# Free & Open Source Software

## The Largest collaborative movement in the human history

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# Road from Darkness to Light  created by

# Richard Stallman, Linus Torvalds and  others.

# Early days of computing ... and clouds of Greed

- 1960s, Hardware was very expensive and the software like operating system, editors, compilers etc. were delivered as a part of hardware. Source code was generally provided, enabling the users to fix bugs.

- Universities were the early users and the improvements done by them were openly shared.

- Early 1980s, Software became a product sold separately (with restricted licenses and no source code) for both mainframe systems and smaller personal computers.

- The Copyright Act of 1976 had overhauled U.S. copyright law, extended the legal protection of copyright to software programs.

- 1976, Bill Gates accuses hobbyists from Stealing BASIC.

- Proprietary software was becoming dominant.

# Story of the Victims

- In 1995, I was running Windows-3 on an 80386 PC, using a word processor included in it for drafting letters.

- Once I received a .doc file from someone, and opening it required the latest version of MSWord.

- Bought  MSWord and it demanded Windows 95.

- Installing Windows 95 required an 80486 computer.

  Total expense to the institute was around 1.2 lakhs and I was not the only one faced such exploitation.

# Richard Stallman: The Programmer - Idealist

- Harvard University (1970–74) BA Physics

- MIT AI Lab as a Programmer (1971–1980s)

- 27-Sep-1983, Announces the GNU project (a free OS).

- Jan-84, resigns from MIT technically.

- Supports himself by shipping Emacs tapes.

- Established the Free Software Foundation (FSF) in 1985

- 1987, Becomes homeless (no voter rights)

- 1990, Received the Genius grant and many other awards subsequently.

Open Book: Free as in Freedom

# Key Contributions of Richard Stallman

- GNU Emacs – powerful text editor
- GCC (GNU Compiler Collection) – vital for many OS
- GPL (GNU General Public License) – ensures software freedom
- Inspired a movement, not just tools

# What is Free Software?

- Free as in Freedom, not price
- Software users have the freedom to:
    - Use
    - Study
    - Modify
    - Share
- The GNU General Public License
- Based on collaboration, transparency, and democratized technology

A Kernel for the GNU Operating System
from Linus Torvalds

Biography: Just for Fun



- Started coding in BASIC on a VIC-20 , at the age of 10

- Joins MS computer science at Helsinki University, Finland

- 1991, Bought a 386 computer, partly on credit.

- Started writing an OS Kernel (Used GNU tools like GCC)

- Named it Linux (Unix from Linus), suggested by a co-worker.

- Shared according to the ideals of Science

- Switched to GNU GPL, after listening to a talk by Stallman

- Version 1.0 of Linux released in March 1994

- Together with GNU, a complete free OS became available.

# Together They Built a Free OS and a software ecosystem

- Today, their contributions power:
  - Single Board Computers to Supercomputers
  - Android phones (uses Linux Kernel)
  - Servers, routers, and more
- Created a foundation for:
  - Open-source communities
  - Digital rights movements

https://www.stackscale.com/blog/most-powerful-supercomputers-linux/

# How GNU/Linux reaches you

Different parts like the Kernel, Compilers, Web Servers, etc. are developed by different groups. An ordinary user need to get them ready for installing on a computer.

This need is taken care by the GNU/Linux Distributions, like

- Slackware  -  Started by an individual
- Redhat      -  First corporate distro ( Fedora )
- Debian      -  An organization of Free Software developers
- Ubuntu       -  A Debian based distro, from Canonical Inc.
- Mint          -  A Debian based distro, community supported.

# Implications of Free Software

- Prevents wasteful expenditure (India spends around Rs 3000 crores annually for Windows OS)
- Avoids dependence on foreign or proprietary software vendors (e.g., Microsoft, Oracle )
- Freedom from proprietary file formats.
- Ideal for teaching and learning, since students can study how the software works.

# Forces against Free Software

- Microsoft resisted opening formats like .doc, .xls, and .ppt, making it hard for free software (like OpenOffice or LibreOffice) to fully inter-operate. This created a vendor lock-in effect, pressuring users to stay on Microsoft software.

- Introduced with Windows 8, UEFI Secure Boot required signed keys to boot alternative OSes. This made it difficult to install Linux on some hardware, especially on OEM devices pre-loaded with Windows.

- Microsoft used licensing deals, lobbying, and influence to prevent governments and schools from adopting free software. In countries like India and Peru.

- Microsoft campaigned against free software initiatives and even offered deep discounts to keep governments hooked on proprietary tools.

- The biggest enemy is the mindset that freedom doesn't matter.

# Pay for one, get two😃
## Most of you are the Unknowing Victims



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- A clever & dirty method to prevent users from exploring other operating systems.
- Not giving the software on an Installer media after taking money.
- Pre-installed OS and Recovery media.

# Ask the following questions to ChatGPT, grok or any other AI platform

- How free software helps developing nations.

- Who was the biggest enemy of free software.

- Which company scuttled the digital standards.

- Effect of Microsoft  developing nations.

- How MSOffice became dominant.

- What is wintel cartel.

- How Netscape was killed.

- How Borland was killed.

- How Wordperfect was killed.

# Free Software in Education

- IT@School project, of Kerala, was established in 2001, in the beginning with Microsoft products

- Switched to Free Software In 2003.

- Transition to Free Software was completed in 2006.

- In 2017, IT@School project was promoted into a government company named KITE.

- More than 2,00,000 computers in various schools are running Free Software.

**FREEDOM BEGINS IN THE CLASSROOM**

**KERALA LEADS WITH FREE SOFTWARE**

**EDUCATION REFORM**
OVER 15,000 SCHOOLS USE GNU/LINUX, LIBREOFFICE, GIMP

**GOVERNMENT POLICY**
OFFICIAL FOSS POLICY DIGITAL SOVEREIGNTY

**INTERNATIONAL RECOGNITION**
MODEL FOR STATES & COUNTRIES
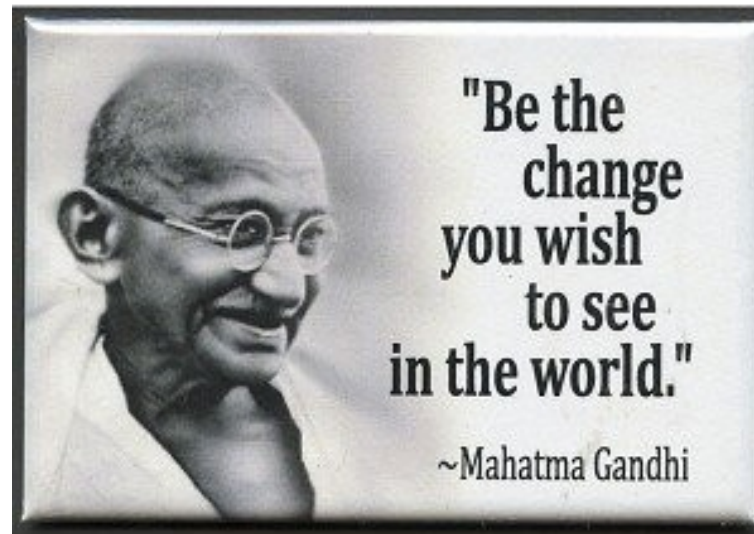
**LEARN MORE AT**
www.gnu.org
www.fsf.org

← Poster created by ChatGPT

It looks like it is unaware of the black spots in this shining example, Colleges in Kerala.

- Mostly unaware of Free Software.
- Struck with the proprietary MSWindows OS, including the computer science departments.
- Happy with a pre-installed OS and troubled either by virus or antivirus programs.

# How can you help ?



"Be the
change
you wish
to see
in the world."

~Mahatma Gandhi

- Start using a Free OS and software tools.
- Learn how to install GNU/Linux.
- Help others to convert to Free Software

# Available support

- Training to Use and Install GNU/Linux
- Laptops to practice Installation

# Freedom is more important than Software

# Thank You

Links:

- GNU website https://www.gnu.org/
- Debian website https://www.debian.org/
- Linus Torvalds Biography Just for Fun
- Richard Stallman Biogaphy Free as in Freedom
- Stallman's video St. Ignutius