



Open Source Software Platform

For Prelims: Computer Emergency Response System (Cert-In), open-source software, GitHub, GovTech 3.0.

For Mains: Government Policy on open-source software, Open source softwares there advantages and disadvantages.

Why in News

Recently, the Github, an **open-source software** repository service was used to create and share an offensively named app that [**sexually harassed a women in India.**](#)

- The app used pictures of the women stolen from their social media handles and invited “users” to bid for them.
- GitHub has blocked the user, and the Indian [**Computer Emergency Response System \(Cert-In\)**](#), has been asked to form “a high-level committee.

GitHub:

- GitHub is the **world's largest open-source developer community platform** where users upload their projects and code for others to view, edit, and tweak.
- The platform uses the **software Git**, which was created in 2005 by **Linus Torvalds**, the developer of the **open-source operating system Linux**, to track changes in a set of files and for coordination in software.

Key Points

- **Meaning of Open-Source:** The term open source refers to something people can modify and share because its design is publicly accessible.
 - **Underlying Principles:** Open source projects, products, or initiatives embrace and celebrate principles of
 - Open exchange,
 - Collaborative participation,
 - Rapid prototyping,
 - Transparency,
 - Meritocracy, and
 - Community-oriented development.
- **Open Source Software:** Open source software (OSS) is **software that is distributed with its source code**, making it available for use, modification, and distribution with its original rights.
 - **Source code** is the part of software that most computer users don't ever see.
 - It's the code computer programmers **manipulate to control** how a program or application

- behaves.
- OSS typically **includes a licence** that allows programmers to modify the software to best fit their needs and control how the software can be distributed.
- The idea of making source code freely available originated in 1983 from an ideological movement informally founded by **Richard Stallman**, a programmer at MIT.
- Examples of **Linux, Mozilla Firefox, VLC media player, SugarCRM, etc.**
- **Closed Source or Proprietary Software:** Closed source software is software that holds the source code safe and encrypted.
 - Meaning, the user can't copy, modify, or delete parts of the code without some type of consequence.

Note:

- While the operating system of **Apple's iPhones (iOS) is closed source**, meaning it cannot be legally modified or reverse engineered, **Google's Android operating system is open-source**, and therefore it is possible by smartphone manufacturers such as Samsung, Xiaomi, OnePlus, etc to modify it for their hardware.

Advantages and Disadvantages of Each Model

Open Source Advantages	Proprietary Software Advantages
<ul style="list-style-type: none"> • Source code available, modifiable • Redistribute solutions • Use software in any way • Eliminates single point of failure • Democratic forum for action • No vendor lock-in 	<ul style="list-style-type: none"> • Predictable releases • Entity to hold responsible for bugs, errors, and updates • Consistent feature development • More stable framework • More consistent training options • Easier access to support
Open Source Disadvantages	Proprietary Software Disadvantages
<ul style="list-style-type: none"> • No guarantee development will continue • Intellectual property (algorithms) • Support consistency 	<ul style="list-style-type: none"> • Higher start-up costs • Single company releasing patches • Vendor owns software

▪ **Government Policy on OSS:**

- The Government of India had issued a **Policy on Adoption of Open Source Software** in 2015.
- **Free and Open Source Software for Education (FOSSEE) Project:** It is a project promoting the use of open source software in educational institutions.
 - It does that through instructional material, such as spoken tutorials, documentation, such as textbook companions, awareness programmes, such as conferences, training workshops, and internships.
- The government has also made the android version of the [**Aarogya Setu app**](#) open source.
- Promoting OSS is a part of [**GovTech 3.0**](#).
 - GovTech 3.0 is focussed on **Open Digital Ecosystems (ODEs)**, the underlying philosophy suggests that the government should focus on creating the "digital commons".

Way Forward

- The government must take **urgent, exemplary action against the perpetrators**. Simply taking down the app, without imposing costs on such criminal behaviour, will lead to encouragement of impunity.

[Source: IE](#)

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