

RooMe

Abstract:

This project is the web based system which helps the students going abroad to find their roommates online, based on their compatibility features like region, room rent, food habits, location, etc...

RooMe also helps students and other bachelors staying abroad to find a perfect room with compatible roommates without hassle of manual search over colleges and community zones.

Roome uses 128 bit AES encryption technique to secure the user data from any intrusion.

Introduction:

Often people find it difficult to find an ideal roommate when they relocate to a new place. This problem mostly arises for bachelors or people moving without family. These people struggle a lot to get an ideal roommate and often compromise a lot with the situations and stay in an uncomfortable situation. This project provides a platform to find idle roommates based on individual set of priorities.

The users have register with the system and login, through which they will enter their priorities. Based on his priorities, the system will bounce back with the appropriate results which match the priorities given by the user.

The user details will be encrypted with a 128-bit AES on the server side for the security reasons.

EXISTING SYSTEM

Students going away from home for studies or job find it very tedious and time taking to find perfect roommates. They have to go through hassle of manual search over community places, work/study places to find roommates.

PROPOSED SYSTEM

This project helps students and other bachelors staying away from home to find a perfect room with compatible roommates, based on their location and priorities like room rent, food habits, gender, nationality, they get a refined results through app saving time and energy.

Background and/or Related Work:

There are not many apps which does a refined roomie search based on various priorities like RooMe. And definitely they weren't using AES 128 bit cryptosystem.

Methodology:

The android application is developed using Android Studio, using an sql database and PHP is used on the server side. The AES 128 bit encryption is performed on the server side using the PHP language.

The application screens are prepared from scratch, based on various priorities which acts as filters, the tables in sql are created.

The comparison or matching of data usually happens on the server side using the PHP script. The user data is encrypted on the server side before sending to the database. And also will be decrypted before sent to the client side.

Experiments:

When a new user is registered with the system, The user name and password is encrypted using a 128 bit AES encryption technique and then saved in the system. Similarly when a user logins with the system, the data is encrypted using a 128 bit AES encryption technique and then login call is performed.

Whenever the user navigates to a the dashboard, the data in the database is decrypted using a 128 bit AES encryption technique and sent to the client side, dashboard screen.

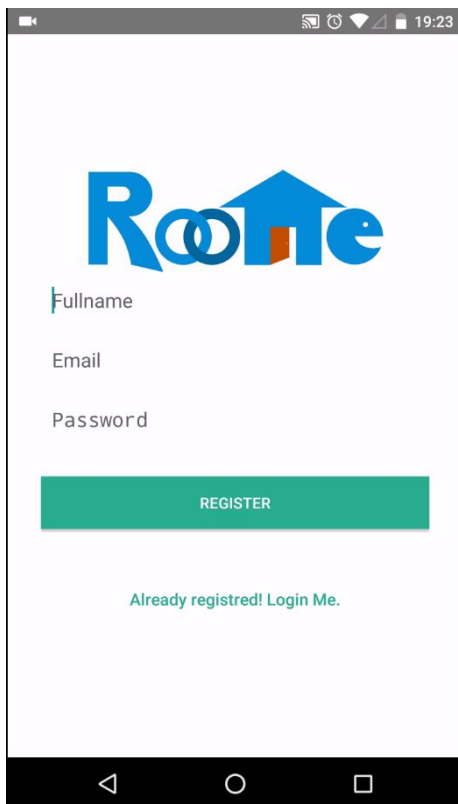
With the use of comparison variables, the PHP script performs matching operations and sends the results to client side.

Discussion and/or Analysis:

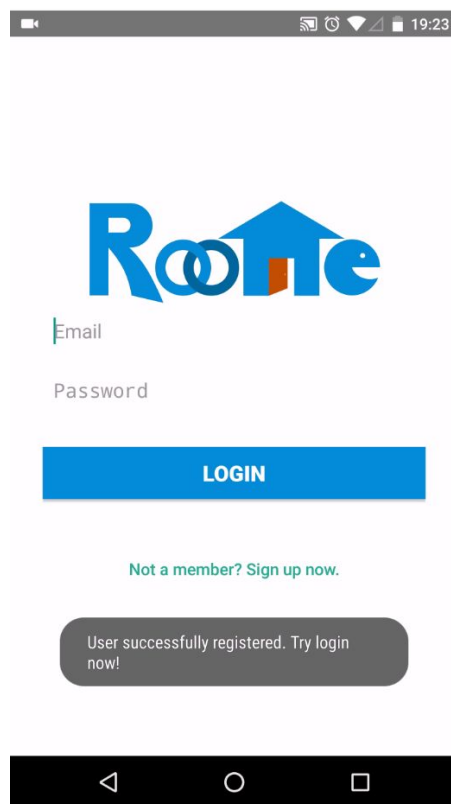
The user is given the results based on the latest entries into the database. More often than not the user gets best matched results based on at least one priority. If not he will be provided with results matching with only same city.

Screen Shots:

Registration Screen

A screenshot of a mobile application's registration screen. At the top, there is a status bar with icons for signal, Wi-Fi, battery, and the time 19:23. Below the status bar is the app's logo, which consists of the word "Roome" in blue, with a stylized house icon integrated into the letter 'o'. Underneath the logo are three input fields labeled "Fullname", "Email", and "Password". Below these fields is a green rectangular button with the word "REGISTER" in white capital letters. At the bottom of the screen, there is a link that says "Already registred! Login Me." in green text. The bottom of the screen shows the standard Android navigation bar with back, home, and recent apps icons.

Login Screen

A screenshot of a mobile application's login screen. At the top, there is a status bar with icons for signal, Wi-Fi, battery, and the time 19:23. Below the status bar is the app's logo, which consists of the word "Roome" in blue, with a stylized house icon integrated into the letter 'o'. Underneath the logo are two input fields labeled "Email" and "Password". Below these fields is a blue rectangular button with the word "LOGIN" in white capital letters. Below the button is a link that says "Not a member? Sign up now." in green text. At the bottom of the screen, there is a grey rounded rectangular box containing the text "User successfully registered. Try login now!" in white. The bottom of the screen shows the standard Android navigation bar with back, home, and recent apps icons.

Post for Roommate Screen

Post For Roommate

Food Habits: ☒ Vegetarian ☐ Non Vegetarian

Cooking Skills: ☒ Yes ☐ No

You are a?: ☒ Night Owl ☐ Early Raiser

Smoker: ☒ Yes ☐ No

Alcoholic: ☒ Yes ☐ No

Amenities

Television: ☒ Yes ☐ No

Fridge: ☒ Yes ☐ No

Geaser: ☒ Yes ☐ No

Air Conditioner: ☒ Yes ☐ No

Washing Machine: ☒ Yes ☐ No

Internet: ☒ Yes ☐ No

Upload Photos:

Additional Preferences

POST

Dashboard Screen

Dashboard Activity

Your Post: Need A Room

Name: B N Anurag

Gender: Male

Phone No: 8008405334

City: hyderabad

Occupation: student

Type Of House: Appartment

Occupancy: Rent

Country: india

Nationality: indian

Rent Budget: 4000-5000

Age: Any

Marital Status: Single

No Of Rooms: null

No Of Roommates: Any

Smoking: Yes

Drinking: Yes

Food Habits: Vegetarian

Message: hey all

You Are A?: Night Owl

Cooking Skills: Yes

phpMyAdmin

Recent Favorites

android_api

New

advrt

contact_us

email

soundabc

users

Server: 182.50.133.90:3306 » Database: android_api » Table: users

Browse Structure SQL Search Insert Export Import Operations Triggers

Showing rows 0 - 19 (20 total, Query took 0.2309 seconds.) [id: 59... - 21...]

SELECT * FROM 'users' ORDER BY 'id' DESC

[Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all Number of rows: 25 Filter rows: Search this table

Sort by key: PRIMARY (Descending)

+ Options

	id	unique_id	salt	email	username	password
	59	5900ebf4aa4318.20122143	4	[1™,□,S6~kœ8"□,«□,cú_súMÂ"0□,e™□,Bu"†0A]T"	Rahul	d8578edf8458ce
	58	5900e11e940a77.10412845	œ_}™—	{□□S□Ô\$×ñ□(C3□aMÄ□IN+□□IÄ%4A+ôE□é□V□JÜ	Sumeet	d8578edf8458ce
	57	5900dcb4e9cf5.99202992	x,□□5e□3□Y2b6†,=;>~	w,ôp"y'k"□>€N□ÄfÄ(+ç™OeQWb□ôMiÖ]...	Naga Anurag	436f7db8347636
	56	5900da00710d22.69701024	□hâÇJlaÖü:B(ô~□□NZes†□ç&X,"ô{æ<□□	EgAe□□E"V□lô¿...	Naga Anurag	436f7db8347636

Console

Database with Encrypted Data

Conclusion:

This Project is designed and developed to reduce the effort put forth by people going away from home to a new place in searching compatible roommates. People spend lots of time spending in community places to find roommates; of finding roommates before reaching a new place is almost impossible. It can be used to fill that void, by providing an online platform to users to find roommates online even before reaching the new place which saves a lot of time and energy.

Future Scope:

With the global applicability, this project can be implemented worldwide. With the transition of the world into digital generation, online platform like this have a scope of becoming a successful venture by enhancing its features like an owner posting ad for tenants, people who needs a roommate posting an ad for 'need of a roommate'. With the increase of the usage of mobile applications, presence of such a facility on a mobile application level also benefits the users and with the user data is being encrypted with a 128 bit encryption system on the server side the security of the application increased exponentially.

References / Bibliography:

<https://www.rivier.edu/journal/ROAJ-Fall-2010/J455-Selent-AES.pdf>

<https://paragonie.com/white-paper/2015-secure-php-data-encryption>

<https://paragonie.com/blog/2015/05/using-encryption-and-authentication-correctly>

