

A Report on
"PC Controller Using Android device"
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SVERI's COLLEGE OF ENGINEERING , PANDHARPUR

CERTIFICATE

This is to certify that the project report entitled "PC Controller Using Android device" is submitted for partial fulfillment of Bachelor Degree in Computer Science And Engineering as per requirement of Punyashlok Ahilyadevi Holkar Solapur University, Solapur for the academic year 2023-2024.

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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. in 2003. Later Android Inc was acquired by Google in 2005. 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.

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.

3 Problem Statement

To create android app that establish connection between laptops ,computers and android device using wifi and allows use of android smartphones touchpad as mouse and phone as wireless keyboard to control laptops and computers Wirelessly.

Objectives

4 Objectives

- 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) Support any Android operating system version.
- 6) Compatible with Mac, Windows and Linux operating systems.
- 7) it can be used for showing live coding demo.

Advantages

5 Advantages

1. Convenience and Flexibility:

Advantage: Users gain the flexibility to control their PCs from a distance, providing convenience in various scenarios.

Details: Users can remotely manage their computers without being physically present, facilitating tasks such as presentations, media playback, or accessing applications from the comfort of their mobile devices.

2. Cost-Effectiveness:

Advantage: The application offers a cost-effective solution compared to purchasing specialized hardware for remote control.

Details: By leveraging existing Android devices, users can transform their smartphones or tablets into remote control devices without the need for additional expensive hardware components.

3. Versatility in Functionality:

Advantage: The application extends beyond basic remote control, offering features such as file transfer and remote shutdown/restart.

Details: Users can seamlessly transfer files between their Android devices and PCs, enhancing the application's utility. Additionally, the ability to remotely shut down or restart a PC adds to the versatility of the remote control functionalities.

4. Accessibility Across Operating Systems:

Advantage: The application is designed to be compatible with various PC operating systems, including Windows, macOS, and Linux.

Details: Users are not limited to a specific operating system, allowing a broader user base to benefit from the remote control capabilities regardless of their PC platform.

Requirements

6 Requirements

6.1 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

METHODOLOGY

7 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.

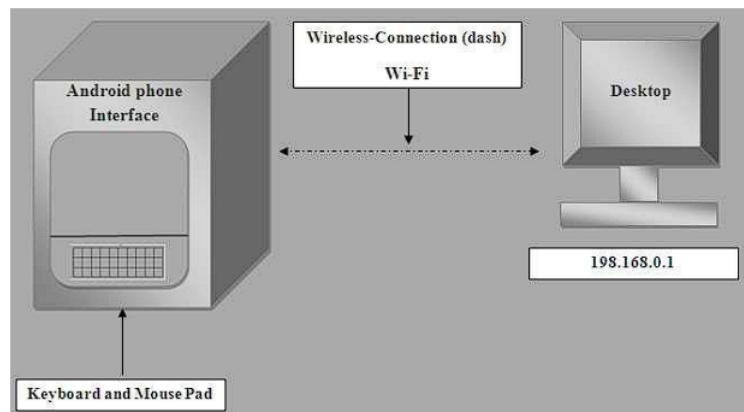


Figure 1: Code page -1

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

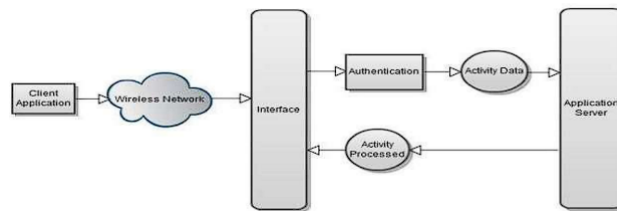


Figure 2: Server Application Flow Diagram

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

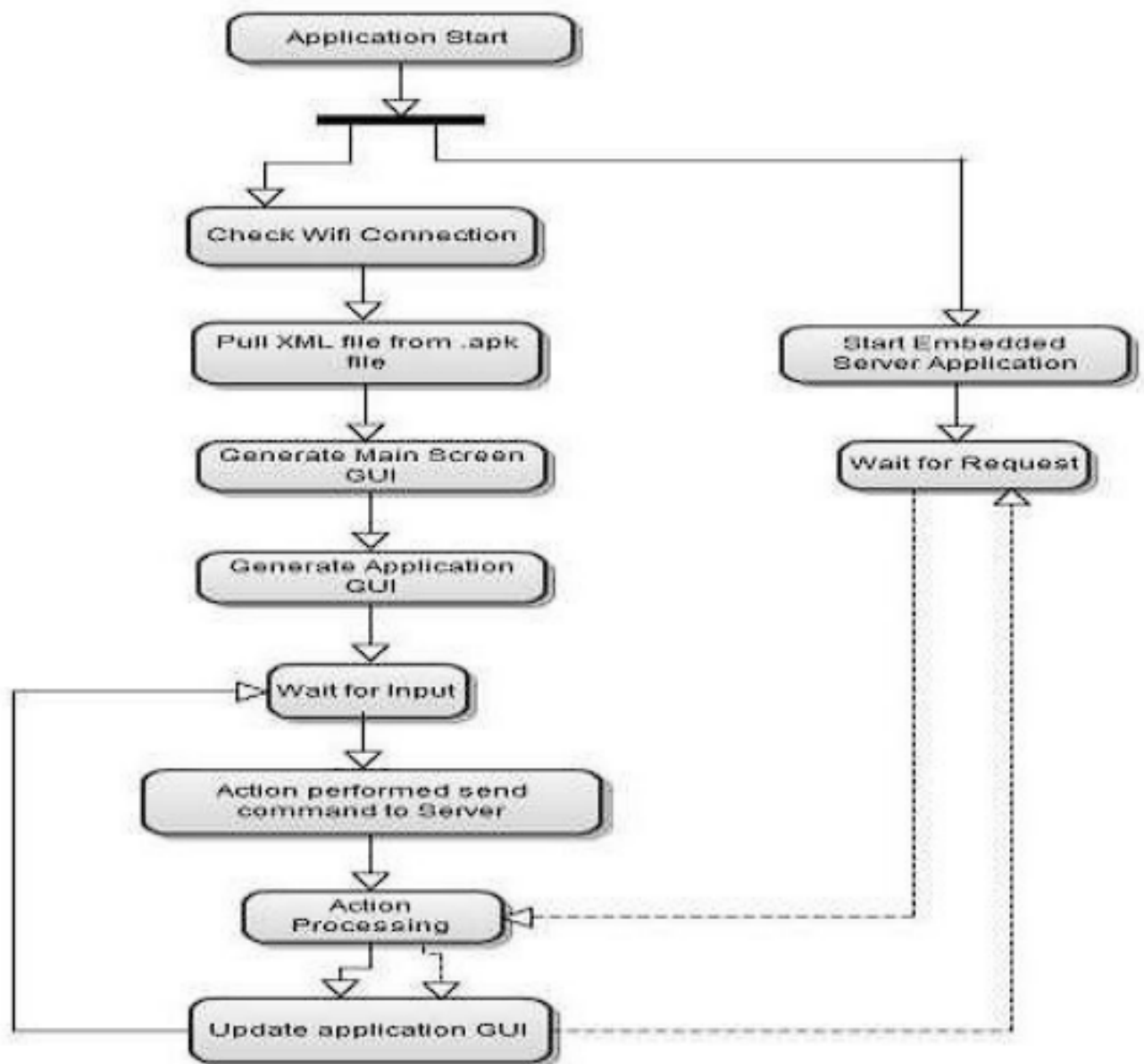


Figure 3:

EXPERIMENTAL RESULTS / OUTPUTS

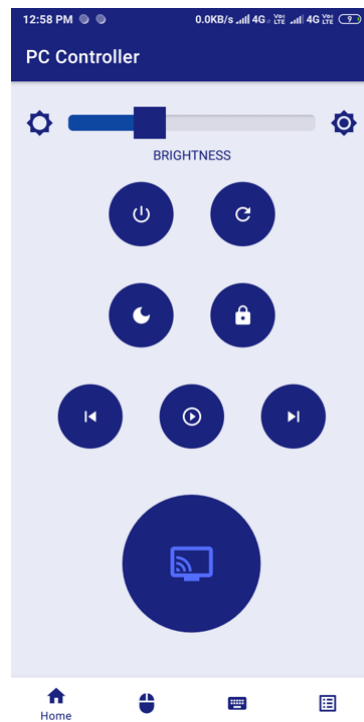


Figure 4: Home Page



Figure 5: Mouse Page

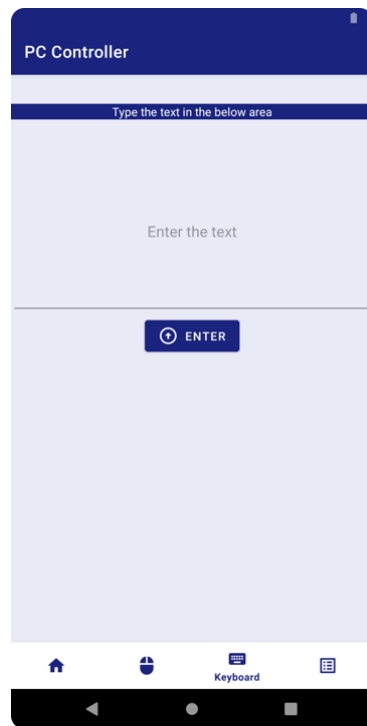


Figure 6: Text Page



Figure 7: Keys

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.

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