A

Report Synopsis

On

"PC Controller Using Android Device"

SUBMITTED TO THE PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, IN PARTIAL FULFILLMENT OF THE

REQUIREMENTS FOR THE AWARD OF

BACHELOR OF TECHNOLOGY

Submitted by

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SVERI's College of Engineering, Pandharpur 2023-2024

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Certificate

This is to certify that the project report entitled "Pc Controller using Android device" is submitted by the partial fulfillment of Bachelor Degree in Computer Science & Engineering as per requirement of Punyashlok Ahilyadevi Holkar Solapur University, Solapur for the academic year 2023-24.

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Acknowledgement

Apart from individual efforts, the success of any project depends largely on the encouragement and guidelines of name others. We take this opportunity to express our gratitude to the people who have been instrumental throughout the project work

It is our privilege to express our gratitude towards our project guide, Prof Mr. A.M. Dyade for her valuable guidance, encouragement, inspiration and whole hearted cooperation throughout the project work. We thank her for being a motivation through all our highs and importantly, our lows

We deeply express our sincere thanks to our Head of Department Prof Dr S P Pawar for encouraging and allowing us to present the project on the topic "Optical Character Recognition and providing us with the necessary facilities to enable us to fulfill our project requirements as best as possible. We take this opportunity to thank all faculty members and staff of the Department of Computer Science & Engineering, who have directly or indirectly helped our project

We pay our respects to honorable Principal Dr. B. P. Ronge Sir for their encouragement. Our thanks and appreciations also go to our family and friends, who have been a source of encouragement and inspiration throughout the duration of the project

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1. Introduction

Nowadays, PC's, Laptop's and all other electronic gadgets are inseparable part of our everyday life. Personal computers are not any longer meant for working purpose, but more and more used for entertainment in people's spare time. This is also applicable to the mobile phones, which have transformed into multifunctional devices with almost same features as computer's have.

Smartphone's are common and commercially used device all over the world, user-friendly interface and lots of features such as Wi-Fi, Internet access, Bluetooth, Camera, Video recording etc. add-on to the Android smartphone to be popular all over the world with cheap cost. We propose application which is compatible and useful in both the areas, the aim is to utilize provided hardware features from smartphone devices along with various useful libraries from Android API. As a result, an application combining different pointing devices is created.

The connection of a smartphone with the Laptop is established wirelessly via Wi-Fi, for desktop an external modem is used to have a Wi-Fi connection. One of the most widely used mobile OS these days is Android. Android comprise not only operating system but also middleware and key applications. Android Inc was founded by Andy Rubin, Rich Miner, Nick Sears and Chris White at Palo Alto of California, U.S. in2003.Later Android Inc was acquired by Google in2005. After original release there have been number of updates in original version of Android.

There was a Need for a App that Not only Solve the Issue but also Give User a Single Platform for all their sharing Need. A all in one app to solve the issues of the user for file sharing and controlling pc. It uses latest WiFi Hotspot Technology to send and receive the Files with the application, you do not have to worry about the file format you want to transfer as well. many applications only allow you to transfer data of a specific format. We using compression algorithm for sharing larger files.

2. Literature Survey

[1] In this paper Lingyan Bi et al.proposed a novel method to Design a Android based Remote Control System e with JNI Interface for providing convenience for the user. Michael Spreitzenbarth et al.

[2] In this paper proposed analysis based Smartphone Mobile Malware for forensic Analyses. Xinfang Lee, et al..

[3] In this paper presented a novel Android based Forensic System. Enck, W et al.

[4] In this paper proposed a secure Android Remote controlling mechanism for performing secure transaction form the Remote location. T. Richardson et al.

[5] In this paper proposed a novel method of Internet based Android application to demonstrate working of Internet Computing.

The growing popularity and spread of smart phones has changed the design of computer systems as they were known in recent years. Technological developments have enabled the creation of mobile devices with technical features previously only conceived in PC architectures or similar devices.

3]Proposed System

The existing systems are potentially good system which allows us to remotely connect to the machine and access their respective desktops. But they have some limitations. They are listed below

 1. One of the application is based on central server, where client and server are connected to the central server. Here the application area is executed on central server. Because of this, the speed of operation is low and the whole system is depends on central server.

2. Another application is controlling desktop from a android phone. But the system uses RFB protocol which is slow protocol. Because of this working of this application is slow. So because of this drawback we are concentrating on proposed architecture.

The Proposed System is based on JAVA Socket Mechanism

The Java Sockets can be used in every system that has Java Virtual Machine, which uses **TCP/IP** protocol. The Android application will have a Server Socket running and awaiting client requests. On the other hand, clients will have Java client sockets that will open communication with the server and will exchange messages with the server until the connection is closed

The data is transferred through streams. You can read data from input stream and write data from output stream on the other hand

Android device will send the corresponding string according to the different events, the next the server will parse the string and call the corresponding operation
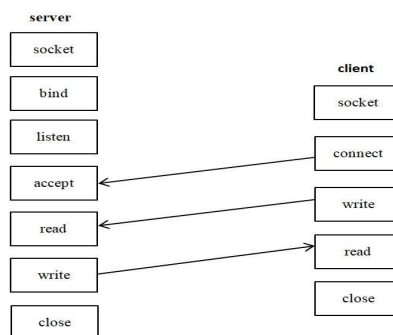
4]Advantages

1. **Eliminate need of hardware:** The use of wireless pc control android app eliminate need of carry wireless hardware such as mousekeyboard.
2. **Accessibility:** You can easily connect app with less efforts and faster setup. No need to pair and connect device to pc and laptop every time.
3. **Real Time performance:** The our app is using wifi basedcommunication that makes low latency and almost 0 latency toperform actions which provides smoother experience to user.
4. **Integration with Existing System:** The project can be integrated with existing system no need to setup new hardware or systems.
5. **User Friendly Interface:** The development of an intuitive user interface ensures that the system is accessible and easy to use for individuals.

Disadvantage

1. Battery Consumption: Running a remote mouse control app on your Android device can consume more battery compared to regular usage. Constantly transmitting touch gestures and maintaining a network connection can drain your device's battery more quickly.

2. Sensitivity Adjustments: Adjusting the sensitivity and responsiveness of the virtual mouse might be more limited compared to the fine-tuning options available with dedicated computer mice.3. Problem Statement

5]Problem statement

To create android app that establish connection between laptop, computer and android device using wifi and use android smartphones touchpad as mouse andphone as wireless keyboard and sharing large files from android to desktop with compression techniques

Objectives and Scope

1. Touch-screen mouse control with two onscreen mouse buttons.

2. Use in either portrait or landscape mode.

3. Works with any Wi-Fi network

4. Keyboard typing capability.

5. Operating computer functionality and handling and modification capability.

6. Support any Android operating system version.

7. Compatible with Mac, Windows and Linux operating systems.

8. Voice typing mechanism, on voice commands all the typing is done in desktop/laptop.

9. It can be used for showing live coding demo.

10. Share files wirelessly from mobile device to pc

6]Methodology

Proposed system can be modelled in two parts server side application (Desktops/Laptops) developed using Java programming language and Client side application (Android phone) which is to be developed in android sdk. To establish connection between both the devices wirelessly Wi-Fi connection technology is used, in which information and commands are transfer in the form of packets, connection is established using IP address of Desktop/Laptops network interface card (NIC)

Android phone and Laptop/PC is interacting with each other via Wi-Fi, the flow of information is exchanged between both the devices, in which actions and commands are translated on both the side and information is transferred in the form of bundles (Packets).

Mobile client application is required to install on Android phone.
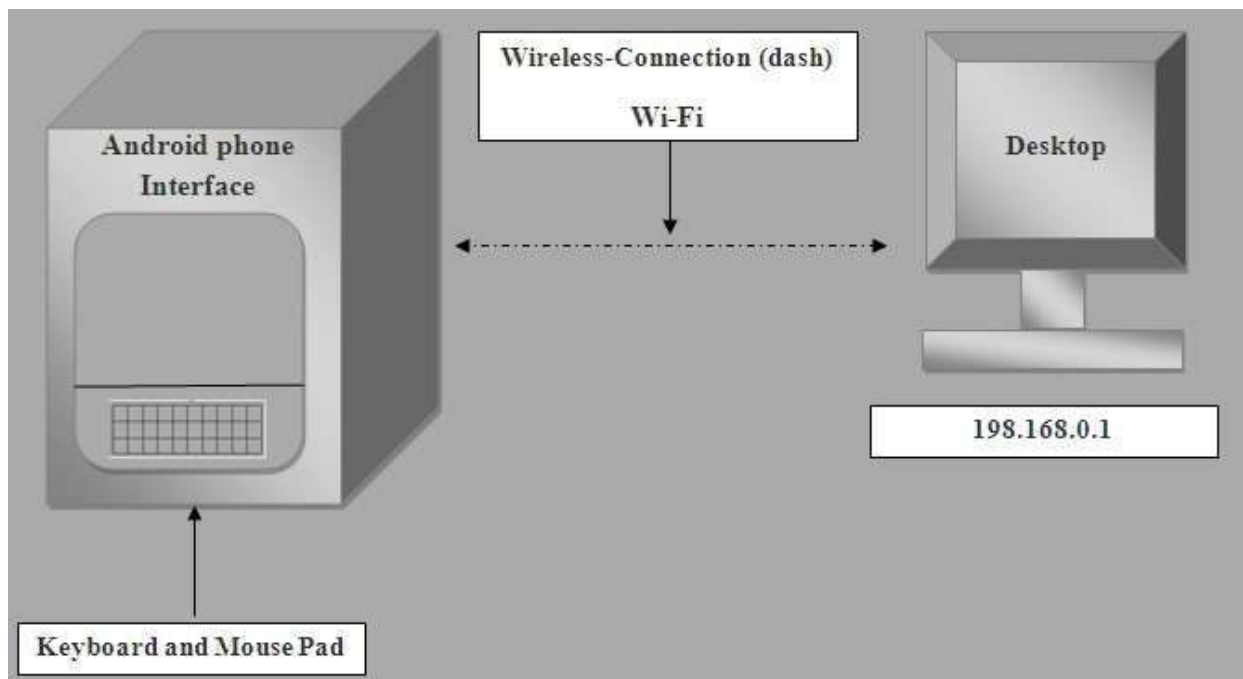
Creating Server

It will automatically search for a server uses IP address to connect your Android phone to your computer or Laptop or Desktop. The devices must be connected to the same Wireless network. Once the devices are connected, you can open the file browser from your Android phone and start controlling from mobile. For more controls, you need to bring up the virtual keyboard by tapping on the keyboard icon. Pushing a button on a remote control sets in motion a series of events that causes the controlled device to carry out a command
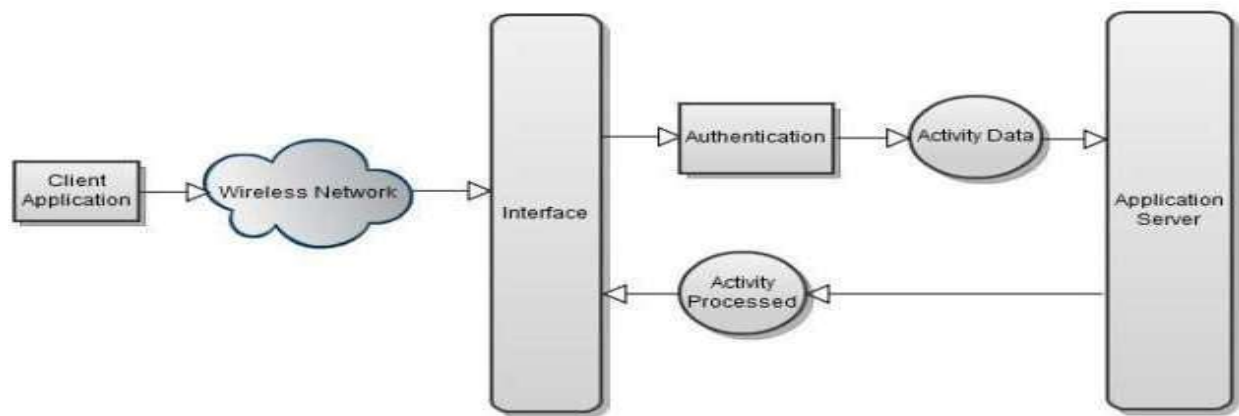
Server application flow diagram

Android application

When the remote control is run, and it follows the path shown on the figure below. After application starts, the embedded java application server is runs in parallel. Sound notification is implemented in the proposed application so as to let users being aware that their IP address. so it has been validated and the user can proceed with the application
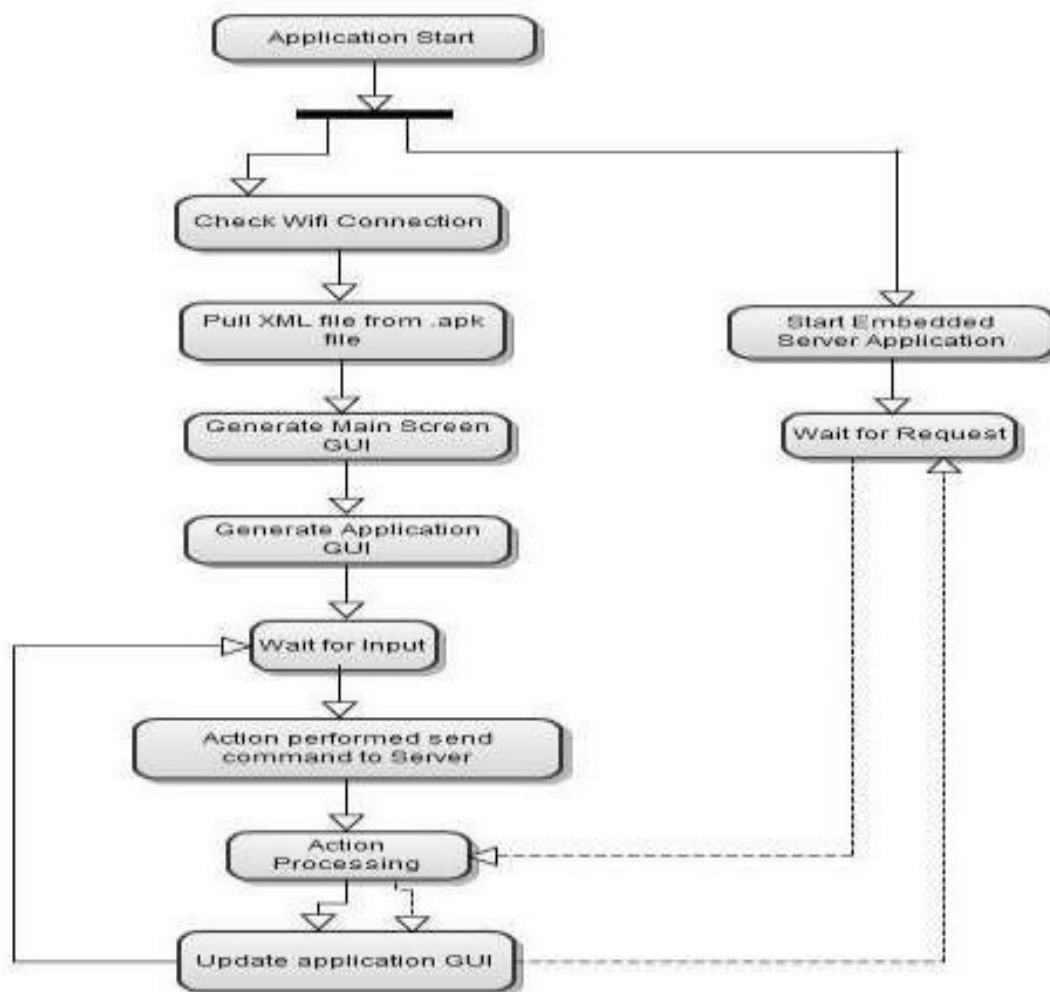
7] Conclusion

This project explores the possibility of controlling the computer remotely using an Android phone device. The proposed prototype is able to control a lot of operations a normal computer keyboard and mouse would perform. It practically turns a mobile phone into a wireless keyboard and mouse using a wireless network via a portable mobile device running under an Android Platform Operating System. It helps mobile phone users on facilitating their work in study life, home life or working life, where the use of the prototype helps in easing the device control. It is proven that this project would relieve a pain in the neck and also the normal back ache due to constantly sitting at a particular place. With the help of this prototype, these stressful moments will be minimized as users will be having a very relaxed position as intended. This is a convenient application for simple operations and for manipulating such computer without the keyboard and mouse been connected.

4. References:

[1] Lingyan Bi, Weining Wang, Haobin Zhong, Wenxuan Liu, "Design and Application of Remote Control System Using Mobile Phone with JNI Interface", The 2008 International Conference of Embedded Software and Systems Symposia (ICESS2008), pp.416-419.2008

[2] Michael Spreitzenbarth, "Tools and processes for Forensic Analyses of smartphones and Mobile Malware", 6. GI FG SIDAR Graduierten (2011)https://www.irjet.net/archives/V7/i5/IRJET-V7I5915.pdf

[3] Xinfang Lee, Chunghuang Yang, Shihjen Chen, Jainshing Wu, "Design and Implementation of Forensic System in Android Smart Phone", the 5th Joint Workshop on Information Security, 2009

[4] Enck, W., Ongtang, M., McDaniel, P., "Understanding Android Security", Security & Privacy, IEEE, Jan.-Feb. 2009, Volume 7, Issue 1, pp.50-57 [5]T. Richardson, Q. Staford-Fraser, K. Wood and A. Hooper, \Virtual networking computing", Internet Computing, Vol. 2, No. 1, pp.33-38, 1998

[5] www.w3school.com

[6] https://chat.openai.com/

[7] www.geeksforgeeks.com

Declaration

We the undersigned have submitted the Synopsis report for the proposed Project work entitled "**Pc Control and Secure File sharing using Compression Technique".** We declare that we have submitted the Synopsis report after through Study& it is not copied from any other source.

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