Journal Homepage: - www.journalijar.com
INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)
Article DOI:10.21474/IJAR01/4907
DOI URL: http://dx.doi.org/10.21474/IJAR01/4907
ISSN NO. 2320-5407

RESEARCH ARTICLE

ANDROID BASED CONFERENCE HALL BOOKING AND RESERVATION SYSTEM.

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Manuscript Info

Manuscript History

Received: 21 May 2017
Final Accepted: 23 June 2017
Published: July 2017

Key words:-
Android, Ad-Hoc Meeting, Meeting and Conference Hall, Real-Time Status.

Abstract

In each association there is dependably a need of meeting and gathering corridors. It is discovered that there is one gathering corridor in each association. Diverse divisions need to share the single meeting lobby for leading its occasion. Be that as it may, there is probability of the lobby being reserved by at least two offices around the same time and time which will be known just when the day of the occasion has come to, past the point of no return for exchange game plan. Thus an effective and easy to understand framework is required to save the corridor previously and make the data accessible to others to check the constant status of the lobby before booking. The framework will be created as an Android application, since many individuals today utilize Android, practically around 95% of the population.

Introduction:-

Conference room booking:-

Gatherings are crucial occasions in each association where individuals can just share learning and data or examine for imperative choices. To encourage those exercises, the vast majority of inquires about focus on enhancing planning programming to enable members to choose ideal meeting time [1][2] or building shrewd meeting rooms where audio–visual content are naturally recorded for future survey [3] [4] [5]. There are extremely set number of frameworks that can oversee meeting rooms in term of constant accessibility and usage. Android is a famous versatile working framework. Above all else, since a meeting room must be saved for a meeting arrangement at once, there are a few conditions that those assets are underutilized [6]. For instance, a meeting might be over before booked time or even not occur at everything except rather still saves a room in planning programming and keep others from utilizing. Moreover, ordinary meeting planning/booking programming can't bolster specially appointed/drop-in gatherings on the grounds that the continuous accessibility of meeting rooms is inaccessible. For this sort of gatherings, individuals may take a parcel of time to locate an abandoned space to utilize, particularly when these rooms are situated in various structures. To determine these issues above, in this paper, we propose a shrewd meeting room administration and booking framework with continuous inhabitance discovery to help impromptu gatherings and boost usage.

Most related work is exhibited in [6]. Be that as it may, this framework has numerous constraints:
1. The inhabitance discovery module must utilize both PIR sensor and receiver to distinguish participant nearness.

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2. The setup is too exorbitant and complex to actualize. In each building, remote sensors are associated as a work connects with numerous organizer and portal gadgets before interfacing with a PC. At that point this PC must process crude information and send them to a focal application server through neighborhood (LAN).

The inhabitance status is not incorporated into the booking/planning application, which is essentially Microsoft Outlook programming in this venture. Accordingly, the framework can't bolster impromptu gatherings. Besides, the framework is fundamentally in light of manual activities to determine underutilization. On the off chance that a planned meeting does not happen, the coordinator is cautioned with a SMS and he/she should physically drop the reservation in the Outlook to free the space for other meeting demands. Another related framework is portrayed in [7].

In any case, in this framework, inhabitance data is utilized as a part of HVAC frameworks to control vitality utilization instead of for meeting purposes. Besides, this framework is likewise in view of remote sensor gadgets which require numerous nearby base stations to transmit information and raise concerns identifying with radio flag obstruction.

Motivation:-
Our primary inspiration came while studying different issues; we found a typical hardship that was confronted by a few urban establishments and organizations, in view of meeting room booking framework. Indeed, even famous government establishments need fundamental meeting booking offices. A great many people attempt to multi-errand however think that its difficult to complete anything [8][9]. So to make it less demanding we are making an android application to lessen conflicts that can happen while booking the meeting rooms.

Objective:-
To build up an effective and easy to understand unified stage/portable application/framework required to save the lobby previously and make the data accessible to others to check the ongoing status of the corridor before booking over various services/divisions in various structures. Thus, we are building up an Android application to check the status of the gathering corridor and save it for leading occasions for a specific day and time. The framework will remind the worry individual about his booking of the lobby utilizing notices.

Review of Literature:-
LinhDuc Tran, Alex Stojcevski, Thanh Chi Pham, Tony de Souza-Daw, NhanTrong Nguyen, VinhQuangNguyen."A Smart Meeting Room Scheduling and Management System with Utilization Control and Ad- hoc Support Based on Real-Time Occupancy Detection".
In most meeting room booking or administration framework, the accessibility of meeting rooms are basically in view of pre-decided calendars. In any case, since the meeting span is not generally correct as it is booked, there are a few circumstances that a meeting room is underutilized. Thusly, in this paper, we show a brilliant meeting room booking and administration framework which distinguishes inhabitance status of meeting rooms progressively and incorporate this data into the planning application to help specially appointed gatherings and increment room usage. Our framework is a basic, simplicity of-usage arrangement in view of PIR sensor combination gadgets and Ethernet availability.

O. Mussawar and K. Al-Wahedi, "Meeting scheduling using agent based modeling and multiagent decision making,".
Specialist worldview is as a rule increasingly broadly used to address appropriated choice issues and meeting booking is one of them. Meeting booking requires various people to collaborate and concur upon a typical time. In this present reality people more often than not have clashing inclinations accordingly making the way toward planning a meeting complex, as it endeavors to fulfill the inclinations of all members. This work models the issue in a conveyed way, using the operator approach. It presents two multiagent basic leadership systems for choosing the ideal meeting time. Specialist based reproductions are run utilizing the proposed choice systems, and the outcomes are introduced.

T. Mishima, K. Takahashi, T. Kawamura, and K. Sugahara, "Meeting Scheduling System using Unpleasant Notification,".
We frequently neglect to organize the planning of a meeting since somebody doesn't include his/her calendar. Along these lines, we trust a framework which empowers clients to urge the contribution of his/her calendar. In this paper,

we propose a framework to urge clients to include their calendars by utilizing disagreeable notice. The framework, to start with, utilizes a general warning, for example, an email, to make a request to include their calendars, in any case, the framework steadily utilizes unsavory notice. In this manner, the clients are not unsavory on the off chance that they completed to enter soon. Else, they turn out to be progressively obnoxious in view of unsavory notices.

System Architecture:-

Architecture:-

The system architecture is a conceptual model that defines the structure, behavior, and more views of a system. An architecture description is a formal description and representation of a system, organized in a way that supports reasoning about the structures and behaviors of the system. A system architecture can comprise system components that will work together to implement the overall system.

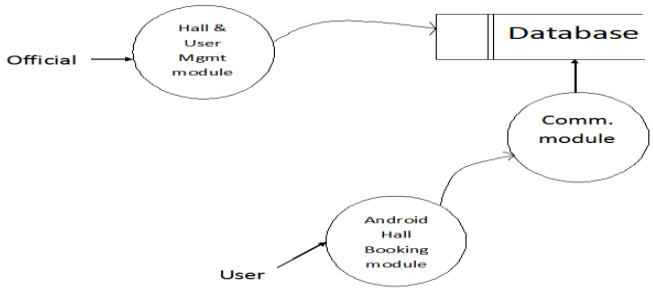
Figure 3.1.1:- Architecture of proposed system

The user uses Android application for reserving the conference hall, the details of reservation are sent to the Central server across the internet. The central server data is maintained using a VB.Net applications which is used to update the database, create users and view reservations.

Data Flow Diagram:-

A Data Flow Diagram (DFD) is a graphical guide for characterizing framework information sources, Process and yields. It speaks to stream of information through the framework. The DFD is a standout amongst the most essential displaying employments. It is utilized to demonstrate the framework segments. DFD might be into levels that speak to expanding data stream and utilitarian subtle elements. A one level DFD otherwise called beat level DFD speaks to the framework with major with modules, information stream and information stores. The other level will demonstrate every module in the top level DFD in more detail form.

DFD Level 0



Figures 3.2.1:- DFD Level 0

DFD Level 1

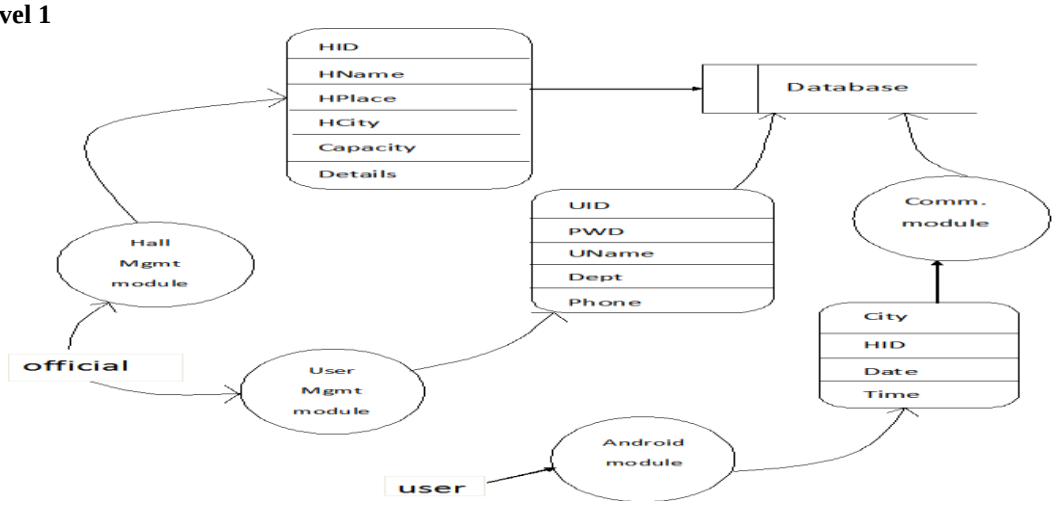


Figure 3.2.2:- DFD Level 1

Sequence Diagram:-

An arrangement chart demonstrates the members in a communication and the succession of messages among them. A succession outline demonstrates the connection of the framework with its on-screen characters to play out all or part of an utilization use case.

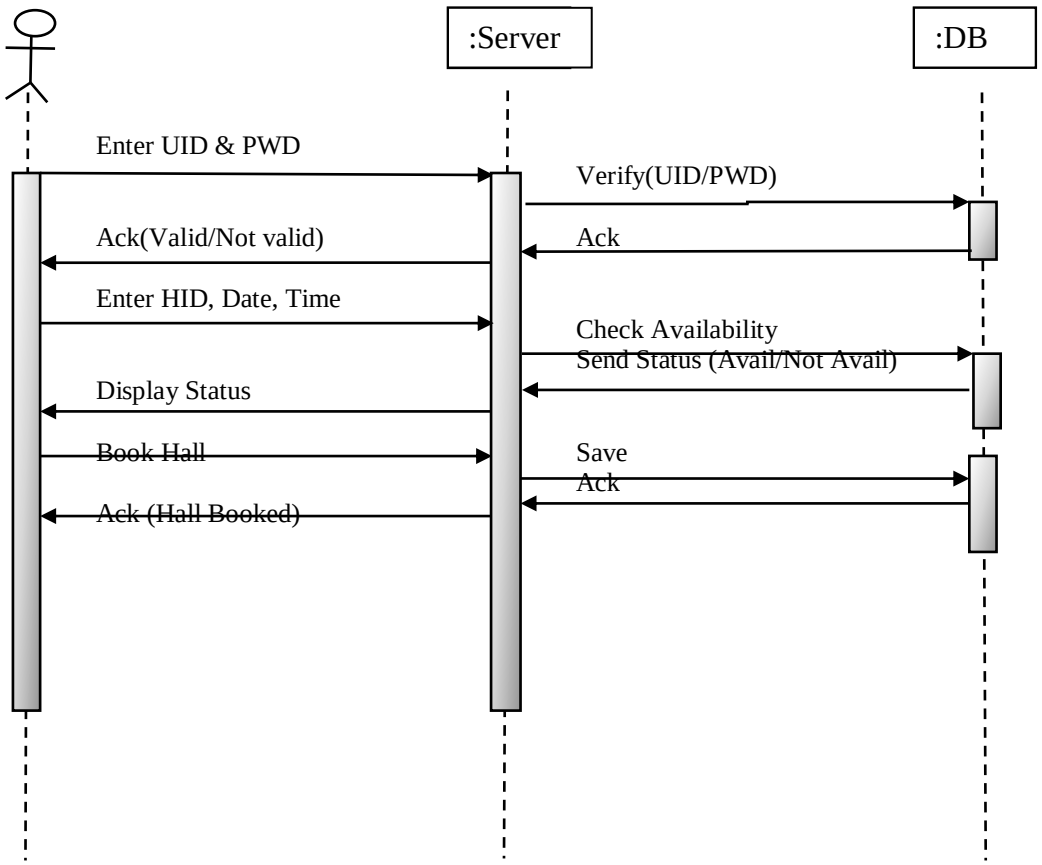


Figure 3.3.1:- Sequence diagram of conference room booking.

Results and Discussion:-

Modules/Scope Diagram:-

1. **Hall Booking Android App:-** This module will provide user interface to the user to login and book hall for events. This will be developed using Java and Eclipse for Android platform.
2. **Hall and User Management Module:-** This module will be used by the government officials for creating all available halls in the database. This module will also have interfaces to create users from various ministries and departments, who will login from android and book halls.
3. **Communication Module:-**This module will be used by the android app to communicate with the central database.

Advantages:-

1. The customer immediately receives a guarantee of obtaining services.
2. Business does not need to communicate with the client, as the book takes place automatically without administrator intervention.
3. The system operates autonomously 24/7.
4. Time economy.
5. It developed for android which is the most popular Operating System.

Experimental Results:-

Login Page:-

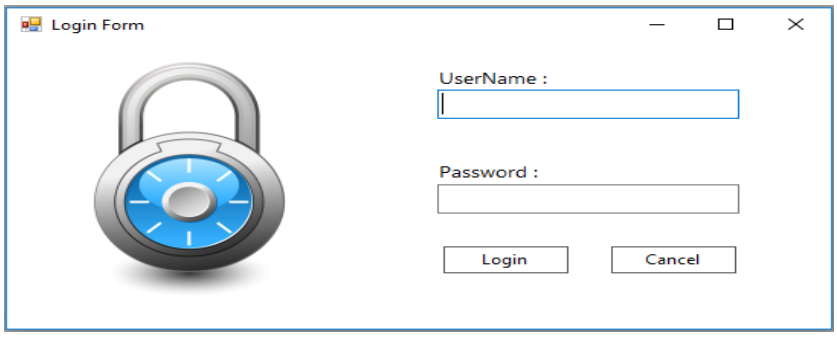


Fig 4.2.1.1:- Snapshot of Login Page for Online Booking of Conference Hall

Above figure indicates login page of booking of conference hall in which the authenticated user has to login through login page. The user has to enter his\her username and password. If he/she is not authenticated user then cannot login

Creating Hall/Booking:-

The creating hall option is used by admin to create various conference hall present in the area. The view booking option is used to view the halls which are available for booking.

User account creation:-

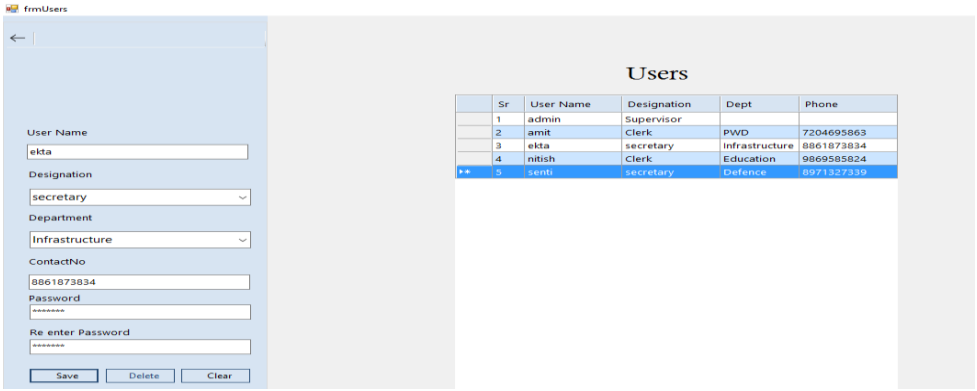


Fig 4.2.1.2:- Snapshot of creating a new user account

Where the admin can create new users of various department. To register the user requires the following information i.e. user name description department and contact number.

Reservation list of users:-

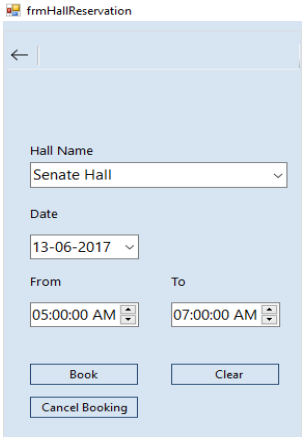


Fig 4.2.1.3:- Snapshot of the reservation made by the user for conference hall

Where all the reservation of the entire user who has booked the conference hall has been display. The reservation Page contains the hall name, user name, Date, timing. On successful reservation, the details of that specific user from the respective department will be updated in the table.

4.2.5 The Official App login Page:-

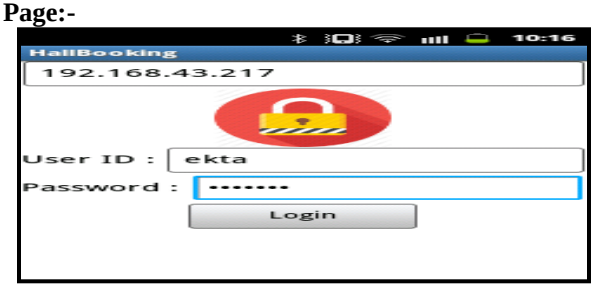


Fig 4.2.1.4:- Snapshot of Conference Hall booking App Login Page
Where users have to enter the login details to proceed.

Details for Booking conference Hall:-

Fig 4.2.1.5:- Details Snapshot for booking conference hall.

Successful Conference Room Booking:-

Fig 4.2.1.6:- Successful Conference Room Booking

The requested room successful book where the meeting will be held respected date.

When the requested Conference Room is reserved:-

Fig 4.2.1.7 When the requested Conference Room is Reserved

The requested conference hall room is available for the respected date and time.

Notification via SMS:-

Fig 4.2.1.8 When the user receives notification via SMS

SMS notification sent to the requested hall booking user.

Conclusion:-

We have built up an Android application to check the status of the gathering corridor and save it for directing occasions for a specific day and time. The framework will remind the worry individual about his booking of the lobby utilizing by means of SMS warnings. There is a Centralized Data stockpiling that makes support simple and keeps it from covering of reservations, a precise client administration for all offices. Subsequently it is an effective and easy to use framework to hold the corridor in advance and make the data accessible to others to check the status of the lobby before booking and helps the client in tedious.

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