

Open Source Engineering Report

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Course Name: Open Source Engineering

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Hardcopy Report

Submitted in partial fulfillment of course requirements

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1 About the Linux Distribution Used

For this project, I used the **Ubuntu Linux distribution**. Ubuntu is one of the most popular open-source operating systems based on Debian. It is widely used for development, cybersecurity, server deployment, and cloud computing.

Key Features of Ubuntu

- User-friendly and stable interface.
- Large software repository and community support.
- Secure environment with frequent updates.
- Supports apt package management system.
- Compatible with virtualization tools and development environments.

2 Encryption and GPG

GNU Privacy Guard (GPG) is an open-source implementation of the OpenPGP standard. It enables secure encryption, signing, and verification of digital messages and files.

How GPG Works

- Public-key cryptography system
- Each user has a public and a private key
- Data encrypted with public key can only be decrypted with private key

Basic GPG Commands

```
gpg --full-generate-key  
gpg --list-keys  
gpg -e -r 'Name' file.txt  
gpg -d file.txt.gpg
```

3 Sending Encrypted Email

To send an encrypted email using GPG:

1. Generate GPG key pair
2. Exchange public keys with recipient
3. Encrypt email text or file:

```
gpg -e -r receiver@example.com message.txt
```

Attach the encrypted file to email. Only the receiver can decrypt it.

4 Privacy Tools from PRISM-Break

1. **Tor Browser** – Anonymous browsing.
2. **Signal** – Encrypted messaging.
3. **VeraCrypt** – Disk encryption.
4. **DuckDuckGo** – Privacy-focused search engine.
5. **ProtonMail** – Encrypted email service.

5 Open Source License Used — MIT License

The MIT License is a permissive free software license that is short, simple, and widely used.

Key Features

- Free commercial use
- Free modification and distribution
- No liability warranty
- Very short and easy to understand

6 Self-Hosted Server

I hosted my project locally using:

- VS Code Live Server Extension
- URL: <http://127.0.0.1:5500>

Installation Steps

1. Install VS Code
2. Install Live Server extension
3. Open project folder
4. Right-click index.html → Open with Live Server

Localized (Translated) Document — Hindi

प्रीमियम टू-डू लिस्ट (Premium To-Do List)

यह एक सरल और सुंदर To-Do List वेब ऐप है, जो HTML, CSS और JavaScript से बनाया गया है। इसमें आप अपने दैनिक काम जोड़ सकते हैं, समय सीमा सेट कर सकते हैं, और जरूरत पड़ने पर टास्क को पूरा, एडिट या डिलीट कर सकते हैं।

मुख्य विशेषताएँ

- टास्क जोड़ना, पूरा करना और हटाना
- समय सीमा (काउंटडाउन टाइमर) सेट करना
- आधुनिक और साफ-सुथरा यूजर इंटरफ़ेस

कैसे चलाएँ

1. GitHub से प्रोजेक्ट Fork करें
2. Clone करें: `git clone <repo-url>`
3. फोल्डर खोलें: `cd project`
4. `index.html` ब्राउज़र में खोलें

ऐप कैसे काम करता है

- नया टास्क जोड़ें
- समय सीमा सेट करें
- टाइमर अपने आप शुरू हो जाता है
- टास्क पूरा होने पर Complete करें

टेक स्टैक: HTML, CSS, JavaScript

लाइसेंस: MIT License

Poster: Live Self Hosting

Below is the poster created for demonstrating the self-hosting setup and workflow of the project.

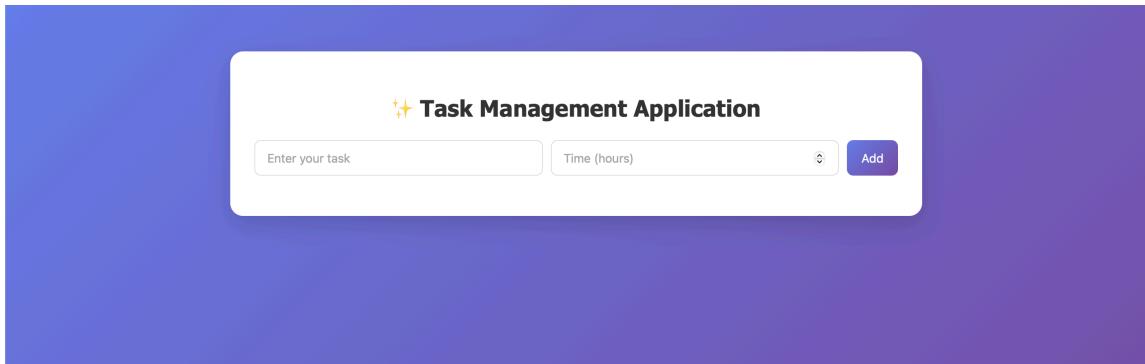


Figure 1: Live Self Hosting Poster

7 Open Source Contributions (Pull Requests)

Below are all contributions made with explanations and screenshots.

PR 1: Add Table of Contents + Back to Top

Repository: codecrafters-io PR Number: #1606

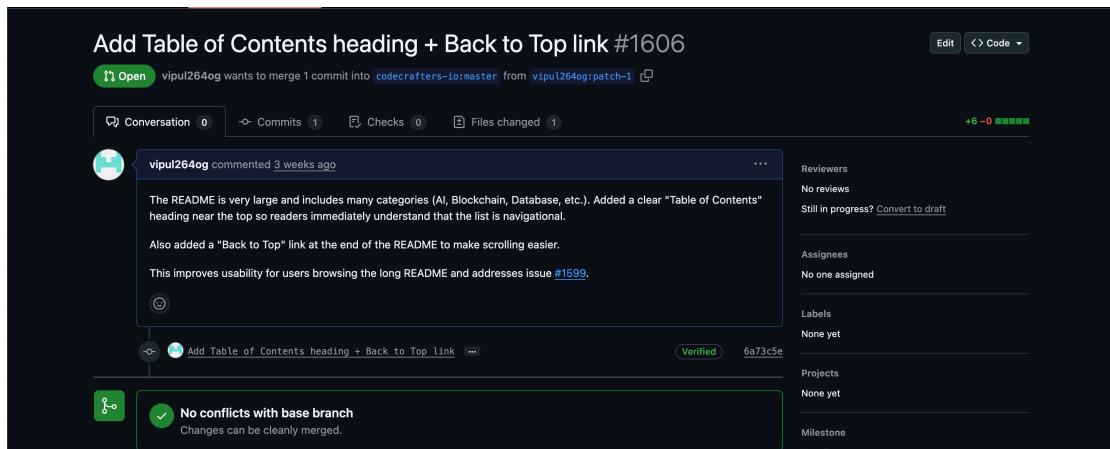


Figure 2: PR #1606 – Improved README navigation

PR 2: Improve README Formatting and Structure

Repository: RishikeshOps PR Number: #2

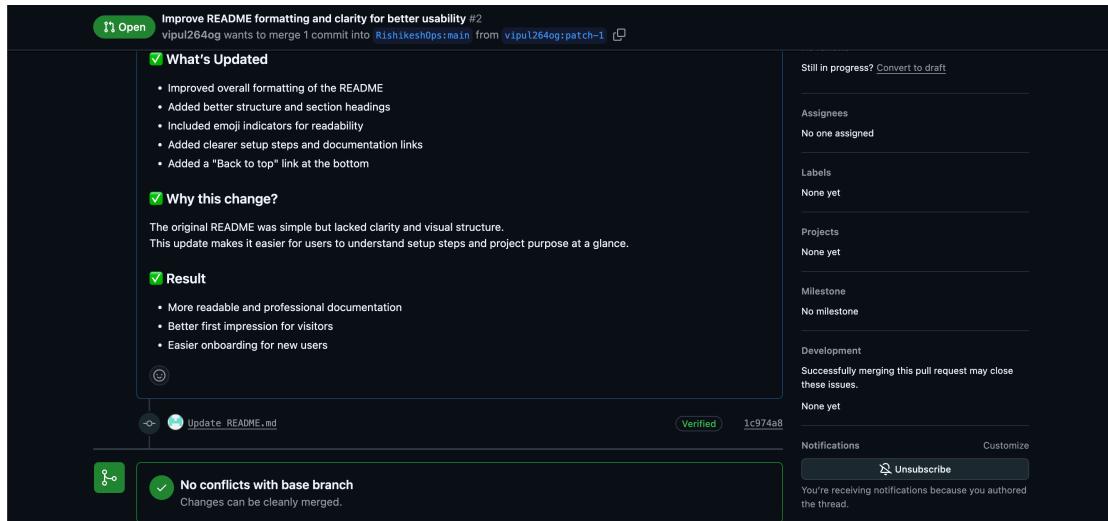


Figure 3: PR #2 – README structure improvement

PR 3: Update data.json (Weather App Data Update)

Repository: MunGell PR Number: #1820

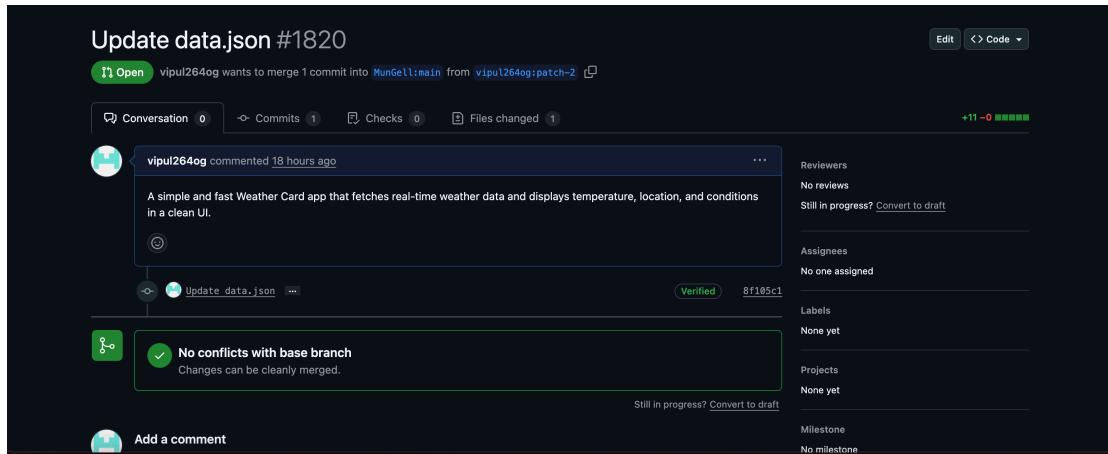


Figure 4: PR #1820 – Updated weather data JSON

PR 4: Update index.html (Social Handles + Card)

Repository: Syknapse PR Number: #4387

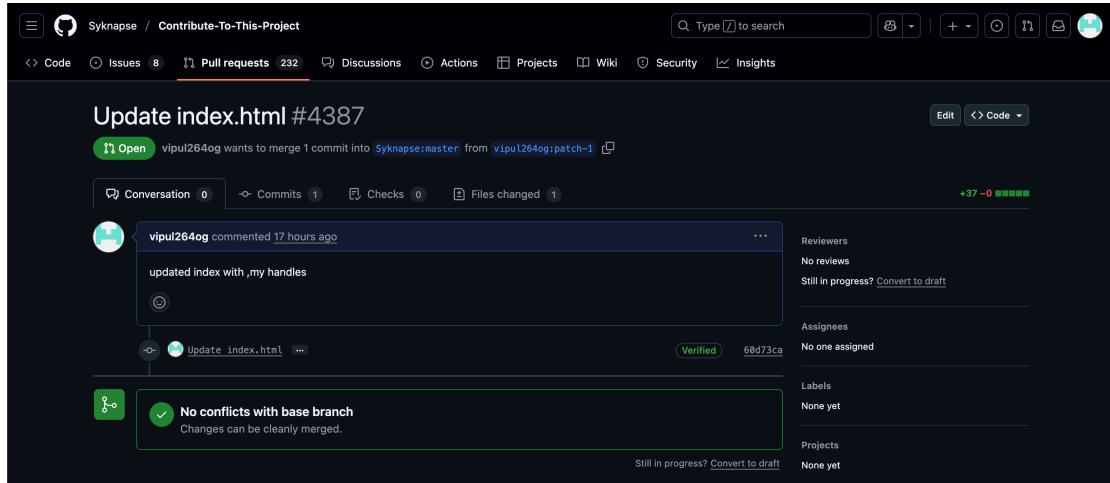


Figure 5: PR #4387 – Updated HTML with social handles

PR 5: Add My Name to Git Gang (Merged)

Repository: SashankBhamidi PR Number: #301

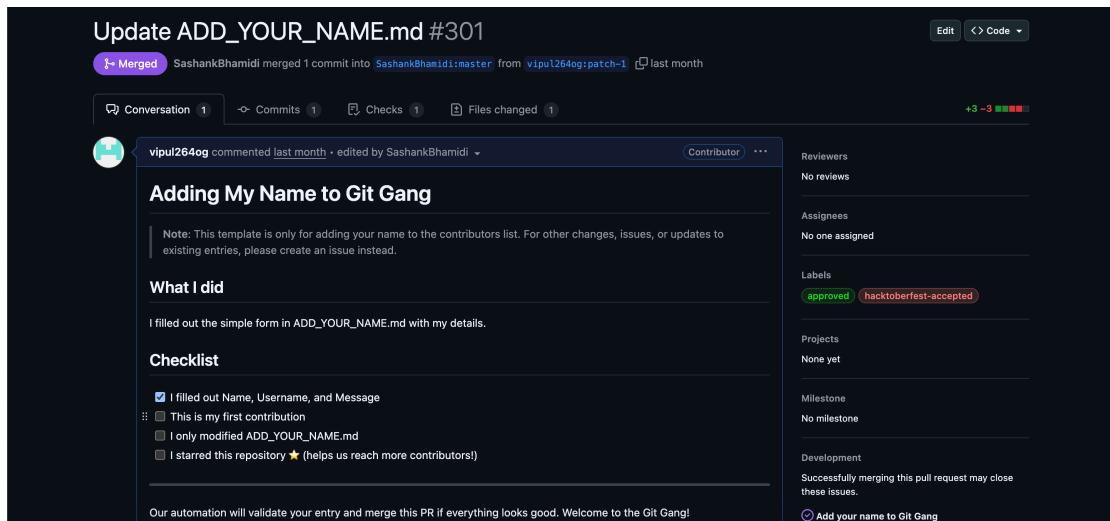


Figure 6: PR #301 – Added my contributor entry

PR 6: Updated README with New Tech Stack + Usage

Repository: Sandali3000 PR Number: #114

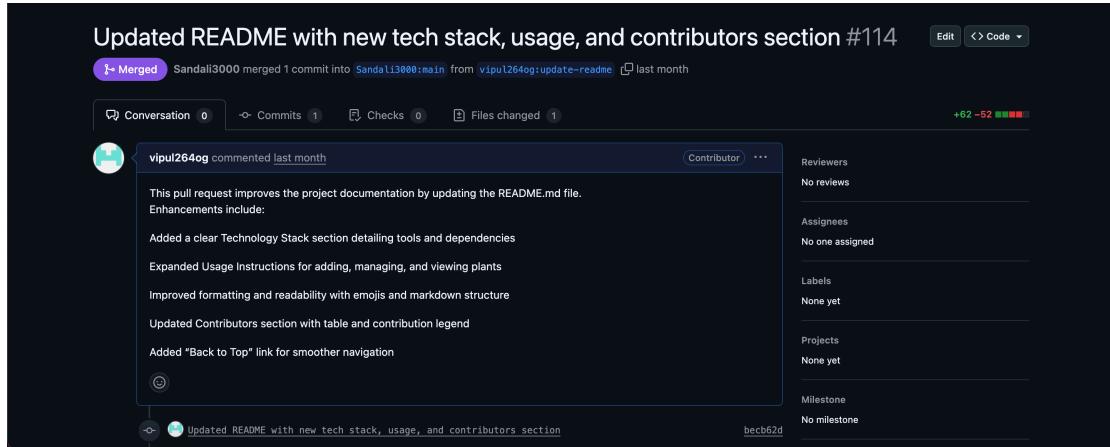


Figure 7: PR #114 – README expanded with tech stack

PR 7: Add Vipul to Contributors.md

Repository: firstcontributions PR Number: #107033

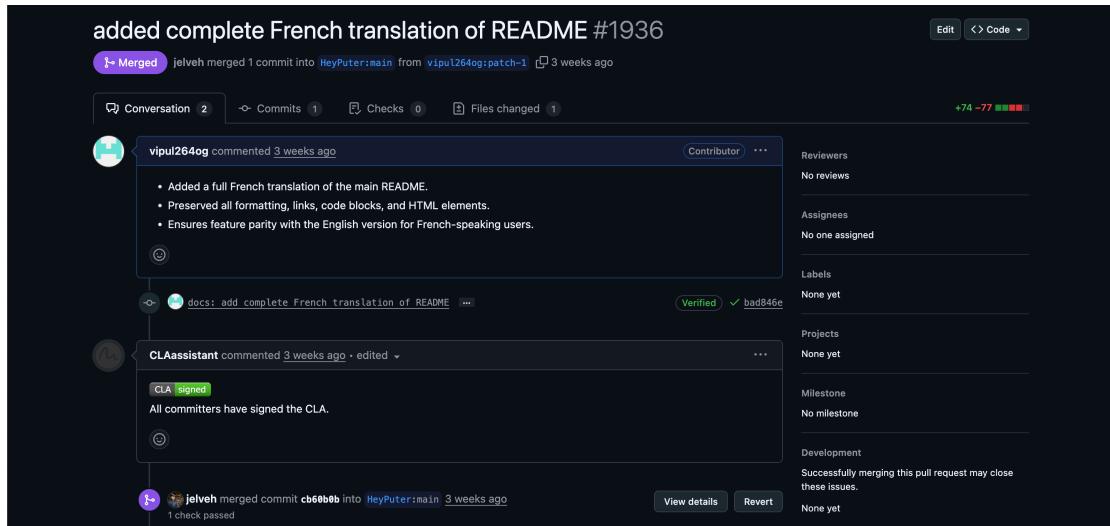


Figure 8: PR #107033 – Added myself to contributors.md

PR 8: Add Punjabi Translation of README

Repository: HeyPuter PR Number: #1944

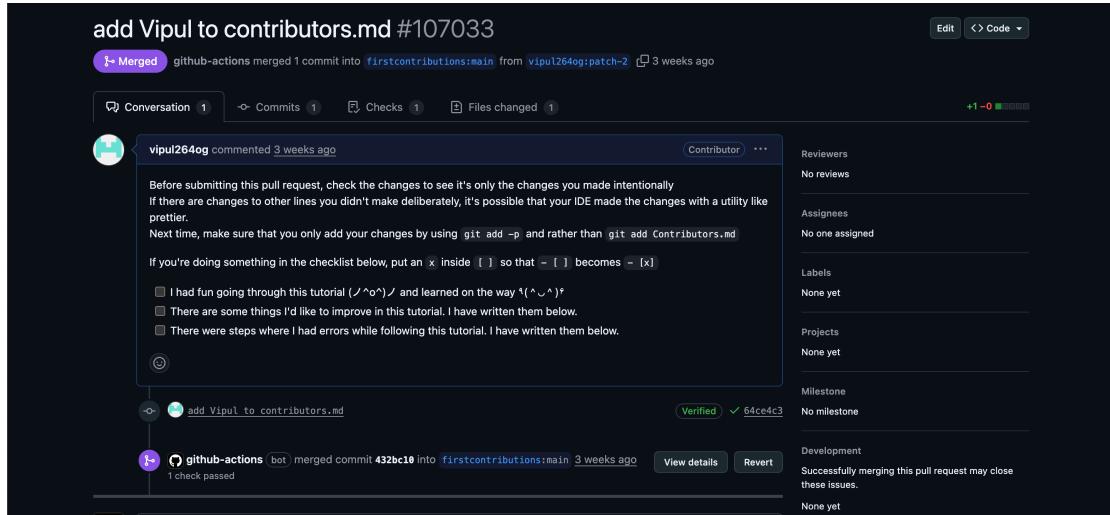


Figure 9: PR #1944 – Punjabi translation added

PR 9: Add French Translation of README

Repository: HeyPuter PR Number: #1936

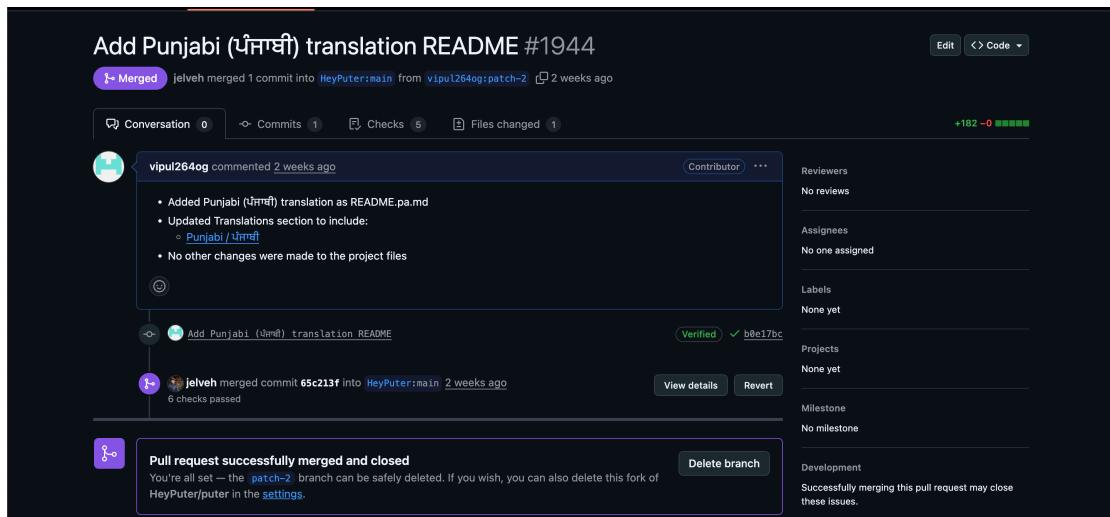


Figure 10: PR #1936 – French translation added

8 LinkedIn Posts

- Self Hosting: <https://tinyurl.com/4wybkss9>
- PR Merge: <https://tinyurl.com/2ssdjmpk>
- Blog Post: <https://tinyurl.com/5ee4s7n8>