INTERNATIONAL JOURNAL OF TECHNO-ENGINEERING
IJTE

ISSN: 2057-5688

Access and Manage the Android Files Via Local Server Wirelessly

[1]Mrs. M SRIMATHI, [2]G CHANDRASHEKAR, [3]SK REHMAN, [4]T AKSHAYA,

[1]Assistant Professor, Dept.of CSE, Teegala Krishna Reddy Engineering College, Meerpet, Hyderabad,

srimathi.marella@gmail.com

[2,3,4]BTech Student, Dept.of CSE, Teegala Krishna Reddy Engineering College, Meerpet, Hyderabad

gundlachandrashekar9@gmail.com, rehman.b2001@gmail.com,
akshayathummanapally630@gmail.com

Abstract: *Now a days successful functioning of computer networks is important. For that network management systems are very much important. This paper describes the method by using which a LAN network can be controlled by a user with the help of android application. Accessing and managing the android files via data cables and some third-party apps are commonly seen in these days (one to one). But when it comes to connect the same phone with multiple devices simultaneously for accessing and managing files, we came up with an idea to implement using local server. For this we need to develop an android application for establishing the server and a web page for accessing the device(phone). Once the server is established it gives us an URL, using this URL we can access and manage the phones data with other devices by pasting the URL in the browser. So, all the devices that wants to access the phone should be connected to the same network. Using this the users can simultaneously copy files from one device to many devices and can also upload the data to phone (server established phone).*

Keywords: *Wireless communication, android application, smart phone*

I. INTRODUCTION

The project "Access and Manage the Android Files Via Local Server Wirelessly" focuses on providing a convenient and efficient way to control an Android device using a web browser over the same network. With the increasing dependency on smartphones and the need for

ISSN: 2057-5688

seamless device management, this project aims to bridge the gap between the convenience of a web browser interface and the capabilities of an Android phone. Traditionally, managing an Android phone required direct physical interaction with the device or using specialized software installed on a computer. However, this project introduces a wireless solution that allows users to access and control their Android devices using a web browser on any computer connected to the same network. We can access and manage the android device files with multiple devices simultaneously and all the devices should connect to the same network and this doesn't require internet for file transferring with multiple devices By leveraging technologies like the Android Debug Bridge (ADB) over Wi-Fi, users can remotely access and manage their Android phones from the comfort of their web browser interface. This eliminates the need for a physical connection, providing flexibility and convenience for tasks such as transferring files and more. The most direct way for transferring files between an android and laptop requires a data cable. File transfer between two android devices requires Bluetooth, which is slow, or file transfer apps that is required to be present on both the device. Also, file transfer between an iOS and an Android is simply not possible due to the restriction of the iOS. This restriction between devices with different Operating Systems creates a problem for file sharing. To resolve these problems occurred during sharing of files, we have made an application that is required only on the host device that is running android. On the host device the app would basically contain a modified web server that would be able to access the files present on the host device. The web server will access all the files present on the host device and display it on a web page as links. To connect to the webserver, we would be using Wi-Fi network. These days Wi-Fi networks are easily available. Even if a network is not available, Android

ISSN: 2057-5688

devices come equipped with hotspot facility to create its own Wi-Fi network.

In recent years the world is pervaded by computer operated devices. Use of mobile phone is frequent in day-to-day life. The objective of the project is to give the details about the computers in network to the administrator, so he will be able to view and monitor all the machines in the network. In our project a network of computers connected together is formed. This network is monitored by a central server. This is identical to the typical client-server architecture. This server is connected to an android based smart phone. The machines connected in the network will act as client and the mobile phone will act as administrator of the network. All the monitoring will be done through the android app installed in mobile only. Administrator will monitor all the ongoing activities in the network with the help of server only

II. LITERATURE SURVEY

Han et al. (2013) This research paper proposes a web-based smartphone remote control system that allows users to access and control their smartphones through a web browser. It discusses the architecture, implementation, and security aspects of the system, highlighting the benefits of remote smartphone management.

Pirzada et al. (2016) The paper presents a framework for web-based remote access and control of mobile devices. It discusses the system architecture, design considerations, and implementation details. It also explores the challenges and potential applications of such a system in the context of mobile device management.

Rault et al. (2015) This paper proposes a remote mobile device management system using web technologies. It discusses the architecture, components, and features of the system, including remote file access, remote control, and remote data transfer. The paper also evaluates the performance and usability of the system through experiments.

Song et al.(2015) The paper focuses on remote access to Android devices for

ISSN: 2057-5688

software development and testing purposes. It discusses the challenges faced by developers in accessing physical devices and presents a solution using web-based remote access. It also presents a case study and performance evaluation of the proposed system.

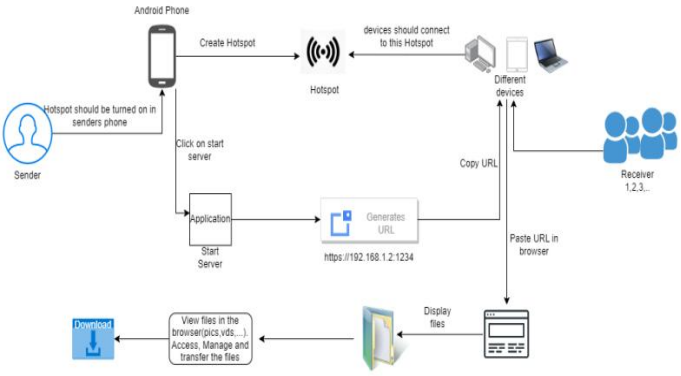
Le et al. (2014) This article introduces a web-based remote-control system for Android smartphones, allowing users to access and control their devices through a web browser. It discusses the system architecture, user interface design, and security considerations. The article also highlights the potential applications and benefits of remote smartphone control.

Ngo et al. (2017) The paper addresses the challenges of secure remote management of mobile devices. It discusses the security issues associated with remote access and control and proposes a secure architecture for managing mobile devices remotely. It also presents a prototype implementation and evaluates its security effectiveness.

y Zhang et al. (2017) This research paper presents a web-based smartphone remote access system that aims to enhance user interaction with smartphones. It discusses the system architecture, user interface design, and implementation details. The paper also evaluates the system's performance and user satisfaction through user studies.

III. PROPOSED SYSTEM

The goal of this project is to develop a system that allows users to access and manage their Android phone's files from a web browser on the same network. The system should provide a user-friendly interface, enabling users to perform various tasks remotely, such as browsing files, and streaming videos, songs and etc.



ISSN: 2057-5688

Fig.1 Proposed system architecture

System architecture is a high-level structure of a system, which describes the relationships and interactions between the components of a system. It is a conceptual model that defines the structure, behavior, and more views of a system. In a project, the system architecture serves as a blueprint for the design and development of the system. It helps the project team to understand the overall structure of the system and how the different components will work together to achieve the desired functionality.

IV. IMPLEMENTATION

Set up a local server:

Create a local server on the same network as the Android phone and the computer running the web browser. use technologies like Node.js or Python's Flask to set up a lightweight web server.

Develop an Android application:

Create an Android application that acts as a server on the Android phone. This application should expose a set of APIs that allow the web browser to access and manage files on the phone. Use frameworks like Retrofit or OkHttp to handle network requests and interact with the file system on the Android device.

Create a web-based user interface:

Develop a web-based user interface using HTML, CSS, and JavaScript. The interface should provide a user-friendly way to browse and manage files on the Android phone. Use AJAX or fetch API to communicate with the Android application's APIs and retrieve file information.

Implement authentication and security:

Implement a secure authentication mechanism to ensure that only authorized users can access and manage files on the Android phone. You can use token-based authentication or session-based authentication. Additionally, enforce secure communication using HTTPS to

ISSN: 2057-5688

protect data transfer between the web browser and the Android application.

Implement file operations:

Implement file operations such as file listing, downloading, uploading, renaming, moving, and deleting within the Android application's APIs. Handle these operations by interacting with the Android file system using appropriate APIs provided by the Android platform. **Handle file uploads:**

Allow users to upload files from the web browser to the Android phone. Implement the necessary APIs in the Android application to receive file uploads, validate file types and sizes, and save the uploaded files to the appropriate location on the device. Provide file preview and thumbnail generation: Implement mechanisms to generate file previews and thumbnails for supported file types. This can be achieved using libraries or APIs specific to the file types, such as generating image thumbnails or using PDF rendering libraries for document previews.

Enable file synchronization:

Implement a synchronization mechanism between the web browser and the Android phone to keep files up-to-date on both platforms. This can be achieved by periodically checking for changes on either platform and synchronizing the files accordingly.

Test and optimize:

Thoroughly test the system to ensure its functionality, performance, and compatibility across different web browsers and Android devices. Optimize the system for efficient file transfer and management, considering factors such as network latency, file size, and user experience. **Deploy and maintain:**

Deploy the system on the local server and ensure it is accessible to users on the same network. Continuously maintain and update the system to address any security vulnerabilities, improve performance, and incorporate new features based on user feedback and requirements

V. RESULTS

INTERNATIONAL JOURNAL OF TECHNO-ENGINEERING
IJTE
ISSN: 2057-5688

Fig.2 User Interface of Web Server Creation Application

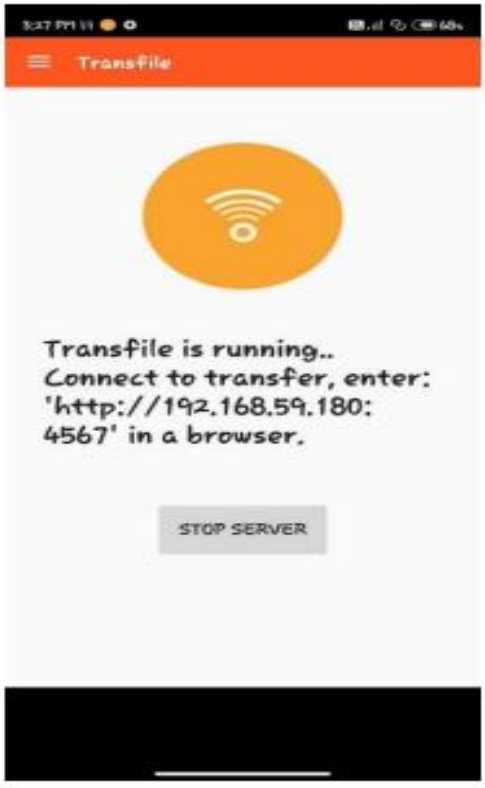


Fig.3 Starting Server gives URL

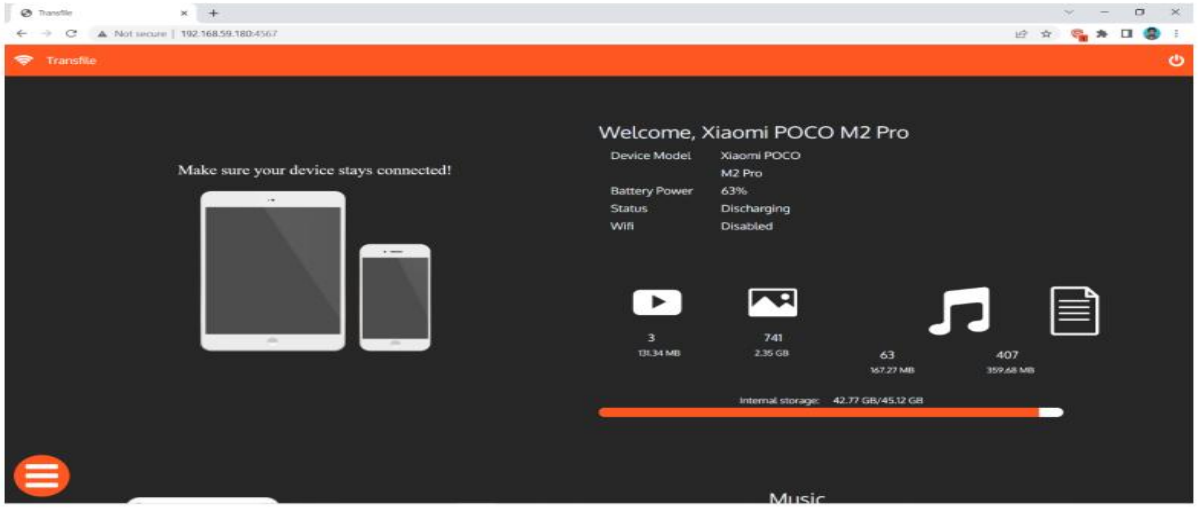


Fig.4 Web Page Interface of Host Device

INTERNATIONAL JOURNAL OF TECHNO-ENGINEERING
IJTE
ISSN: 2057-5688

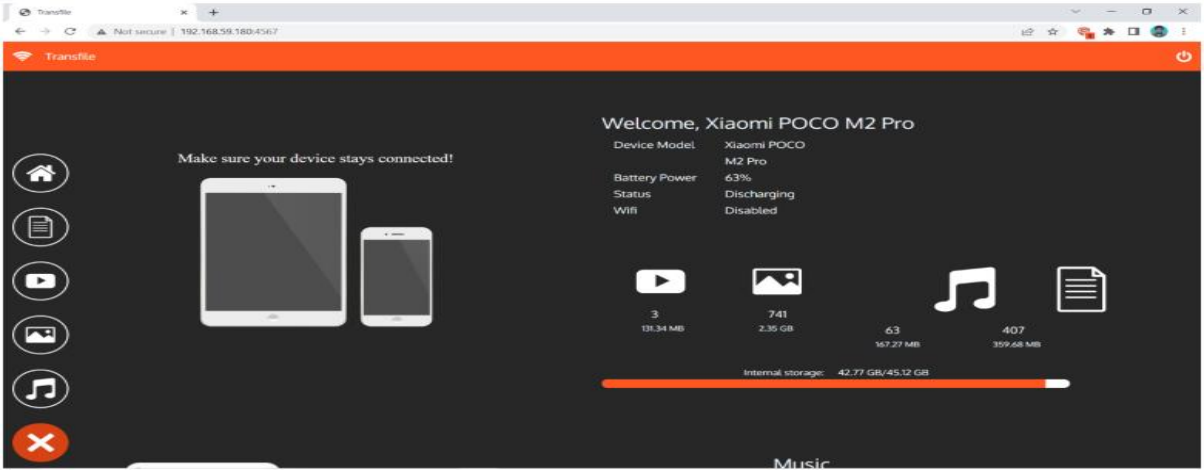


Fig.5 Information of Host device

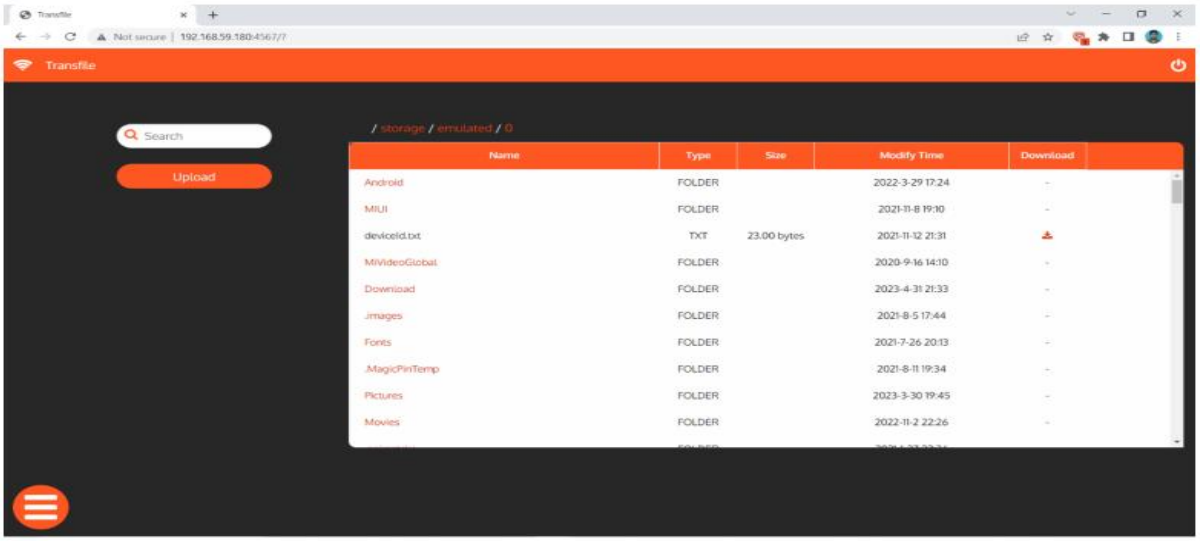
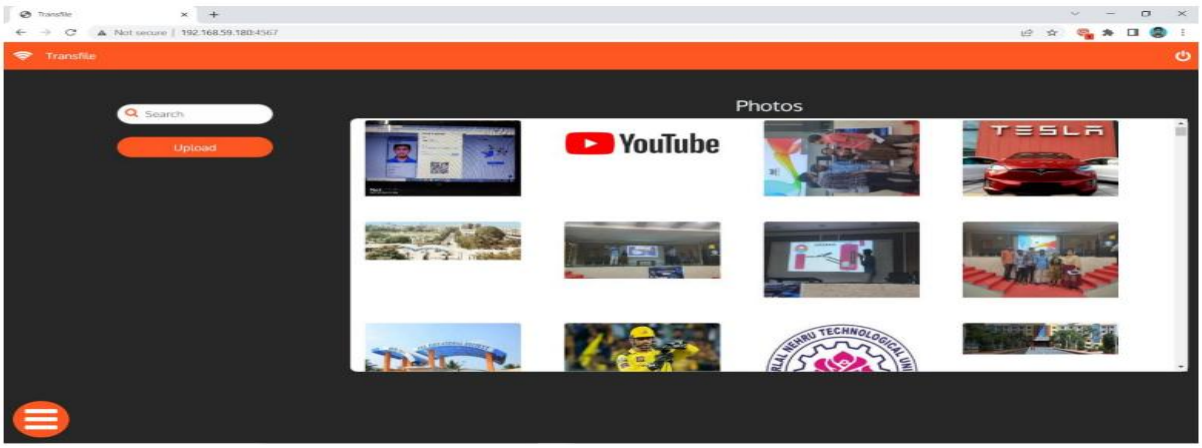


Fig.5 All File Directories of Host Device



INTERNATIONAL JOURNAL OF TECHNO-ENGINEERING
IJTE
ISSN: 2057-5688

Fig.6 Photos of Host Device

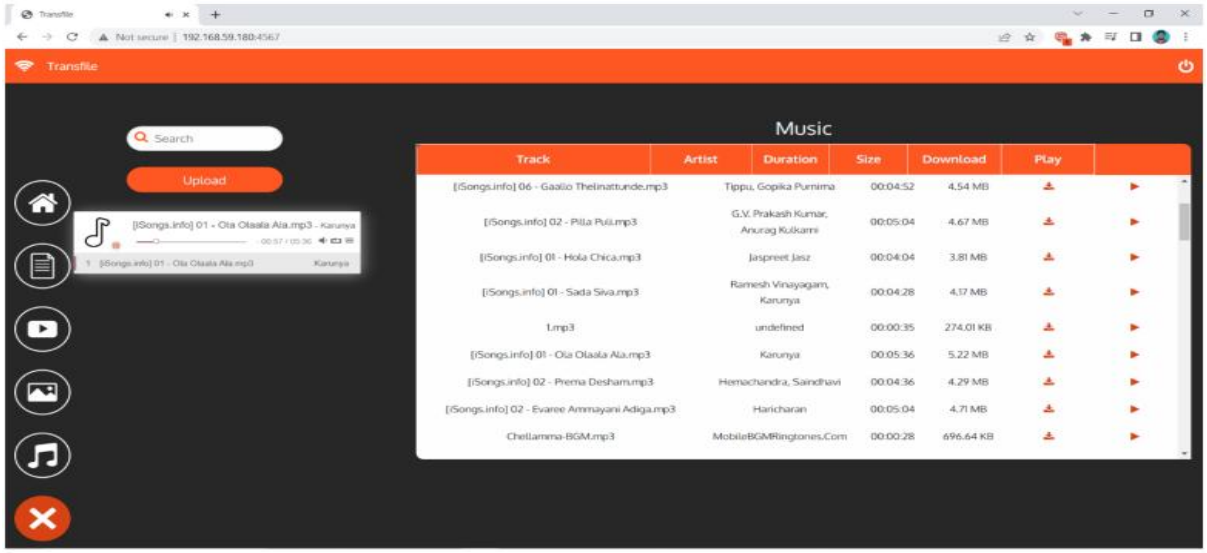


Fig.7 : Streaming Audio from Host Device

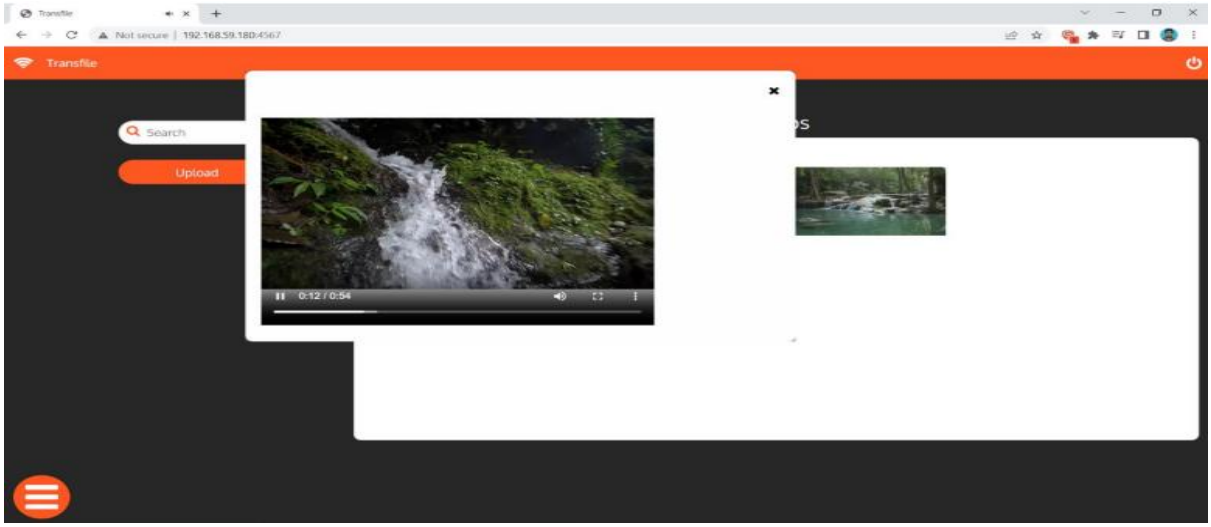


Fig.8 Streaming from hosted device

INTERNATIONAL JOURNAL OF TECHNO-ENGINEERING
IJTE
ISSN: 2057-5688

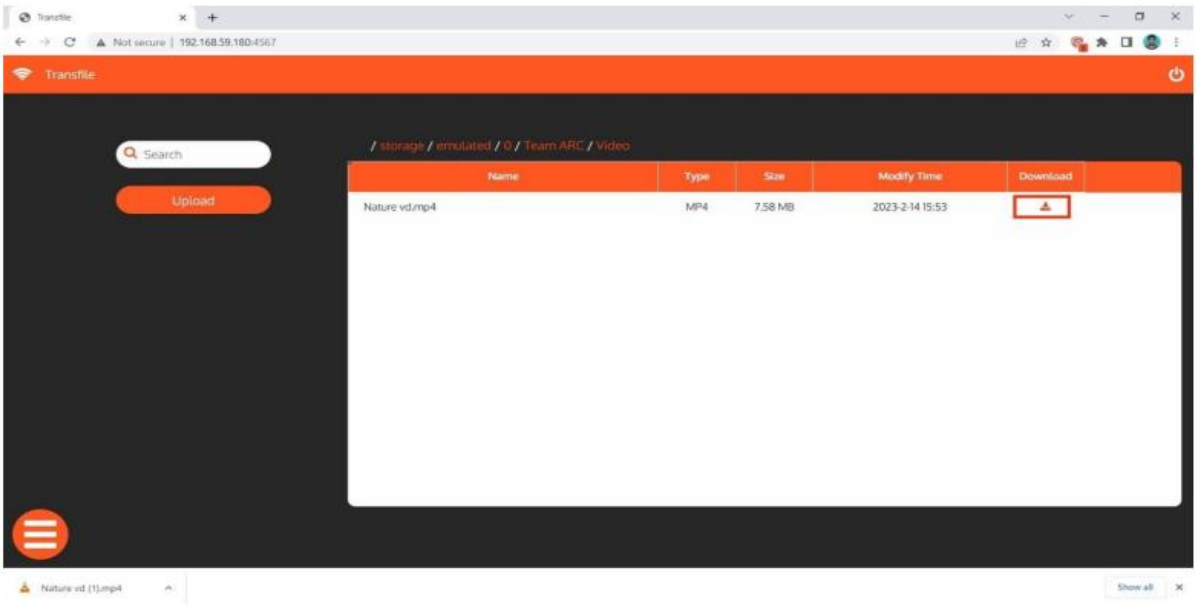


Fig.9 Downloading Files from Host device

VI. CONCLUSION

In conclusion, the project "Access and Manage the Android Files Via Local Server Wirelessly" aims to provide users with the convenience of remotely accessing and managing their Android phones files through a web browser on the same network. Throughout the project, various concepts, technologies, and implementation approaches have been explored. By developing a system that enables remote access and control, users can perform tasks such as browsing files, streaming videos and transferring the files between the devices conveniently from their web browser. The project emphasizes the importance of a user-friendly web interface that is responsive across different devices and provides real-time updates between the Android phone and the web application. The literature survey and research papers highlighted the challenges associated with remote device management and proposed solutions using web technologies. Security considerations, including user authentication and data encryption, were identified as crucial elements to protect user privacy and prevent unauthorized access. The project required the development of an

ISSN: 2057-5688

Android application acting as a server on the phone, a web application providing the user interface, and the establishment of a secure communication channel between them. Testing, performance evaluation, and user feedback played essential roles in ensuring the system's functionality, usability, and scalability. In summary, the project "Access and Manage the Android Files Via Local Server Wirelessly" addresses the need for remote smartphone management, allowing users to access and control their Android phones files conveniently through a web browser. The successful implementation of such a system can significantly enhance user experience, productivity, and flexibility when interacting with their devices, ultimately offering a valuable solution in the realm of mobile device management.

REFERENCES

1. Han, D., Lee, H., & Kim, H. (2013). Web-based Smartphone Remote Control System. 2013 Ninth International Conference on Intelligent Information Hiding and Multimedia Signal Processing (IIH-MSP), 267-270.

2. Pirzada, A. A., Siddiqui, M. S., & Ahmed, S. (2016). Web-based Remote Access and Control of Mobile Devices. 2016 International Conference on Innovations in Electrical Engineering and Computational Technologies (ICIEECT), 1-6.

3. Rault, T., Avril, J., & Festor, O. (2015). Remote Mobile Device Management Using Web Technologies. 2015 IFIP/IEEE International Symposium on Integrated Network Management (IM), 1261-1266.

4. Song, M., Lee, D., & Kim, K. (2015). Remote Access to Android Devices for Software Development and Testing. 2015 IEEE International Conference on Consumer Electronics (ICCE), 463-464.

5. Le, M., Truong, T. C., & Pahl, C. (2014). Web-based Remote Control System for Android Smartphones. 2014 IEEE 8th International Symposium on Service Oriented System Engineering (SOSE), 13-20.

ISSN: 2057-5688

6. ABDUL AHAD AFROZ, & Dr Peddi Prasadu. (2022). Enhanced security privacy preservation solution for the for the advanced cloud services. Internation Journal Of Advance Research And Innovative Ideas In Education, 8(3), 5598-5604.

7. Zhang, L., Dong, Y., Zhang, R., & Zhang, X. (2017). Web-based Smartphone Remote Access for Enhanced User Interaction. 2017 10th International Conference on Internet Technology and Applications (iTAP), 299-301

8. Prasadu Peddi (2021), "Deeper Image Segmentation using Lloyd's Algorithm", ZKGINTERNATIONAL, vol 5, issue 2, pp: 1-7.

9. Uday Chandrakant Patkar, Sushas Haribabu Patil and Prasad Peddi, "Translation of English to Ahirani Language", *International Research Journal of Engineering and Technology(IRJET)*, vol. 07, no. 06, June 2020.