wine
  - Linux + Wine
  - Linux
- Can choose the setup that best suites your situation and application requirements

# The choice is yours

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- To clarify: the purpose here was not to say “you should switch to Linux as your main OS”
  - But, you should know what tools and options exist, and be able to use Linux as your main OS if desired
  - You should be able to survive if someone locked you in a closet with a laptop that had Fedora or Ubuntu
- Wrap up discussion:
  - What are the pros/cons of using Linux as your main OS?
  - What tools seem the most useful that you learned this quarter?
    - What tools seem like they address important areas, but need to be better?
  - From your experience, are there other tools you think you’d mention in this course, tools CSE majors should be aware of?
    - Linux commands/tools, programming development tools...