

Wireless Virtual Network Computing

Introduction

The project aims to introduce wireless control of the clients in a network by the usage of a mobile device and hence access the various applications of the clients via the mobile device. The system developed will allow the user to access details (here, student details) using a mobile device, stored in a client in a network.

REQUIREMENTS:

The following requirements were set forward by the users,

1. Facility to access applications on a client over a mobile device.
2. Access details of the session marks and attendance details of students.
3. Facility to enter data via mobile to the target client. search option the user can typically adjust the search criteria to fit their own needs, choosing to search only images or animations, color or black & white, and setting preferences on image size.

FEATURES OF THE SYSTEM:

The system establishes a connection to the network via Bluetooth. Thus the mobile device gains control over the clients connected to the server in that network. The following features will be incorporated in our system as a part of the project implementation,

1.System ON/OFF

The target machine can be switched ON/OFF using the mobile device.

2.File Search/Management

We will be able to perform search over the various files present in the client apart from being able to manage its data.

3.User Attendance

This gives an idea about the number of devices connected to the server.

4.Desktop view

This feature allows the user to view the desktop on his mobile screen.

5.Usage of CMD prompt

The user will be able to make use of the command prompt for data provision and manipulation.



INDUSTRIAL APPLICATION

The above features in our context helps the user to access the details of the session marks and attendance details of the student via a mobile device connected to the college server via Bluetooth.

TECHNOLOGY USED

The mobile device establishes connection to the server by the means of a Bluetooth connection. The device can gain control over the various clients connected to that specific server in that particular network. The operating system used maybe either WINDOWS or LINUX.

The device will be able to access the various applications, enter data and retrieve information using the various applications installed on the target client. The user will be able to view the desktop in his mobile screen and hence ease of usage is increased. The model of the system is illustrated below, The mobile device establishes connection to the server via Bluetooth or TCP and the server connects to the clients via the TCP protocol.

WHY BLUETOOTH IS USED AS THE MODE OF CONNECTION?

The system can be implemented using GPRS too, but it lacks security. The connection over Bluetooth offers an easier and secure way of communicating with the servers. into consideration. Since the system involves the connection of client PC to a mobile device, the mobile should have the following capabilities, Bluetooth support SYMBIAN S60 or higher mobile OS.

Bluetooth is the wireless technology that you can use to establish ad-hoc connection between mobile devices (cell phone, wireless mouse, laptop, wireless headset, etc) within short range by creating a wireless personal area network (PAN) in low bandwidth without any cabling.

The Bluetooth technology operates in microwave radio frequency spectrum at 2.4 to 2.485 GHz. This technology is easy to set up and normally used in ad-hoc situation to transfer voice or data between mobile devices . If you need to have wireless connection

between mobile devices in high bandwidth and bigger coverage range, then you need to set up a wireless network.

As an example, you can use Bluetooth to connect your wireless headset to laptop, connect wireless mouse to computer, connect PDA to laptop or connect cell phone to laptop. A mobile device can communicate with up to seven other mobile devices by using Bluetooth at the same time.

Also Bluetooth is able to take care of both data and voice transmissions simultaneously, and this will enable users to enjoy varieties of innovative solutions such as hands free talking, printing and faxing, etc.



How to use Bluetooth on computer or laptop? You need to have Bluetooth adapter to communicate with other mobile devices! Most of the new laptops have built-in Bluetooth adapter, if not you need to install an Bluetooth dongle(Bluetooth adapter)a small USB device that can communicate with other Bluetooth supported mobile devices.



CONCLUSION

As mobiles are increasingly becoming a handy tool of carrying data and sharing, them system offers its users the control of the clients over a Bluetooth connection. The sharing of data between the clients and the mobile device is made possible over this system control over the network using his Bluetooth enabled device and also transfer files to and from clients at will. Hence the client-server architecture is taken to the next level.

SOFTWARE SPECIFICATION

- ◆ Front end : Java ,J2ME
- ◆ Back end : My SQL
- ◆ Operating system : Windows/LINUX
- ◆ IDE : Net beans

HARDWARE SPECIFICATION

- ◆ Processor : Pentium IV OR Above
- ◆ Primary Memory : 256 MB RAM
- ◆ Storage : 40 GB Hard Disk
- ◆ Display : VGA Color Monitor
- ◆ Key Board : Windows compatible
- ◆ Mouse : Windows compatible
- ◆ Mobile : Bluetooth Enabled