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A Study on Hotel Residence Using Adhaar

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ABSTRACT: The Hotel Residence Verification System is an all-encompassing system created to improve the procedure for confirming hotel guests' identification and guaranteeing a safe and quick check-in process. The system has a mobile application for customers to book hotels as well as a web portal for administrators and hotel authorities. During the booking procedure, users must use their Aadhaar card, an exclusive form of identification in India, to confirm their identity. The Hotel Residence Verification System's main goal is to improve security and authentication procedures in the hotel business while giving visitors a smooth user experience. The method guarantees that only legitimate and verified visitors are accommodated, lowering the danger of doing so and boosting general security. This is done by incorporating Aadhaar card verification into the booking process.

The Hotel Residence Verification System provides hotels with a complete solution to verify visitors' identity and speed up the check-in procedure. Aadhaar card verification is integrated into the mobile application, which improves security while giving consumers a smooth and comfortable experience. The technology aids the hotel sector's initiatives to improve guest verification procedures, lessen fraud, and provide a safe and secure environment for all visitors.

Keywords: Hotel residence, Aadhar, Security, Web application, Mobile application

I.INTRODUCTION

The hotel sector is continuously changing, with a focus on seamless guest experiences and security. By introducing a reliable identification verification method for hotel visitors, the Hotel Residence Verification method seeks to improve the check-in procedure. This system combines a web site for administrators and hotel management with a mobile application that enables consumers to reserve hotel rooms by authenticating their Aadhaar card, an exclusive form of identity in India. The Hotel Residence Verification System offers customers a quick and easy check-in procedure while addressing the demand for enhanced security and authentication processes within the hotel sector.

To manage visitor information, room bookings, and verification procedures, the system comprises of a web application created for administrators and hotel authorities. Administrators have access to a thorough dashboard where they can check visitor information, control room availability, and track the process of guest verification. In order to ensure smooth operations, hotel staff may update room statuses, monitor visitor arrivals and departures, and work with the administration. The smartphone application offers a user-friendly interface where visitors can look up hotels, see what rooms are available, and book them. Users are required to scan their Aadhaar cards as identification during the booking process utilizing the mobile application's built-in scanning feature.

This verification process increases security and lessens the chance of illegal access by ensuring that only people with legitimate identity may proceed with the booking. The Hotel Residence Verification System makes use of cutting-edge technology to streamline check-in and enhance security measures, including Aadhaar card verification and mobile application integration. The biometric data used for Aadhaar verification includes fingerprints and iris scans. During the Aadhaar enrollment process, an individual's biometric information is collected and linked to their Aadhaar number [1].

The system's dependency on manual verification procedures is decreased, mistakes are reduced, and

overall efficiency is increased by implementing Aadhaar card verification. We also go through some survey data on Aadhaar's effects as well as some scientific empirical findings. Alternative identity protocols to Aadhaar are also covered [2]. The UIDAI's database safely houses this biometric information. The individual presents themself at an approved Aadhar enrollment facility, where their biometric data is recorded, as seen in Figure 2. This entails employing sophisticated equipment to scan their fingerprints. A person must give their biometric information (such as their fingerprint) in response to a verification or authentication request [4].

The Hotel Residence Verification System offers hotels a complete way to verify visitors' identity and speed up the check-in procedure. Aadhaar card verification is integrated into the mobile application, which improves security while giving consumers a smooth and comfortable experience. The below figure 1 shows the linking of adhaar to mobile number that helps in creating secure verification to the hotels for residents.

Figure 1: Linking Adhaar to Phone Number to Help Securing Hotel Residence

II.LITERATURE REVIEW

Kamta Nath Mishra

A smartcard includes fingerprints, iris, face, and palatal patterns where DNA sequence and palatal patterns of the smartcard will be used for identifying a dead person but fingerprints, iris, and face will be used identity verification of a living person. The smartcards are now widely being used as one of the most useful and reliable form of electronic identity verification system. By embedding biometrics in the host, we can formulate a reliable individual identification system as the biometrics possesses. Hence, the conflicts and problems related to the intellectual property rights protection can be potentially prevented. Consequently, it has been decided by governmental institutions in Europe and the U.S. to include digital biometric data in future ID documents.[1]

Kamta Nath Mishra et al

Recently biometrics is merged into digitization technology to improve the credibility of the conventional watermarking techniques. The access control and authenticity verification have been addressed by digital watermarking biometric authentication systems. By embedding biometrics in the host, we can formulate a reliable individual identification system as the biometrics possesses. Hence, the conflicts and problems related to the intellectual property rights protection can be potentially prevented. Consequently, it has been decided by governmental institutions in Europe and the U.S. to include digital biometric data in future ID documents.[2]

Dr.K.Ravikumar et al

Face recognition technology within biometrics is one of many methods that may be used to verify and authenticate persons. All three branches of government, as well as law enforcement and the private sector, make use of this surveillance and security technology to monitor and control access. It has many applications presently, and no doubt more are being discovered all the time. In this paper, we develop a face recognition system that enables the identification and verification of the individuals using Aadhaar authentication.[3]

Bhagwan Chowdhry et al

We describe India’s ten-year experience with establishing a digital identity in India. Remarkably, 1.25 billion residents in India now have a digital identity, called Aadhaar, which is a 12-digit random number that is linked to each individual’s biometrics. We discuss the technology, the infrastructure requirements, the costs, the benefits, the political tradeoffs, and the debates this rollout ensued related to financial inclusion and exclusion, and the evolution of data and privacy threats and laws to protect these. We also discuss some survey evidence on the impact of Aadhaar as well as some academic empirical studies.[4]

Raja Siddharth Raju et al

This paper presents a brief review on Aadhaar card, and discusses the scope and advantages of linking

Aadhaar card to various systems. Further we present various cases in which Aadhaar card may pose security threats. The observations of Supreme Court of India are also presented in this paper followed by a discussion on the loopholes in the existing system. Methods: We conducted literature survey based on the various research articles, leading newspapers, case studies and the observations of Supreme Court of India, and categorized the various cases into three categories. Findings: Aadhaar project is one of the significant projects in India to bring the universal trend of digital innovation. The launch of this project was focused on the inter-operability of various e-governance functionalities to ensure the optimal utilization of Information, Communication and Technology Infrastructure. Towards this Government of India has recently made Aadhaar card mandatory for many government applications, and also has promoted Aadhaar enabled transactions.[5]

Umar Bashir Mir et al

With the increasing levels of digital transformation, focus on digital identities of individuals is increasingly getting prominence. It is the information captured as part of the identity surrounding the citizen which decides what services and products one is entitled to and can access. At present, there are still around 1.1 billion people in the world without any official identity and to address this concern, United Nations through its 16th Sustainable Development Goals (SDGs) recommended governments to provide their citizens with unique identities by 2030.[6]

Subhashis Banerjee et al

The decision on the constitutionality of Aadhaar1 by the Supreme Court remains a matter of speculation, but it has become abundantly clear that most of the use cases for Aadhaar based biometric authentication (ABBA) have turned out to be deeply problematic. That the use of biometrics as an authentication factor is conceptually flawed has been pointed out by many. Biometrics are not secret information and are hence open to fraud.[7]

Kumar H. Naveen et al

The extent of financial exclusion is acute in india. Presently almost half of the population is unbanked. Financial service is one of the most important requirements for the current excluded segment. one of the key objectives of constitute UIDAI is to extend the delivery of financial services to the currently excluded. UID plays a key role in the financial inclusion by providing national portability of identity of migrant population which would give them access to basic services such as banking and telecom services.[8]

III. METHODOLOGY

By following this methodology, the Hotel Residence Verification System can be developed, providing a secure and efficient process for administrators, hotel authorities, and guests. The methodology ensures the system meets the requirements of all stakeholders, integrates Aadhaar card verification, and delivers a seamless user experience across the web and mobile applications.

1. **Requirement Analysis**: Conduct a detailed analysis of the requirements for the Hotel Residence Verification System. This involves understanding the needs of administrators, hotel authorities, and guests. Identify the key features such as user authentication, Aadhaar card verification, room management, and booking capabilities.
2. **System Design**: Design the architecture and user interface for the web application used by administrators and hotel authorities. Create wireframes and prototypes to visualize the flow and interactions within the application. Design the mobile application interface for users to search for hotels, view availability, and make reservations.
3. **Database Design**: Design the database schema to store guest information, room details, and verification status. Establish appropriate relationships between entities to ensure efficient data retrieval and storage.
4. **Web Application Development**: Develop the web application using visual .NET code for administrators and hotel authorities.
5. **Mobile Application Development**: Develop the mobile application using Android for users to search for hotels and book rooms.

Algorithm to implement Hotel Residence Verification

Step 1: Initialize the web application for administrators and hotel authorities.

Step 2: Display the dashboard with options for managing guest information, room bookings, and verification processes.

Step 3: Initialize the mobile application for users.

Step 4: Load and display the login or registration page for users.

Step 5: Authenticate the user's credentials or facilitate user registration.

Step 6: If the user selects "Hotel Residence":

a. Retrieve the list of available hotels and their details from the database.

b. Display the hotels, including location, amenities, and room availability.

c. Allow the user to select a hotel for booking.

Step 7: Repeat steps 5 to 6 as long as the user performs tasks.

Step 8: Verify Adhaar number

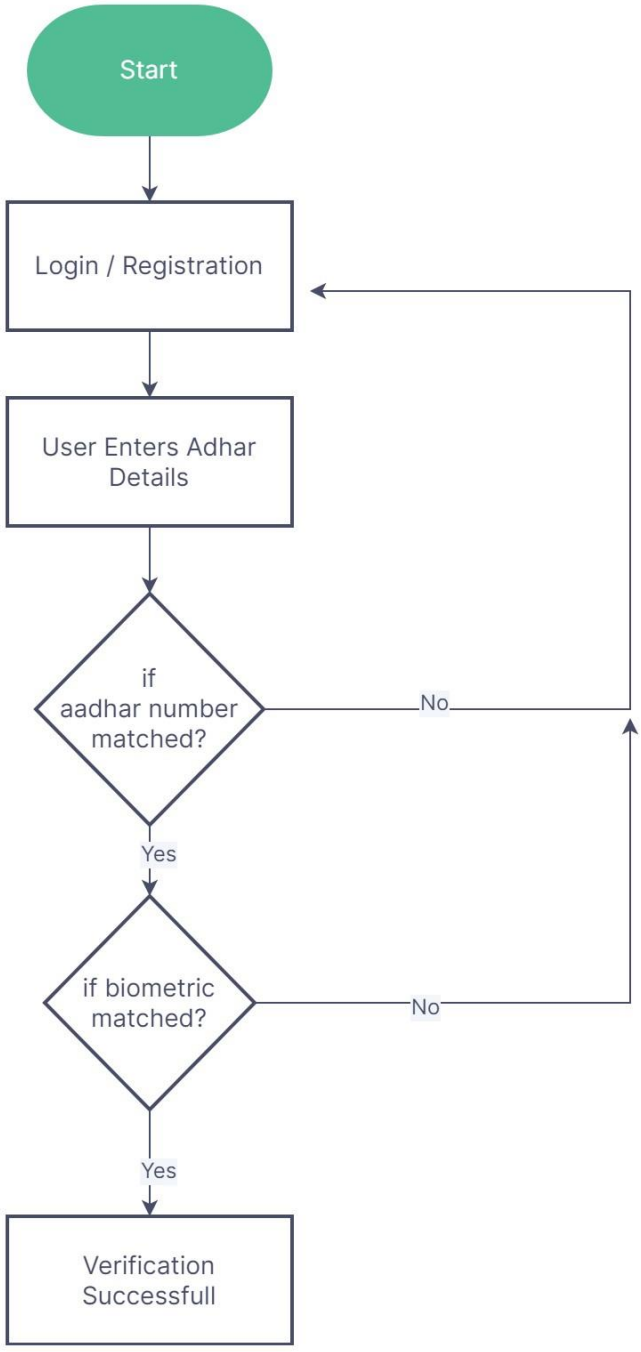
Step 9: if Aadhar == True

Verification Successful Else

Repeat Step 5

Step 10: Terminate the applications when the administrator, Hotel or user chooses to log out or exit.

Flowchart on verification process of user using aadhar



VI. CONCLUSION

The Hotel Residence Verification System, with its integrated web and mobile applications, presents an innovative solution for ensuring secure and efficient check-ins while enhancing the overall guest experience. By leveraging a web application for administrators and hotel authorities and a mobile application for users, the system streamlines the process of booking hotel rooms by verifying Aadhaar cards, a unique identification document in India. The system aims to enhance security and authentication protocols within the hotel industry while providing a seamless and convenient experience for guests. The web application empowers administrators and hotel authorities to efficiently manage guest information, room bookings, and verification processes. They can review guest details, monitor verification statuses, and update room availability, ensuring smooth operations and improved guest services.

By implementing the Hotel Residence Verification System, hotels can strengthen their guest verification protocols, ensuring the safety and security of both guests and hotel facilities. The system reduces the reliance on manual verification, minimizing errors and streamlining operations. Guests benefit from a convenient and efficient check-in experience, allowing them to securely book rooms using their verified Aadhaar card, saving time and ensuring a seamless arrival process.

V.REFERENCES

1. Mishra, Kamta Nath. "Importance of AADHAR-Based Smartcard System's Implementation in Developing Countries." *Advances in Soft Computing and Machine Learning in Image Processing* (2018): 443-457.
2. Mishra, Kamta Nath. "AAdhar based smartcard system for security management in South Asia." *2016 International Conference on Control, Computing, Communication and Materials (ICCCCM)*. IEEE, 2016.
3. RAVIKUMAR, K., S. BRITTORAJ, and GB SANTHI. "AN AADHAR AUTHENTICATION APPLICATION USING A FACE RECOGNITION SYSTEM AND VERIFICATION FOR IDENTIFYING."
4. Chowdhry, Bhagwan, Amit Goyal, and Syed Anas Ahmed. "Digital identity in India." *The Palgrave handbook of technological finance* (2021): 837-853.
5. Raju, Raja Siddharth, Sukhdev Singh, and Kiran Khatter. "Aadhaar card: challenges and impact on digital transformation." *arXiv preprint arXiv:1708.05117* (2017).
6. Mir, Umar Bashir, et al. "Realizing digital identity in government: Prioritizing design and implementation objectives for Aadhaar in India." *Government Information Quarterly* 37.2 (2020): 101442.
7. Banerjee, Subhashis, and Subodh V. Sharma. "An offline alternative for Aadhaar-based biometric authentication." *Ideas for India* (2018).
8. Kumar, H. Naveen, S. J. Manjunath, and G. Arun Kumar. "Role of UIDAI in financial inclusion." *International Journal of Managment, IT and Engineering* 2.10 (2012): 627-637.
9. Panagariya, Arvind. "Digital revolution, financial infrastructure and entrepreneurship: The case of India." *Asia and the Global Economy* 2.2 (2022): 100027.
10. Pandey, Santosh K., Kavita Bhatia, and Jahnavi Bodhankar. "e-Sign-An Online Digital Service: Evolving Trends & use Cases."
11. Gururaj, Prabhanjan. "Identity management using permissioned blockchain." *2020 International Conference on Mainstreaming Block Chain Implementation (ICOMBI)*. IEEE, 2020.
12. Rajendiran, Mr S., et al. "Aadhar based electronic voting system and providind authentication on internet of things." *International Research Journal In Advanced Engineering And Technology (IRJAET)* (2017): 1711-1718.