

# How to become Hacker



**UVic SEng 265**

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# What is a Hacker



- ❖ A person who enjoys exploring the details of programmable systems and how to stretch their capabilities, as opposed to most users, who prefer to learn only the minimum necessary.
- ❖ One who programs enthusiastically (even obsessively) or who enjoys programming rather than just theorizing about programming.
- ❖ One who enjoys the intellectual challenge of creatively overcoming or circumventing limitations.
- ❖ (deprecated) A malicious meddler who tries to discover sensitive information by poking around. Hence ‘password hacker’, ‘network hacker’. The correct term for this sense is cracker.

# Hacker Attitude



- ❖ Hackers solve problems and build things,
- ❖ They believe in freedom and voluntary mutual help.
- ❖ You have to really believe the attitude.

# The World is Full of Fascinating Problems to Solve



- ❖ To be a hacker you have to get a basic thrill from solving problems, sharpening your skills, and exercising your intelligence.
- ❖ Develop a kind of faith in your own learning capacity

# No problem should be solved twice



- ❖ Creative brains are a valuable, limited resource.
- ❖ They shouldn't be wasted on re-inventing the wheel
- ❖ You have to believe your thinking time is precious
- ❖ It is your moral duty to share information, your solutions so other hackers don't waste their time solving the same problems
- ❖ You don't have to give everything away (and yes, you can make money out of it)
- ❖ *It is like being a scientist!*

# Boredom and drudgery are evil



- ❖ You should never be bored or have to drudge at stupid repetitive work,
- ❖ You should automate away the boring bits as much as possible

# Attitude is no substitute for competence



- ❖ An attitude alone won't make you a hacker
- ❖ Becoming a hacker will take intelligence, practice, dedication, and hard work.
- ❖ Hackers respect competence

# Basic Hacking Skills



- ❖ You need to learn a set of skills and become competent with them
- ❖ Get your toolkit and become a master of it
- ❖ Your toolkit will change with technology, so stay up-to-date

# Learn how to program



- ❖ A fundamental skill
- ❖ C/C++, Python, Perl, Java, Lisp
- ❖ LISP is worth learning for a different reason:
  - ❖ *the profound* enlightenment experience you will have when you finally get it.
  - ❖ That experience will make you a better programmer
- ❖ Each of the 5 languages represents a very different approach to programming

# Learn how to program



- ❖ To learn to program: read code and write code
  - ❖ Read some stuff written by masters of the form, write some things yourself,
  - ❖ Read a lot more, write a little more, read a lot more, write some more ...
  - ❖ and repeat

# Install an open-source Unixes and learn to use and run it



- ❖ That will give you a chance to explore how the OS works
- ❖ You will be in total control
- ❖ You can explore its source code
- ❖ Contact the [www.vlug.org](http://www.vlug.org)

# Learn how to use the World Wide Web and write HTML



- ❖ Your page must have content
- ❖ It must be interesting and/or useful to other hackers.

# Status in the Hacker Culture



- ❖ Hackerdom runs on reputation
- ❖ So you want to be recognized?
- ❖ Demonstrate you are competent

# Write open-source software



- ❖ Write programs that other hackers think are fun or useful,
- ❖ Give the program sources to the whole hacker culture to use.

# Help test and debug open-source software



- ❖ They also serve who stand and debug open-source software
- ❖ Good beta-testers are worth their weight in gold
- ❖ There's a natural progression from helping test programs to helping debug them to helping modify them

# Publish useful information



- ❖ Collect and filter useful and interesting information into Web pages and FAQs
- ❖ Maintainers of major technical FAQs get almost as much respect as open-source authors.

# Help keep the infrastructure working



- ❖ The hacker culture (and the engineering development of the Internet, for that matter) is run by volunteers
- ❖ There's a lot of necessary but unglamorous work
- ❖ Doing them shows dedication.

# Serve the hacker culture itself



- ❖ The hacker culture doesn't have leaders, exactly.
- ❖ but it does have culture heroes and tribal elders and historians and spokespeople.
- ❖ Hackers distrust blatant ego in their tribal elders.
- ❖ you have to sort of position yourself so it drops in your lap, and then be modest and gracious about your status.

# The Hacker/Nerd/Geek Connection



- ❖ A hacker does not have to be a nerd
- ❖ But if you are a nerd/geek be proud of it
- ❖ Finally, you don't call yourself a hacker, others will call you if you are one

# Epilogue



- ❖ I am *very* surprised I have enjoyed teaching you and hope to see you again in the future
- ❖ Don't forget to study for the exam!