hi

#FullStack:

- Linux Operating system.
- Git Commands.
- NetWorking
- Cloud Computing
- WEB DESIGING
- CODING (.HTML,.CSS,.JS,.Py,.Md)
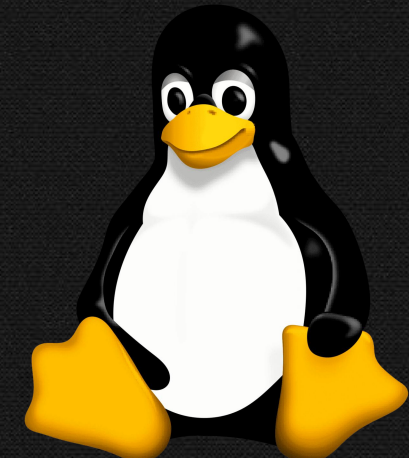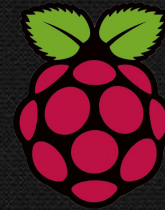
#Solution:

Created a VIRTUAL PLATFORM for STORING data and TRANSFERING data

1 First we used USB's for DataTransfer (we use to pass single usb among 20 members)

2 Even we used WhatsApp, Email couldn't handle the data

3 After that we used GIT and GitHub (slow internet speed and no signals)

▶ So we Decided to build a open source platform which can store data and able transfer data with NO internet

git

## Learned git Commands

version control

source code management

MINGW64:/c/Users/mugun

rm: cannot remove '/etc/post-install/01-devices.post': Permission denied
rm: cannot remove '/etc/post-install/03-mtab.post': Permission denied
rm: cannot remove '/etc/post-install/06-windows-files.post': Permission denied
rm: cannot remove '/etc/post-install/99-post-install-cleanup.post': Permission d
enied

mugun@varshitha MINGW64 ~
$ git status
fatal: not a git repository (or any of the parent directories): .git

mugun@varshitha MINGW64 ~
$ git init
Initialized empty Git repository in C:/Users/mugun/.git/

mugun@varshitha MINGW64 ~ (master)
$ git add
Nothing specified, nothing added.
hint: Maybe you wanted to say 'git add .'?
hint: Turn this message off by running
hint: "git config advice.addEmptyPathspec false"

mugun@varshitha MINGW64 ~ (master)
$
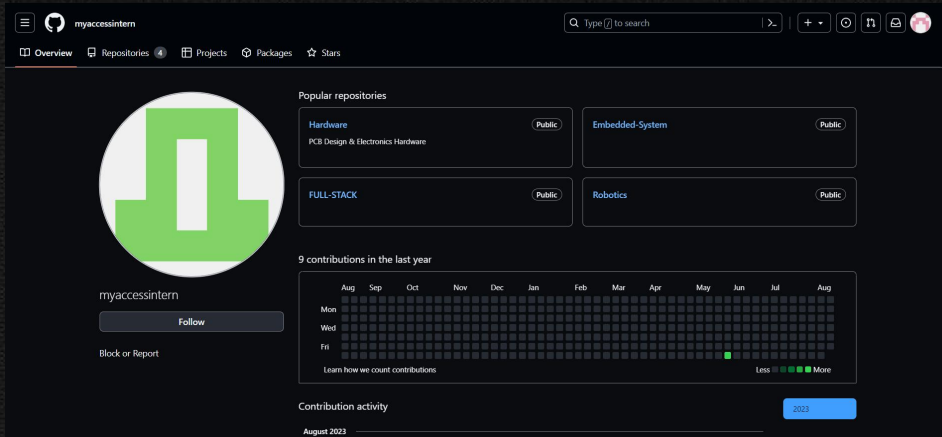
code Hosting platform

collaborating

Cloud-based service

GitHub

git and GitHub require Internet for working

SERVER Self Hosted

Run your own website or application by setting up a server and network yourself

Self Hosting is a form of running your own website or application by setting up a server and network yourself

Self-hosting is the practice of running and maintaining a website or service using a private web server, instead of using a service outside of someone's own control. Self-hosting allows users to have more control over their data, privacy, and computing infrastructure, as well as potentially saving costs and improving skills

1 Gitea

It is a forge software package for hosting software development version control using Git as well as other collaborative features like bug tracking, code review, continuous integration, kanban boards, tickets, and wikis

2 NextCloud

Nextcloud is a suite of client-server software for creating and using file hosting services. Nextcloud provides functionality similar to Dropbox, Office 365 or Google Drive when used with integrated office suites Collabora Online or OnlyOffice
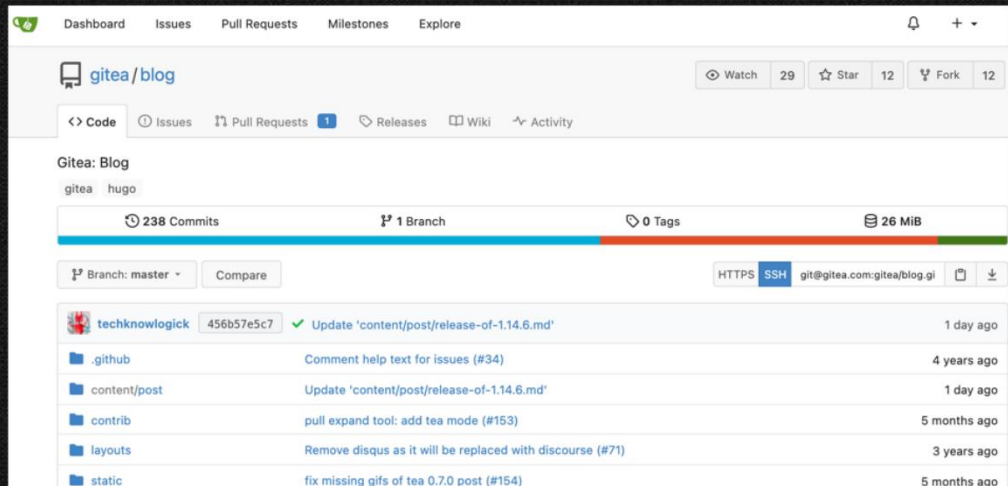
Gitea

It is a forge open source software package for hosting software development version control using Git

Features:

- Bug tracking

- Code review

- Continuous Integration

- SelfHosted

NextCloud

Nextcloud is an open-source, self-hosted software suite that provides a platform for file Synchronization, Sharing, Collaboration, and Communication. It allows individuals and organizations to create their own private cloud infrastructure, enabling them to manage and access their files, calendars, contacts, and more from various devices while maintaining data.
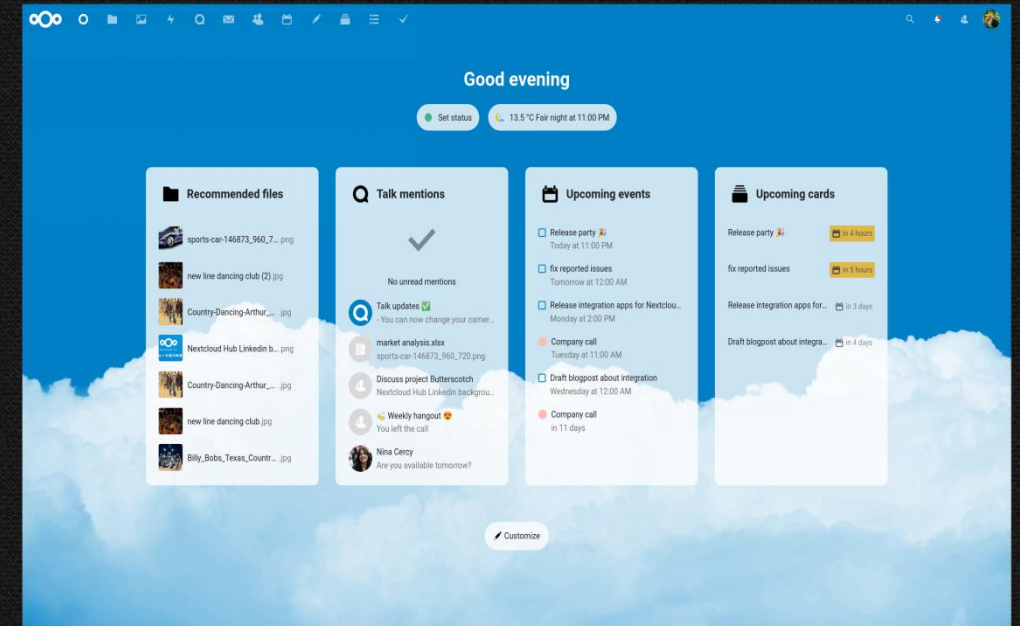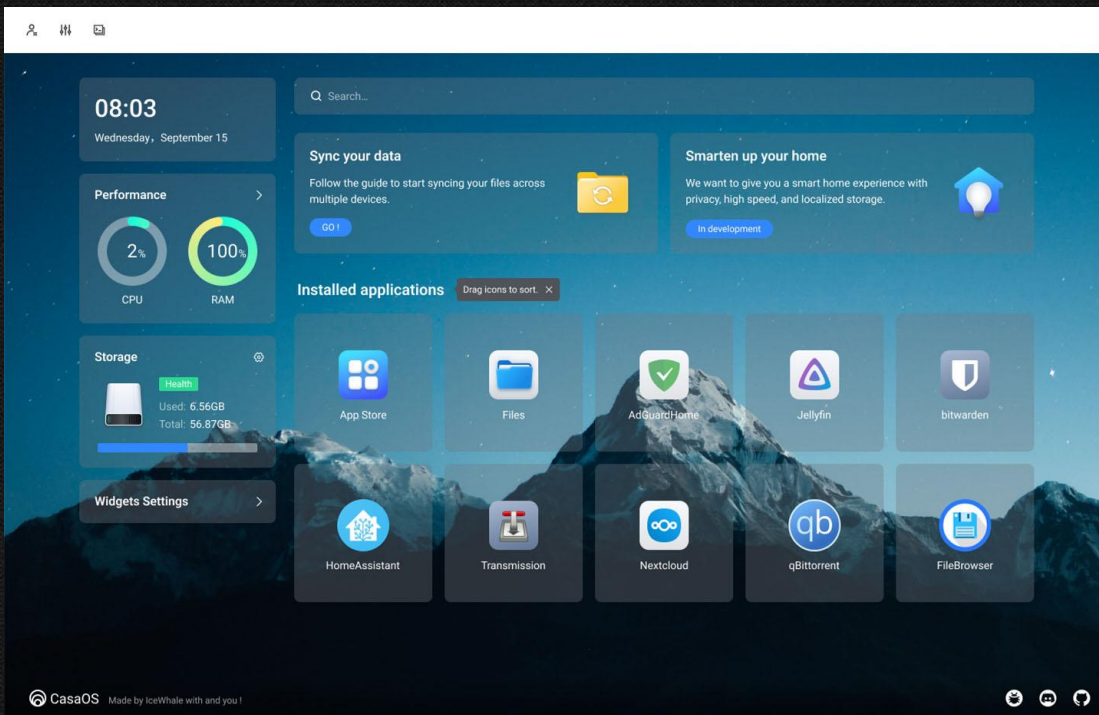

▶ It doesn't require internet

▶ The only drawback is that user must connect to same ip of the router

Cloud Computing

- DigitalOcean is a cloud computing platform like AWS, IBM, LINODE, AZURE.

- Provides a range of cloud services, primarily focused on simplifying the deployment and management of virtual servers

- CasaOS is an open-source home server system

- It is based on the Docker ecosystem and designed for home scenarios.

- It is committed to building the world's most simple, easy-to-use, and elegant home server system.

- CasaOS is compatible with Raspberry Pi and x86 devices.

Mqtt

MQTT (Message Queuing Telemetry Transport) is a lightweight messaging protocol designed for efficient communication between devices

Broker: The MQTT broker acts as a central hub that handles the distribution of messages between publishers and subscribers. It receives published messages and forwards them to all subscribers of the relevant topics.

Topic: Topics are the communication channels in MQTT. Messages are published to specific topics, and subscribers receive messages from topics they are subscribed to.

Publisher: A publisher is a device or application that sends messages to a specific topic. These messages are then distributed to all subscribers of that topic.

Subscriber: A subscriber is a device or application that receives messages from topics it has subscribed to.

Message: A message is the payload of data that is sent from a publisher to a topic and then received by all subscribers of that topic

Mqtt

By Using Node.js

SOURCE CODE

OUT PUT

Mqtt

By Using python:


```
File  Edit  Selection  View  Go  Run  ...                              ←  →              🔍 Search                                                       🗖  ⬜  ✕

Welcome         ●  pub.py  ×                                    ...        ●  sub.py  ×                                                              ⬚  ...

C: > Users > Admin > Downloads > ● pub.py                                C: > Users > Admin > Downloads > ● sub.py
  1   const mqtt = require('mqtt');                                        1   const mqtt = require('mqtt');
  2                                                                        2
  3   const mqttBroker = 'mqtt://mqtt.eclipseprojects.io';                 3   const mqttBroker = 'mqtt://mqtt.eclipseprojects.io';
  4   const client = mqtt.connect(mqttBroker);                             4   const client = mqtt.connect(mqttBroker);
  5                                                                        5
  6   client.on('connect', () => {                                         6   client.on('connect', () => {
  7       console.log('Connected to MQTT broker');                         7       console.log('Connected to MQTT broker');
  8                                                                        8       client.subscribe('TEMPERATURE');
  9       setInterval(() => {                                              9   });
 10           const randNumber = Math.random() * (21.0 - 20.0) + 20.0;    10
 11           client.publish('TEMPERATURE', randNumber.toString());       11   client.on('message', (topic, message) => {
 12           console.log(`Just published ${randNumber} to Topic TEMPERATU 12       console.log(`Received message: ${message.toString()}`);
 13       }, 1000); // Publish every 1 second                             13   });
 14   });                                                                 14
 15                                                                       15   process.on('SIGINT', () => {
 16   client.on('error', (error) => {                                     16       client.end(() => {
 17       console.error('MQTT error:', error);                            17           console.log('MQTT client disconnected');
 18   });                                                                 18           process.exit();
 19                                                                       19       });
 20   process.on('SIGINT', () => {                                        20   });
 21       client.end(() => {
 22           console.log('MQTT client disconnected');
 23           process.exit();
 24       });
 25   });

                                                      Ln 20, Col 4    Spaces: 4    UTF-8    CRLF    Python    Go Live
```

Paho MQTT is a widely used MQTT library for Python that allows you to implement MQTT communication in your Python applications

The Paho MQTT library for Python to implement MQTT communication

HTML(Hypertext Markup Language) used to create and structure content on the World Wide Web. It forms the backbone of web pages and is used to define the structure, layout, and elements of a webpage's content, including text, images, links, forms, and more. HTML works in conjunction with other web like CSS and JavaScript to create interactive and visually appealing web experiences

CSS (Cascading Style Sheets) is a stylesheet language used to describe the presentation and visual styling of HTML and XML documents.

It's a crucial technology in web development, allowing developers to control the appearance and layout of web pages.

There are three types of CSS:
    Inline CSS.
    Internal or Embedded CSS.
    External CSS.

JavaScript is a high-level, dynamic programming language primarily used for creating interactive and dynamic content on websites. It is an essential part of modern web development and is widely supported by web browsers, making it a fundamental tool for building web applications and adding interactivity to web pages.

Markdown

▶ The VScode extension : markdowon preview enhanced

Markdown is a lightweight markup language created by John Gruber in 2004.

It's designed to be human-readable and easy to convert into HTML.

Markdown simplifies the process of formatting text without the need for complex coding.
It's ideal for creating documents, web content, emails, and more.

Wix allows users to customize the design of their websites, including fonts, colors, backgrounds, and layouts.

This customization flexibility helps create unique and visually appealing websites.

Wix templates are designed to be responsive, ensuring that websites look and function well on various devices, from desktops to smartphones.

Wix **Editor X** as an advanced website design and development platform, designed to provide more creative freedom and customization options compared to traditional website builders.

Evolution of Wix: Explain how Wix Editor X is an evolution of the original Wix platform, catering to users who require more intricate design capabilities and advanced features.

Pixel-Perfect Design: Highlight how Wix Editor X allows designers to create pixel-perfect layouts, enabling precise control over design elements and positioning.

THANKS

By: