

Offline Management System using Wireless routers

D. Manoj Kumar¹ R. K. Jaya Krishna Kumar² Ayush Mishra³ P. M. Kamath Aswin⁴
K. Gowtham⁵

¹Assistant Professor ^{2,3,4,5}U.G Student

^{1,2,3,4,5}Department of Computer Science and Engineering

^{1,2,3,4,5}Sri Eshwar College of Engg., Coimbatore, India

Abstract— This project is to implement offline networking to a closed area using WIFI Routers. So, that user can interact or manipulate with multiple web applications without using Internet in a closed network. To implement a secure and reliable way of accessing services rendered by the organizations through a closed offline network.

Key words: Routers, Closed Network, Web Application

I. INTRODUCTION

This methodology helps to share the resources and make an interaction with the people in the Private network which makes

Wireless technology has helped to simplify networking by enabling multiple computer users to simultaneously share resources in a private network. This kind of resource sharing has become additional current as laptop users have modified their habits from victimization single, complete computers to functioning on networks with multiple computers, every with doubtless totally different operative systems and ranging peripheral hardware.

This mechanism provides fast and secure way of accessing the resources in a private network where there is no need of Internet .The network is setup using Wifi router the user can join the private network by simply connecting to wifi provided by the network.

Places like hotels, schools, hospital and colleges which prefer private network can share their resources through web application to people in their network using Wifi.

User stand in a queue or depend on someone to access the resources and to interact with the organization. This may lead to unnecessary time consumption and other tensions.

To avoid these type problems the organization give access to user who all join their wifi network. By connecting to their wifi user is directed to their authorized web application through that user can interact with the organization and they can access their resources without using Internet in a Private network.

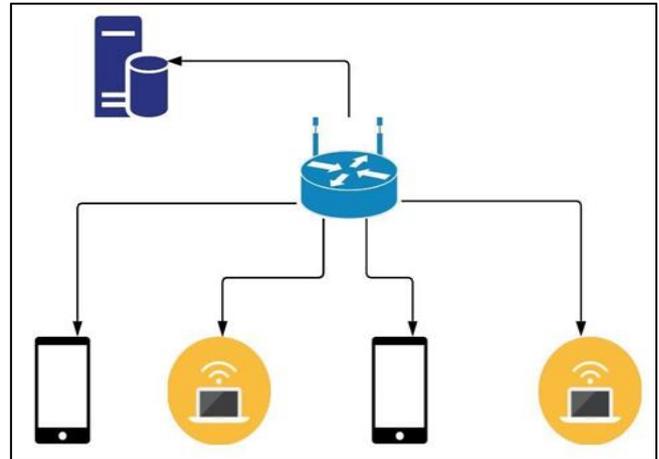
To join the network the user have to simply connect to the wifi which has been provided by the organization. And it automatically redirects to the home page of the web application through that the user can interact with the organization and access their resources.

User can access the resources or interact with organization using their own device such as smart phone, laptops, tablets, etc.

II. PROJECT FRAMEWORK

The project framework consist of Wifi router which provides a wireless local area network for the work place. The network

has separate Database server to maintain and manipulate the user credentials and interactions.



User join the network through wifi which automatically redirects to the applications of the organization or the network. The application displays the information about the organization and resources provided by them. Using this application one can easily know about organization or interact to with them.

III. IMPLEMENTATION SETUP

A. Components Required:

- Wifi Router

B. Router:

A wireless router may be a device that performs the functions of a router and conjointly includes the functions of a wireless access purpose. it's accustomed offer access to a network or a non-public electronic network. Counting on the manufacturer and model, it will operate in an exceedingly wired native space network, in an exceedingly wireless-only LAN, or in an exceedingly mixed wired and wireless network.

There are many wireless data standards that have been introduced for wireless router technology. New standards have been created to accommodate the increasing need for faster wireless connections. Some wireless routers provide backward compatibility with older Wi-Fi technologies as many devices were manufactured for use with older standards.

- 802.11a
- 802.11b
- 802.11g
- 802.11ac
- 802.11n

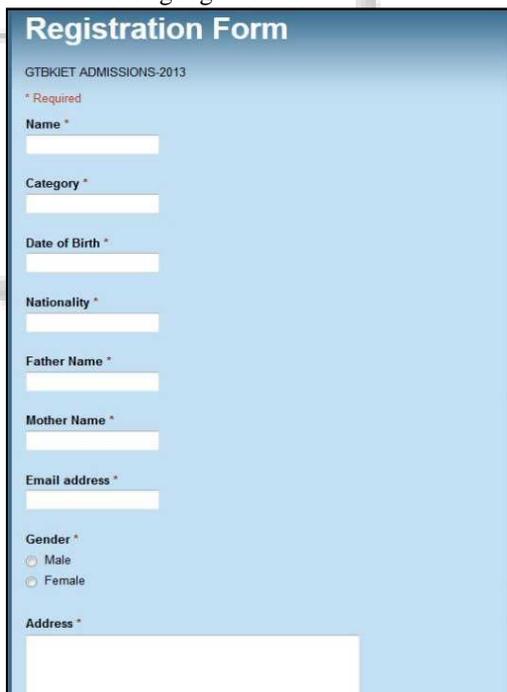


Fig. 1: Wireless Router

Single, dual, and tri-band refers to the frequency channels of a router. Single band routers operate at a lower frequency on the 2.4GHz band which has fewer channels and is therefore more crowded. In fact, most household appliances such as your microwave, cordless phone, bluetooth devices also operate on this frequency. Dual band routers support both 2.4GHz and 5GHz frequencies. The 5GHz band is capable of transmission additional knowledge at higher speeds, however contains a arduous time routing around walls and article of furniture and can't travel as way. Tri-band routers support a 3rd band on the 5GHz channel, 5.8GHz.

C. User Interface:

In this project the application displayed to user can be in the form of web application, single HTML registration page, registration forms or google forms.



The image shows a web registration form with the following fields and options:

- Name ***: Text input field
- Category ***: Text input field
- Date of Birth ***: Text input field
- Nationality ***: Text input field
- Father Name ***: Text input field
- Mother Name ***: Text input field
- Email address ***: Text input field
- Gender ***: Radio buttons for Male and Female
- Address ***: Text input field

The interaction made by user through the application or the registration forms are reflected in the database and it is stored eventually.

D. Database:

A database is an organized assortment of knowledge, usually keep and accessed electronically from a ADP system. wherever databases are additional advanced they're typically developed exploitation formal style and modeling techniques.

In this project database is to store the user credentials for authorization and inventory data of the organization which is displayed to the user.

IV. CONCLUSION

Using this project user can easily communicate with the organization in a closed network without Internet. This project can be implemented in Hospital for patient can book their appointment, they can use the application for uploading their Medical reports for future examination and it can used to find lab or other facilities in the hospital.

In hotels user need not wait for waiter to address themselves for receiving order and to deliver the menu. They can place their order form the table using table number and user details. The bill receipt is easily generated using the table number.

In colleges and school events the student are supposed to register themselves online or on the spot by waiting in a queue and student get themselves lost in the new environment without knowing about event venue. This may lead to unnecessary time consumption and confusion.

To avoid this situation the institution can provide a wireless network where they can provide a form for registration and details about the event and its venue without Internet.

REFERENCES

- [1] Loren Schwiebert, Sandeep k S Gupta, Jennifer Weinmann "Research challenges in Wireless Networks of Biomedical Sensors,"
- [2] https://www.researchgate.net/publication/220421017_Current_and_Future_Applications_of_Mobile_and_Wireless_Networks.
- [3] K. N. Durai and K. Baskaran, "Energy efficient random cast DSR protocol with mediation device in MANET," 2013 International Conference on Advanced Computing and Communication Systems, Coimbatore, 2013, pp. 1-5.
- [4] Mostafa Zaman Chowdhury, Tanvir Hossan, Amirul Islam, Yeong Min Jang, "A Comparative Survey of Optical Wireless Technologies: Architectures and Applications," in IEEE ,2018,pp.9819-9840.
- [5] https://www.cisco.com/c/en/us/solutions/collateral/enterprise-networks/outdoor-wireless-network-solution/net_implementation_white_paper0900aecd80440590.pdf
- [6] <https://www.securedgenetworks.com/blog/Top-3-Applications-for-Outdoor-Wireless-Networks>