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# Remote Access Desktop via Android Application

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**Abstract -** *The goal of this project is to design and develop an android application to gain access areas of remote PC with the utilization of an android based mobile phone. It is done by using Virtual Network Computing (VNC) based engineering. A client will have the capacity to get the access rights and control over the work areas of remote PCs through a VNC viewer that will be given on the client's mobile phone. The client can get to control the remote desktop within the Wi-Fi network extent, independent of different platforms like Windows, Macintosh or Linux. The view of the desktop is compacted before it is transmitted to the mobile phone. The connection between the remote PC and the mobile phone are associated with the IP address of the PC.*

*There a few several situations where we want to wirelessly and comfortably operate a computer, where the computer screen is design onto a big screen through a projector or big-screen television, such as classrooms, conference/meeting rooms, mobile, workgroup project environments and modish office environments, and even living rooms. This project describes an Android application designed to control the Remote Desktops. Technological developments have enabled the creation of mobile devices with the technical features which were previously conceived only in PC architecture. With this application, here comes the need to integrate these devices so that interaction between the PC and mobile can be monitored and a better interaction can be accomplished.*

***Key Words*: Remote desktop, VNC, Android application, Remotely access desktop, File transfer, Socket programming.**

## 1. INTRODUCTION

There a few several situations where we want to wirelessly and comfortably operate a computer, where the computer screen is design onto a big screen through a projector or big-screen television, such as classrooms, conference/meeting rooms, mobile, workgroup project environments and modish office environments, and even living rooms. This project describes an Android application designed to control the Remote Desktops. Technological developments have enabled the creation of mobile devices with the technical features which were previously conceived only in PC architecture. With this application, here comes the need to integrate these devices so that interaction between the PC and mobile can be monitored and a better interaction can be accomplished.

The design of this application is to address the stress of an uncomfortable moment with the use of computer. It facilitate the user to search for files, click on the desktop applications, This could be achieved by installing the proposed application that show to the computer network via Wi-Fi which then connects both systems together, then follows with the command from the mobile phone that remotely controls the computer. It also allows user to download files form the remote PC onto their smartphones.

### 1.1 PROPOSED MODEL

Nowadays we know that mobile devices are getting more popular and smartphone users are also getting increased day by day and we carry most of the documents on our mobile devices and computer is kind of our backup system for storing all of our important documents and files but if some doc or file is missing on our mobile which we are in need of then we can't access our computer system from mobile device. Thus our application provides facility to access computer from mobile app. So that user can search and browse computer files and download the needed files remotely.

The main aim of our project is to allow users to access sharable drive of PC on mobile devices so that user can easily access and download files from shareable drive whenever needed. And can basically interact or operate its computer whenever it wants remotely independent of its location and physical accessibility of its computer.

### 1.2 SYSTEM DESIGN

**System Architecture-** Figure-1 shows the structure of the client side and server side of the proposed project System. Each side is divided into components with specific well defined functionality. Client is an android device which controls the remote PC. Commands issued by the user are saved using the SQLite Database, for the future references.

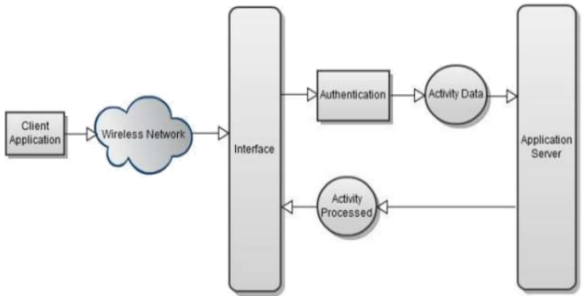


**Fig-1:** System Architecture

### 2. TECHNOLOGY USED

This project is mainly based on Socket programming and android web service calls. It allows user to connect to their PC using android application and access files resides on disk. It also provides a way to download and upload file from and to PC. Its android based application uses java sockets and web-services to communicate with the computer.

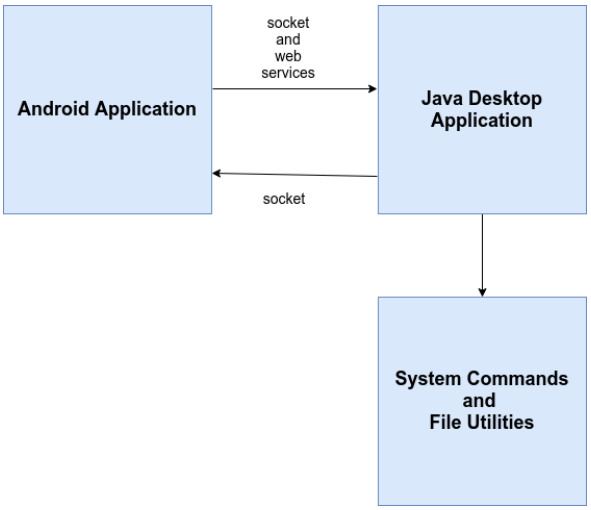


**Fig-2:** System Interaction

### 2.1 ALGORITHMS USED

**Coordinate Mapping:** This algorithm is based on getting screen coordinates from mobile application and sending those coordinates to java desktop application using socket. When this coordinates reached to java application they will be converted into screen coordinates based on corresponding desktop that is screen coordinates.

- **File Browser:** This algorithm is used to list all the files in efficient manner so that less resource will be consumed. Java desktop application takes path from the mobile app and fetch all the files under that path and return it to mobile application. Here we are using java file APIs to browse directory and list files.

- **Key Actions:** This algorithm makes use of coordinate mapping algorithm to get the mapping keys right, left click , right click & etc., and takes action based on java virtual keyboard commands like VK_DOWN & etc.

- **Screen sharing:** This algorithm makes use of java APIs to get the screen shot of PC and share it with mobile application. Since we are showing live screen handling screen sharing is implemented using continuous capture of screenshot and sharing with android application to make it look like live screen sharing.

- **Web Services:** This is used to share data between java application and android mobile app. It makes use of android HTTP request to communicate with the connected java application. It is used to list all the files which resides in particular folder.

### 3. EXPERIMENTAL RESULTS

The experimental results shown below with the screenshots of the Android OS based device and Windows OS based computer. It shows the generated outcomes after performing specific features provided.

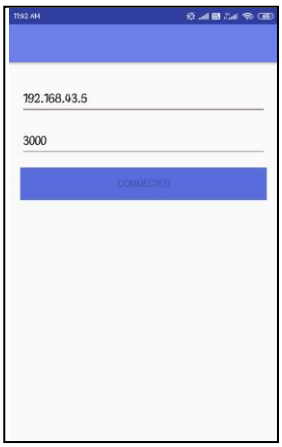


**Fig-3:** Connection on mobile phone

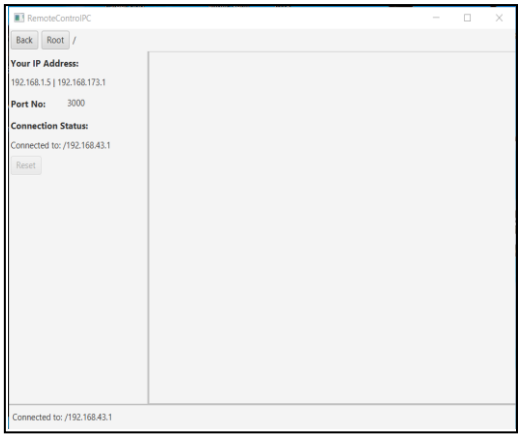


**Fig-4:** Connection on desktop


**Fig-5:** Features menu


**Fig-6:** Touchpad & mouse controls


**Fig-7:** Keyboard

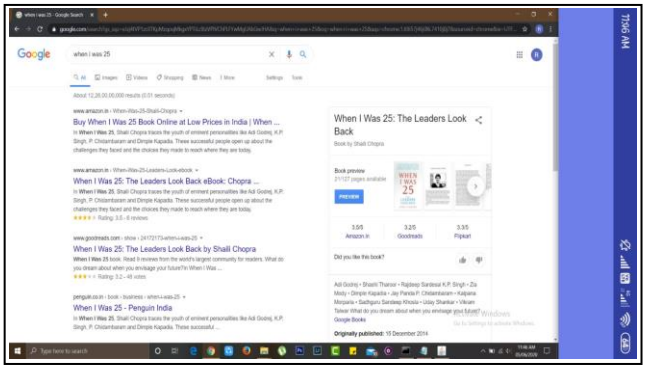


**Fig-8:** Live view of Desktop
(with keyboards o/p)

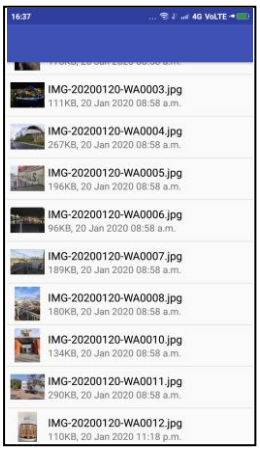


**Fig-9:** Image viewer

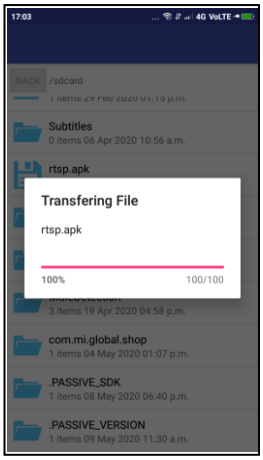


**Fig-10:** File transfer

| Feature | Function |
|---|---|
| Connect | Establish connection between android device and server. |
| Touchpad | Operates as touchpad to guide mouse cursor with mouse click controls. |
| Keyboard | As the name suggests, it performs the keyboard functions like typing and etc. |
| Image viewer | Provides function for viewing images stored on the server. |
| File transfer | As the name suggests, it's for fetching files from the server's storage remotely. It also provides function of uploading any file as backup onto the server's storage. |

## 4. CONCLUSIONS

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.

## REFERENCES

[1] "Remote Control of Mobile Devices in Android Platform Angel", Gonzalez Villan, Student Member, IEEE and Josep Jorba Esteve, Member, IEEE, 2016.M. Young, The Technical Writer's Handbook. Mill Valley, CA: University Science, 1989.

[2] "Video Surveillance System And Content Sharing Between PC And Mobile Using Android", D.Shiny Irene, R.Dhanalakshmi Dept of Computer Science and Engineering. RMK Engineering College, Anna University, Kaverapettai, Chennai, from IEEE Volume 1, Feb. 2013.

[3] Thommes, Q. Wang, A. Gerlicher, and C. Grecos, "Remote UI: A high performance remote user interface system for mobile consumer electronics devices" Proc. Of IEEE International Conference on Consumer Electronics (ICCE 2012), pp. 670-671, Jan 2012.

[4] Android. http://www.android.com Retrieved March 1st, 2011.

[5] F. Lamberti and A. Sanna, "A streaming-based solution for remote visualization of 3D graphics on mobile devices," IEEE transactions on visualization and computer graphics",MAR/APR -2007.

[6] "Virtual Network Computing", Tristan Richardson, Quentin Stafford-Fraser, Kenneth R. Wood and Andy Hopper, Reprint from IEEE Internet Computing Volume 2, Number 1 January/February 1998.