A Report on

"Pc Remote Controller And File Sharing"

Submitted by :

Mr.Atharv Miind Davale	PRN : 2020032500183191
Mr.Rushikesh Rajesh Waghule	PRN :2020032500186525
Mr.Digvijay Sambhaji Shinde	PRN : :2020032500185166
Mr.Abhijeet Balkrishna Surshetwar	PRN : :2020032500183392
Mr.Amrut Yoesh Virdhe	PRN : :2020032500185916

UNDER THE GUIDANCE OF

Mr.A.M.Dyade

in partial fulfilment for the award of the degree

of

BACHELOR OF TECHNOLOGY

IN

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

at

SHRI VITHAL EDUCATION AND RESEARCH INSTITUTESs,

College of Engineering, Pandharpur

Affiliated to Punyashlok Ahilyadevi Holkar Solapur University, Solapur

2023-2024

SVERI's COLLEGE OF ENGINEERING , PANDHARPUR

CERTIFICATE

This is to certify that the project report entitled "PC Remote Controller and File sharing" is submitted for partial fulfillment of Bachelor Degree in Computer Science And Engi neering as per requirement of Punyashlok Ahilyadevi Holkar Solapur University, Solapur for the academic year 2023-2024.

(Mr.A.M.DYADE)
Project Guide

(Mr.P.D.MANE)
Project Coordinator

(Dr.S.P.PAWAR)
(HOD , CSE)

Dr.B.P.RONGE
PRINCIPAL

EXTERNAL EXAMINAR

Acknowledgement

We are pleased to acknowledge **Dr.S.P.PAWAR** (HOD CSE) for her valuable guidance during the course of this project work . We extend our sincere thanks to **Dr.P.D.MANE** who continously helped us throughout the project and without his guidence , this project would have been an uphill task

We are also grateful to other members of the CSE faculty members and technical staff who cooperated with us regarding some issues

Last but not the least , Ms.T.A.Dhumal supervisor of Project Lab and Mr.P.D.Mane supervisor of Database Lab as the case may be for project sessions , also cooperated with us nicely for the smooth development of thid project . I would also like to thank my parents and friends who helped me a lot in executing this project within the limited time frame .

Signature :

Mr.Atharv Milind Davale	**Sign :.....)**
Mr.Rushikesh Rajesh Waghule	**Sign :.....)**
Mr.Digvijay Sambhaji shinde	**Sign :.....)**
Mr.Abhijeet Balkrishna Surshetwar	**Sign :.....)**
Mr.Amrut Yogesh Virdhe	**Sign :.....)**

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Chapter 1

INTRODUCTION

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. An 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.

Chapter 2

Research Paper

In the scope of remote control there are several projects and initiatives designed to allow remote control between devices. Although most of the architectures have the objective of control remotely PCs

[**1**] For Instance we have one software Gmote : This is an Android remote application that is used to control a VideoLan Client (also known as VLC) media player, with basic choices such as play, pause, stop, forward track and backward track.However, this remote application has its limitation in controlling one program. It is separated into 4 parts:

. GmoteClient: An android application that is installed on a phone.

. GmoteServer: A server application that is installed on a user's computer. It receives commands from the GmoteClient and executes those functions by interacting with different parts of the computer, such as the file system or a media player.

. GmoteCommon: Stores files that are common to both the gmote client and server. This includes a set of Serializable objects that get exchanged between two to facilitate communication. Important: Since this code is shared, it must only use language features that are compatible with both the Android SDK and a java SDK

[**2**] Remote mouse android application use a client-server architecture and specific communication protocols. Client-Server Architecture: **1**] Client (Android Device) **2**] Server (Computer) . Remote Control Protocol use Proprietary standardized remote control protocol . Communication between Android client and the computer server

typically uses TCP/IP protocol. Commands such as mouse movements and keyboards are encoded and sent from client to server. Server decodes that commands and executes corresponding action

[**3**] Gonzalez Villan project is all about an Android application for Remote Desktop Control. ADB (Android Debug Bridge) is configured on the device then it provides service of server for communication with this protocol. Android Debug Bridge is used mostly for communication between targeted PC and Android mobile. The communication between client and server using the RFB protocol consists of Handshake, initialization, and Normal interaction The ADB protocol can be transported over USB or over Wi-Fi through TCP. It uses a client-server architecture. There are two different protocols in use. The first is between the client and the server and the second is between the server and the daemon. The daemon is facilitated by the Android USB framework.

The communication mode between the client and server is a TCP socket. The server listens on a port, to which the client has to send a request. The request contains a 4-byte initial field in ASCII and a payload. The payload starts with the word host, to indicate it should be sent to the server. The server can then reply with OKAY or FAIL to indicate the status, combined with an optional payload and length.

The messages sent from the server consist of a 24-byte long header, with the following fields:

. Command
. First argument
. Second argument
. Length of the payload, 0 or higher
. CRC-32 of the data payload
. Magic value, calculated through command XOR 0xFFFFFFFF For ADB USB Debugging is required and Connection is depend upon drivers. The ADB is Command Line Tool which have complexity

[4]H.Kawashima-In this paper aim at the adoption of desktop virtualization and developed a web-based interface following the cloud computing concept. In this they implemented a sketch of clientless remote desktop based on Google Web Toolkit framework. The remote desktop can be accessed from any OS platform through any HTML5 compliant browser. They plan to reduce the communication overhead in the cloud. It Uses : **1**] RDP (Remote Desktop Access)-It is windows based protocol and Developed by Microsoft **2**] VNC (Virtual Network Computing)-It is an Open source protocol that allows remote control desktop.

[5] VNC -: The most popular system designed to perform remote control of devices is Virtual Networking Computing. There are a large number of implementations to this solution including applied to Android software stack. It has an open protocol VNC System is based on RFB(Remote Frame Buffer) which transmits all information The VNC system is compound by a server side and some thin clients that connect remotely to the server and send requests to the server to retrieve updates of the remote controlled device. The limiting factor of bandwidth is a problem due to the amount of that that is sent, above all because of the latency in the network

Chapter 3

LITERATURE SURVEY

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.

Chapter 4

SYSTEM ANALYSIS AND DESIGN

3 System Analysis And Design

3.1 Requirement Specification

i)Mobile Platform : Android
ii) Application development framework : Android (Android Studio)
iii) Developing language : JAVA
iv) User Interface Language: XML
v)Android API level : 10 and above
vi) Wireless Communication Medium : WIFI

Chapter 5

METHODOLOGY

4 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.

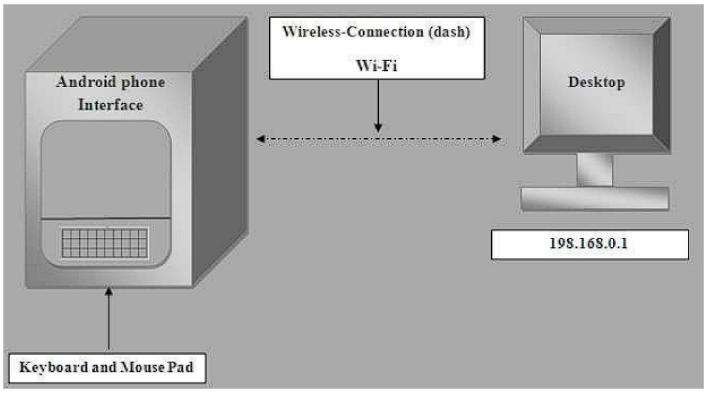

Figure 1: Code page -1

i) 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

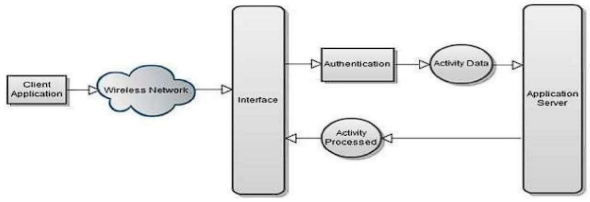

Figure 2: Server Application Flow Diagram

ii) 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

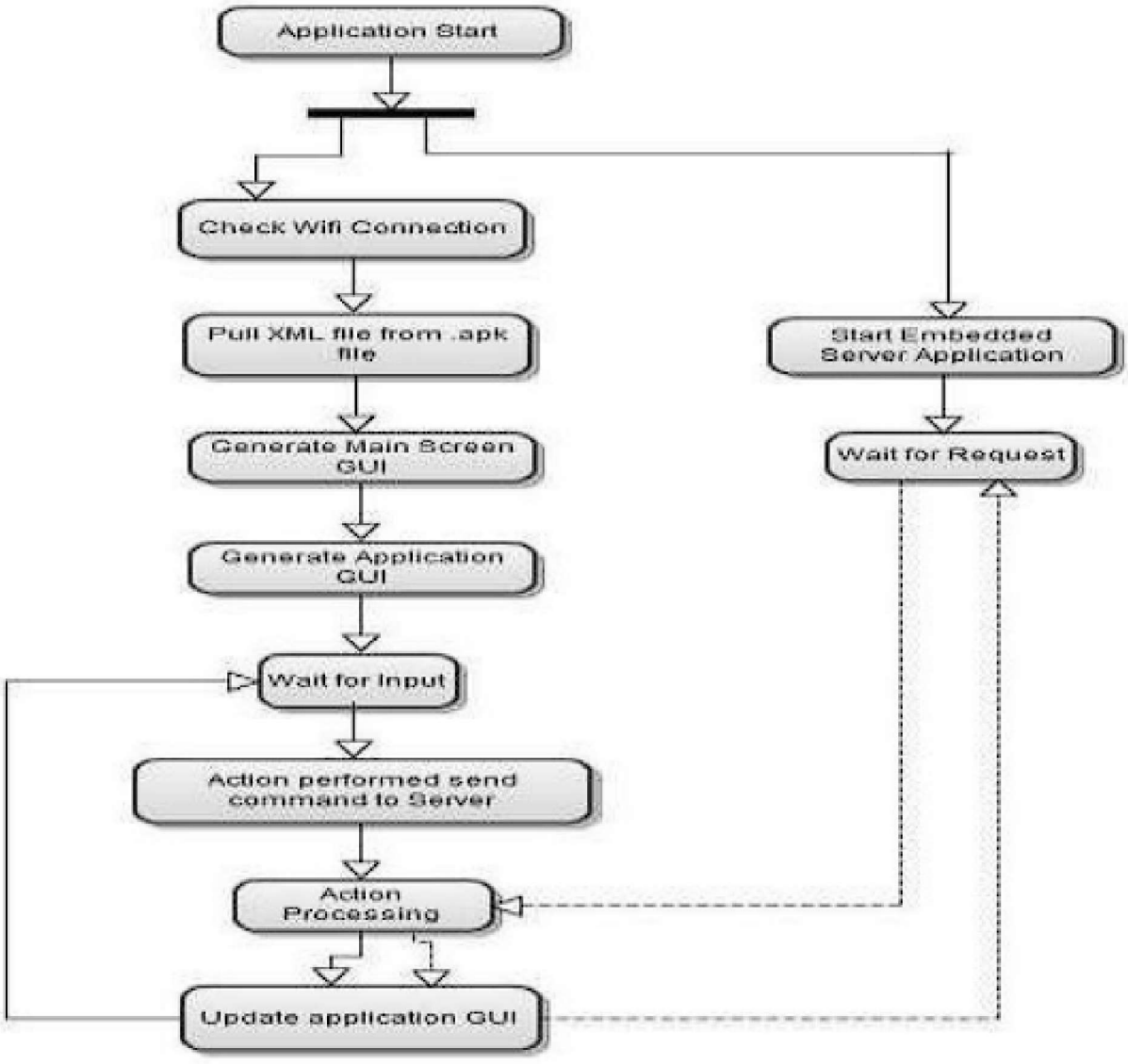
Application Start
Check Wifi Connection
Pull XML file from .apk file
Generate Main Screen GUI
Generate Application GUI
Wait for Input
Action performed send command to Server
Action Processing
Update application GUI
Start Embedded Server Application
Wait for Request

Figure 3:

Chapter 6

EXPERIMENTAL RESULTS / OUTPUTS

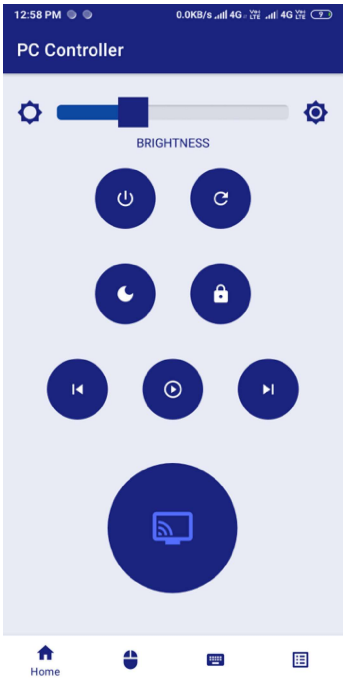

Figure 4: Home Page

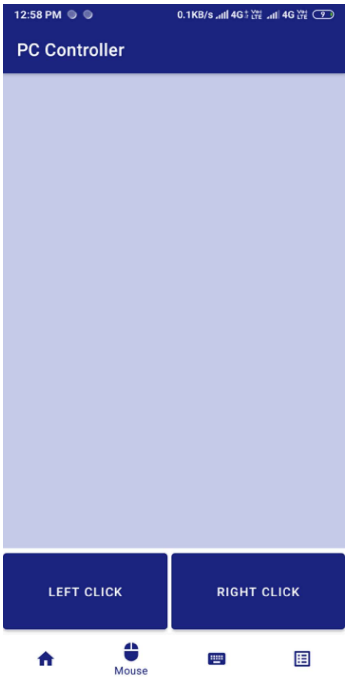

Figure 5: Mouse Page

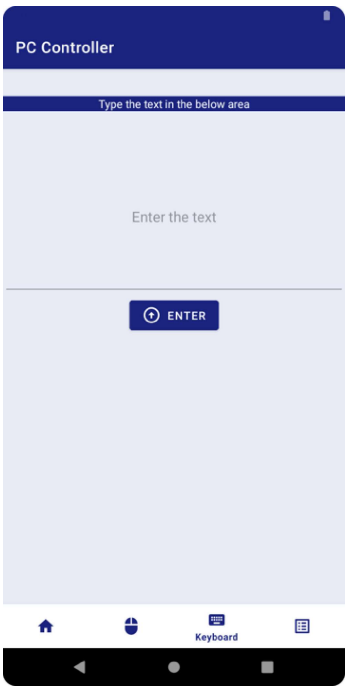

Figure 6: Text Page

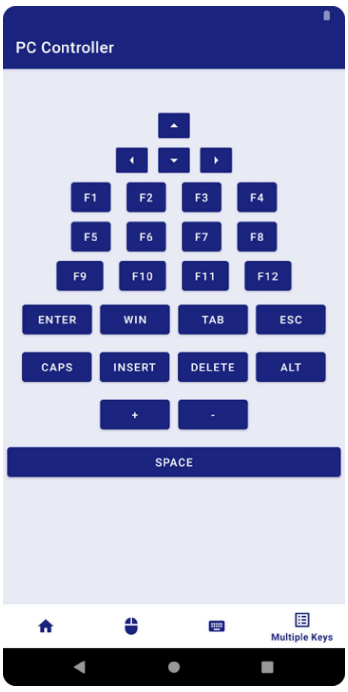

Figure 7: Keys

Chapter 7

CONCLUSION AND FUTURE SCOPE

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.

Chapter 8

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