

# IoT based Pirate-Box

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**Abstract:** After studying the fact of emerging advancement in the technology and understanding the importance of file sharing we come with an idea of developing project based on the concept of offline file sharing system. To create offline file sharing system using wireless technology so that users connected to it can easily share files with-in the Wi-Fi to get a smooth file sharing experience. This will not require any costly tools instead we are using normal memory device along with raspberry pi module and Wi-Fi module to make users connected in a portal like offline file sharing system.

This sharing system also allows users to access files which were shared earlier i.e. history access. And this will be beneficial for saving bandwidth and also we can make our files reach where current systems cannot reach.

**Keywords:** Pirate Box, Anonymous file sharing, offline chat, Raspberry-pi, Internet of Things, number of users.

## 1. Introduction

We know that in today's world file sharing is such an important activity. In order to transfer file from one device to another we need to follow some condition, so as to make this process easier and faster we can use Pirate box. It creates offline wireless networks designed for anonymous file sharing, chatting, message boarding, and media streaming. With the help of Pirate-box users can easily connect their devices through Wi-Fi and when they open their browser they will be automatically redirected to login page where they will be authenticated and then they can easily share their desired files.

This is very unrealistic that user should wait for transferring some larger file through USB cable or Bluetooth because actually it takes very much time and in today's fast paced world this is not accepted. Also installing various applications in our device and wasting memory just for file sharing seems much more problematic.

In this project, the main goal is to overcome such problem using a Wi-Fi based offline file sharing system or portal where a normal consumer can use such service in a day to day life.

## 2. Proposed system

As we are developing an offline sharing box, our main concern will be given to the security, all types of file to be shared and all generalized features given will by other sharing medium.

- Wi-Fi based connectivity
- Web based sharing of different files (file formats)

- Web based chatting with connected user in the network

Apart from this the user will be concerned about the security provided to him for sharing and chatting in the network also, support of different file formats uploaded on the web.

### A. Flow chart

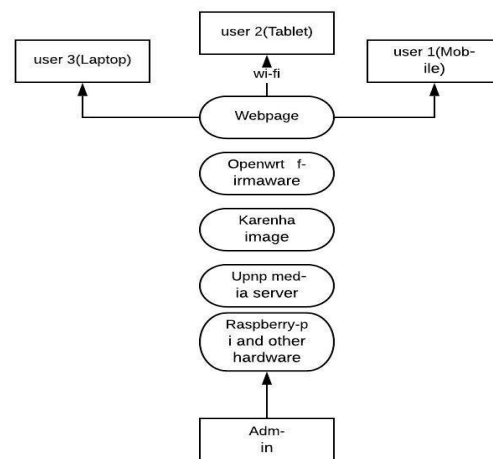


Fig. 1. Flowchart

### Flowchart description

- The admin switches on the pirate box which then will share its Wi-Fi range.
- All the users want to connect to the box will connect to the Wi-Fi.
- The entire loaded server, webpages will be active.
- The user will be redirected to a specific page through which all the applications of the product will be used.

## 3. Implementation

### A. Logic behind the idea

- In traditional system  
 In today's system the data is shared one-to-one through wi-fi which is very slow and time consuming.

- In Proposed system

Here, multiple users will be connected to a Wi-Fi network and then will be connected to each other through a web application where they can share data, files, and chat simultaneously. This will reduce the time of sharing the data

took in traditional system.

Based on the above logic, adaptive time is calculated. The final conclusion would show that the time required in the traditional system would be detached, as, in proposed system the time will be saved as multiple users would be connected simultaneously together.

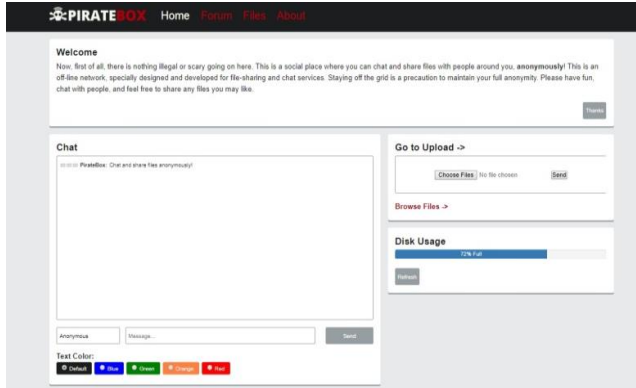


Fig. 2. The web application

**B. Logic behind the chat window**

• In Traditional System

Earlier, in traditional systems, it was not possible to chat or communicate, only by getting connected on Wi-fi.

• In Proposed System

People who have been connected to Pirate box through their phone, do not need any kind of internet connection, but Wifi.

People can communicate with each other, even where there is no range on their mobile network, once connected to the Pirate box.

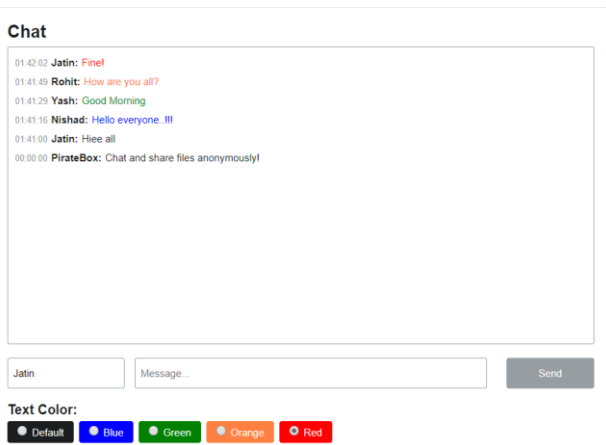


Fig. 3. Chat Window

**C. Concept of File accessing**

- Also people can share any type of file using Pirate box. The files that have been shared on this, appear in the following window.
- All the details related to the file will be stored in the memory device/flash drive in the backend and the users can access, browse, download these files using the web application.

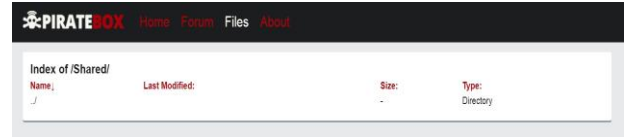


Fig. 4. File Storage System

Table 1  
Comparison with existing systems

NAME OF FILE SHARING SYSTEM	INTERNET REQUIRED	BETWEEN DEVICES	SOFTWARE REQUIREMENT	HARDWARE REQUIREMENT
LAN NETWORK	No	Multiple computers	No	Ethernet cable
CLOUD SYSTEM	Yes	Mobiles, computers etc.	Server Client Interface	None
SHARE IT and XENDER	No	Application oriented devices	Well-developed application	None
I-TUNES	No	Windows to IOS	Well-developed application	USB cable
NFC(Near Field Communication)	No	Android to Android	Inbuilt mobile function	Physio-electric sensors.
BLUETOOTH	No	Between any having Bluetooth hardware	None	Transmitter and Receiver
e-mail services	Yes	Between any devices having supportive interface	HTML and CSS interface website	None
AIR DROP	No	IOS TO IOS	In built function	Wi-Fi transmitter
PIRATEBOX	No	Any type of devices can share files in group.	HTML webpage	Wi-fi

**4. Conclusion**

The major advantage of this Pirate Box sharing device is its robustness and ease of installation. Using this box, it will allow the users to connect to other user’s devices in the network just through Wi-Fi connection and not with internet

Connection and access the advantages of the application of sharing files, chatting with other users, accessing the files conveniently through web application which will be supported by any browser.

**5. Future Scope**

There exists a huge scope of using this product and its applications. New and different modules can be added to this product to make it more effective and user friendly. The scope that can be added would be authentication of the users. Authenticating the user would itself allow this product to be used in organizations to share the data and to connect the users with each other for easy communication. Product can be used then in colleges to share the files in the lecture with many students simultaneously.

The accuracy of the connections and the load can be balanced and increased as the number of users will increase.

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