



Tenant Intimation and Information System

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Abstract : This Paper Presents the novel idea of Tenant Intimation and Information System. It describes a web app for Submitting Information of Tenants for overall security and crime management. Users can send the basic information of the Resident Members which is required by the local police station. We aim to collect required data at ground level. The primary objective of our system is to reduce the dependency of physical Forms and Records. Existing Systems are polar systems that are Either Completely Manual or are Completely Online. The Initial Login Page of Web App Comprises New Entry and Modify Entry in User Section. Using the New Entry Section Users Can Generate a New Entry. Admin Login and Verify Application are two Subsections Present in Admin Section. As a Result, Users experience a Hybrid System that can Integrate Manual Filled Forms and Online Form. The System Also Completes the objective to solve the existing problem of party and residents' photographs which are not available in the existing portals.

Keywords - Data Entry Systems, Police Verification, Public Data Collection Systems, Tenant Intimation.

I. INTRODUCTION

Tenant Intimation and Information System Deals Information of Tenants / Licensee / Long-Term Temporary Residents, Intimation of Such Persons to Local Police Station. A Form Containing the Relevant Information Like 1) Owner Details 2) Rented Property Details 3) Tenant Details 4) Family/Resident Members Details Etc. is Submitted Physically to Local Police Station. Each Police Station Keeps the Records in Physical Form. Under Digital India Programme Many City and Urban Police Websites have Launched their Own Digital Systems to Collect this Information. Each Different System has Different Databases and It is not Possible to Collect Information from Physical Forms as well as Connect the Databases at Time of Need of the Information. Thus We Have Built an Easy Access User-Friendly and Single Common System All over the State to Collect the Tenant Information, Submit and Receive the Intimation of New Tenants.

II. PROBLEM STATEMENT

At Present there are Different Physical Forms Used by Every Police Station to Collect Information of Local Residents. Hence, there exists a problem of searching physical data When Required. When the data is needed insistent for Investigation Purposes the Data is Not Available on time which Delays Investigation and Ultimately Delays Delivery of Deserved Justice. Due to Different physical forms no proper Common Resident data is collected nor a Database is Maintained for Such. For Online Forms that are Currently Available, there are different Systems and databases for every district in every State. Data is not accessible by the Investigating Police personal. When an Investigating Officer wants to access the data they have to request specially to Superiors (Office of SP, or DSP). Online Facilities to Submit the Information of Tenants cannot be accessed by All as Each Citizen does not Possess Equal Technical Expertise to Submit Information through Multiple Page Online Forms. Hence a Hybrid System is Required which can Combine Online as well as Offline Data Inputs.

III. OBJECTIVE

Our Primary aim is to reduce the dependency on physical Forms and Physical Records which is not Accessible at time of Need and search of required Data. Secondly, we aim to simplify the user interface for citizens of all technical backgrounds. Objective is to create a common database all over the state, Covering Urban as well as Rurals Districts. The system will be built such that the Investigating officer can access the data When required at time of investigation. Our overall Objective is to solve the problems present in current Systems empaneled by Different City and District Police for the Citizens a provide a system easy to access, more secure.

IV. METHODOLOGY

The Basic Methodology of our System Relies upon Data Entry Systems and automation related to such systems. Tenant Intimation and Information system is also a type of Data Entry and Data Collecting System where Data Submitted by Citizen is Approved by admin and Ultimately stored in Records upon Approval by the Admin. Citizen refers to the Owner, Landlord, Tenant, Lessee, Agents or Service Providers under CSC VLE Scheme of the Government who intend to submit the information of the Tenant to Local Police Station. The Admin Panel is used by Police Officers and Intelligence Agencies to Approve / Verify / Download Report of Such Submitted Information.

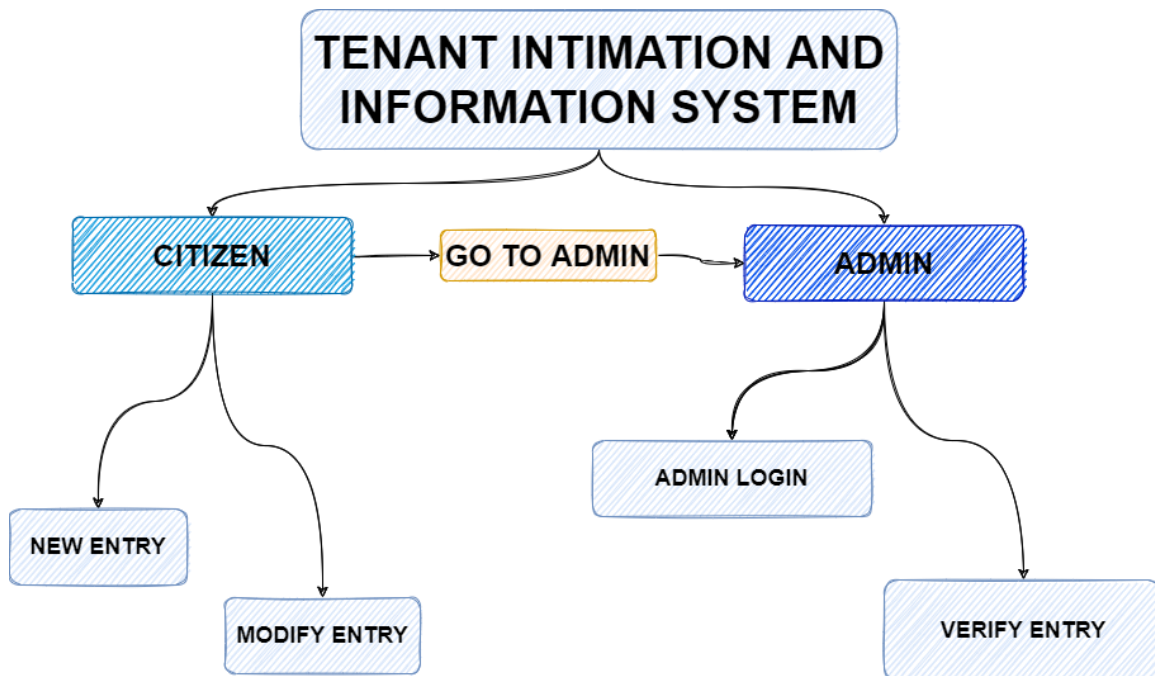


Fig. 1 Basic Design Methodology

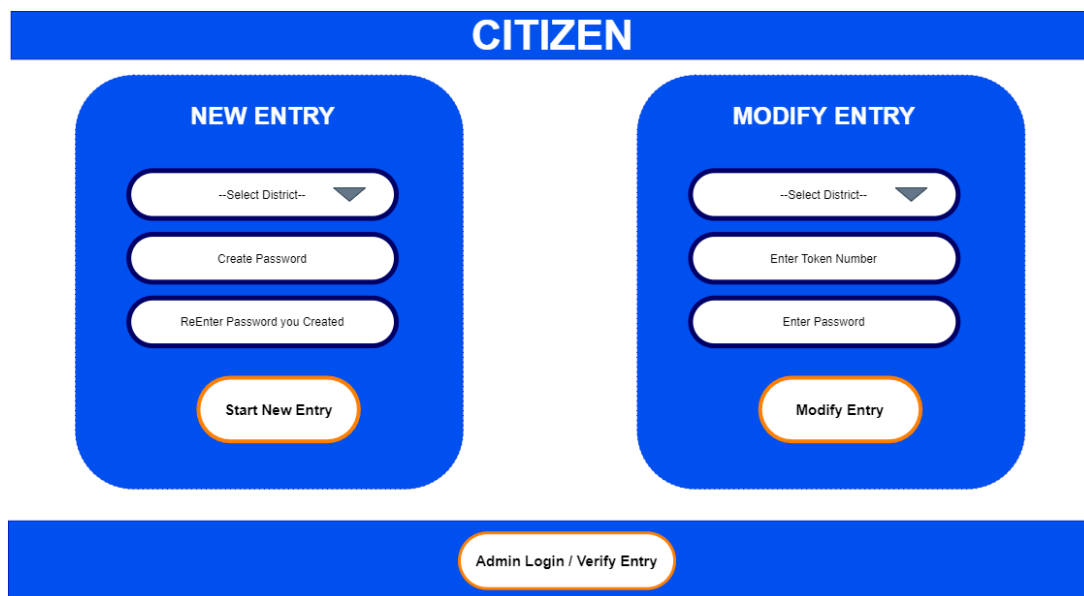


Fig. 2 User Interface for Citizen Section

The Citizen Panel would bear the New Entry Section where user can create New Entry and Modify Entry Section where User Can Modify Existing Entry before submission or upon query by the admin section. The Admin Section has options to login with Department provided user-id and password and Other Option would be to Verify Entry which is Approved by Admin / Police. Using Verify Entry Option Third Parties like Banks, Gas Agencies, Passport Seva Kendras, Etc. can verify the Intimation Submitted to Police Station with that Provided by the Citizen. This would Eliminate any chances of forgery or false information submission to third parties.

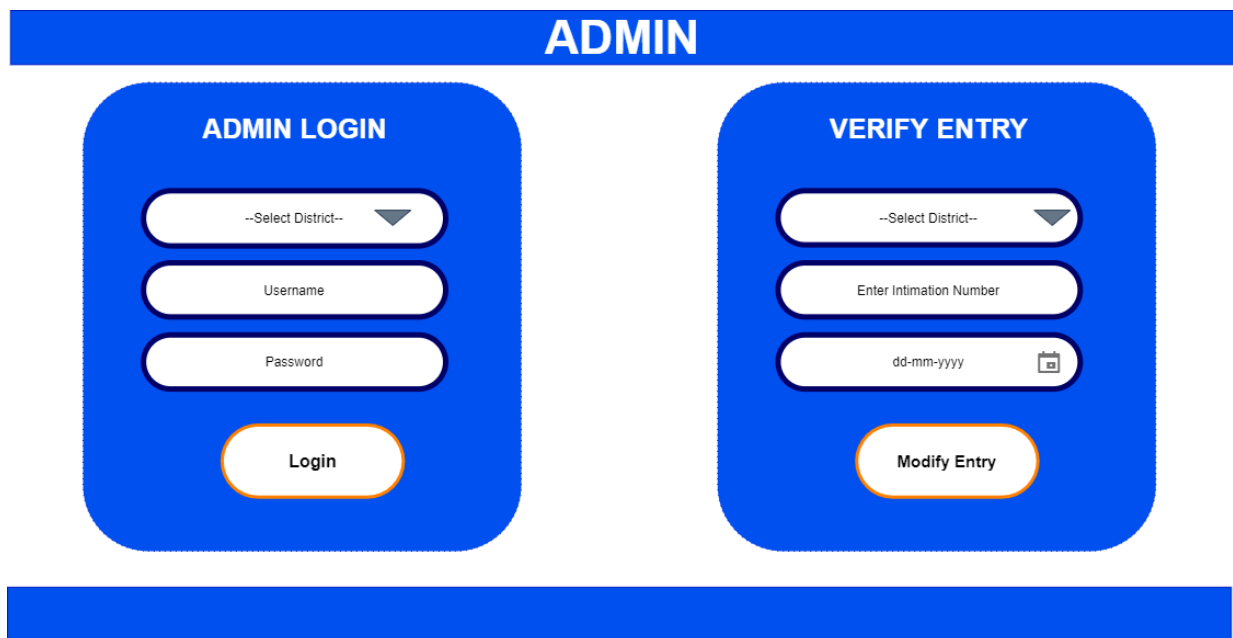


Fig. 3 User Interface for Admin Section

The Flow Chart Explains the process flow for Citizens and Admin Sections. The Citizen Selects the District and Starts New Entry. Upon First Saving the Owner Details the Citizen is provided with Temporary Request Number Called Token Number. Using this Token Number User Can Modify Entry any time before submission or when entry is queried by admin. A Single form collects The Information in 4 Parts and Ultimately Collects the Self Declaration for Criminal Case and Correct Information.

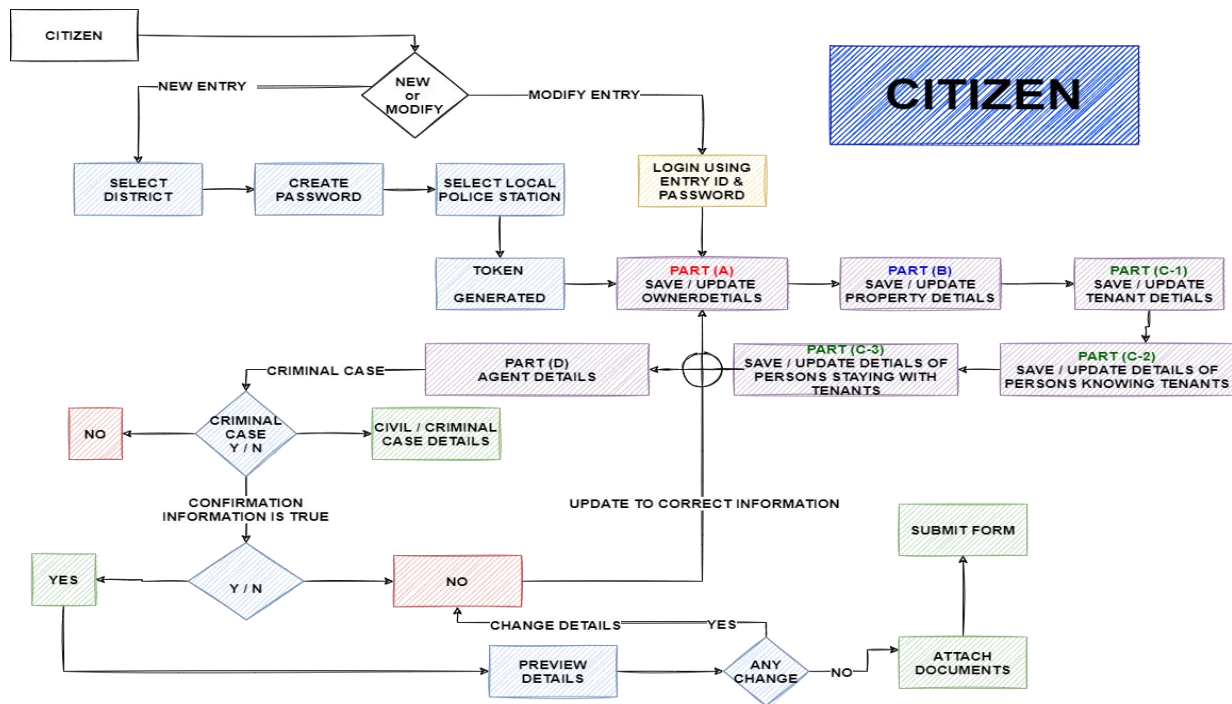


Fig. 4 Process Flow Chart for Citizen

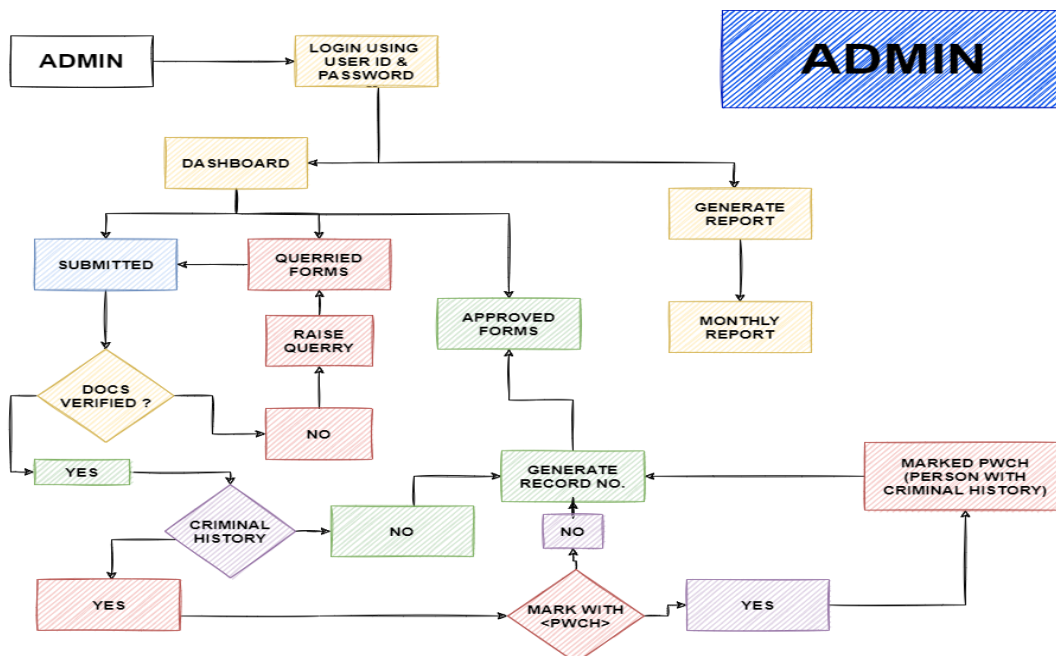


Fig. 5 Process Flow Chart for Admin

The Admin should verify the form submitted by the user. If the details are not verified Admin Can Query the Form Which Returns back to Citizen Panel. If Details Are Verified, Admin can Shift Entry under Approved Form which returns PDF form of Details Filled to the Citizens which can be Obtained Using View Status Button.

4.1 Tools to be Used

MERN Stack for Web App Development

MERN stack is a collection of robust and powerful technologies used to develop scalable master web applications, comprising front-end, back-end, and database components. It is a technology stack that is a user-friendly full-stack JavaScript framework for building dynamic websites and applications.

MERN Stack is a combination of MongoDB, Express.js, React.js, and Node.js. MERN is a free, Open-source, user-friendly, and full-stack JavaScript framework ideal for dynamic websites and web apps. If anyone is looking for a more effective and productive web solution, then the MERN stack comes to the picture with the ability to work with all the advanced java script stacks.

Where MongoDB is the latest and widely used NoSQL database, Express.js is providing a solid framework for node.js, react.js is a famous yet powerful front end and Node.js is the new and most powerful back-end.

M - MongoDB (Open source NoSQL Database)

E - Express.js (Back-end web app framework)

R - React.js (Front-end web application framework)

N - Node.js (Back-end runtime environment).

OCR as a Tool

OCR (Optical Character Recognition) is the use of technology to distinguish printed or handwritten text characters inside digital images of physical documents. The basic process of OCR involves examining the text of a document and translating the characters into code that can be used for data processing. OCR is sometimes also referred to as text recognition. We aim to Integrate OCR Technology to Simplify the User Experience for our Users that are not Much Technology Oriented but can Physically Fill Up the Form (Handwritten) and Upload it into the System. The OCR System Converts the Handwritten Information into Recordable Data in Database System.

V. RESULT

We have Successfully Implemented and Delivered Tenant Intimation and Information System. The New Entry Section Opens Blank New Entry upon Starting New Entry. While the Modify Entry Successfully Retrieves Data from Database and allows User to Update the Details.



Fig. 6 Citizen Page (Actual Result)

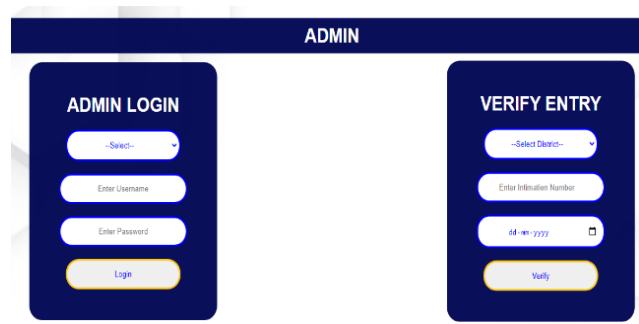
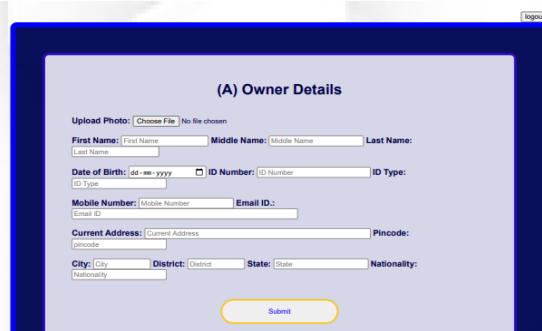


Fig. 7 Admin Page (Actual Result)

The Data Entry Forms is also Proved to Collect Information and Store Accordingly. The Form proves User Friendly and Users are Very Comfortable with Operating the System



VI. CONCLUSION

Tenant Intimation and Information System gives an interface for a simple and common system for tenant intimation and verification process. The System increases the Ease of Doing Business (EoDB) for Citizens and Police. Common Database will provide an element of safety for both, Citizens and police. By Using this Intimation system, it is easy to keep records and keep track of people with criminal history or On-Going Criminal Case and on Bail. It provides first Hand Information in case of many Major and Minor Criminal Activities. The System will further Benefit all stakeholders of the system as well as Citizens if Implemented Under Digital India Scheme and Common Service Center Village Level Entrepreneur (CSC-VLE) Schemes for Urban and Rural Integration. Our Primary Objective of Collecting Information Under One System will be Achieved if this system is Implemented by State Government through Different City and District Police Offices.

VII. FUTURE SCOPE

The Tenant Intimation and Information System Can Include QR Code Verification wherein the Third Party Verifier Can Just by Scanning the QR Code, obtain a server Copy of the Record which can eliminate Forgery of the Output Received. The System can also have Import Data functionality where the Data from Previous Entry can be Directly Imported into New Entry for Editing thus Reducing the Need to Fill all the Details Again. Aadhar OTP Verification is another eKYC Option that can be Integrated to Verify the KYC of the parties. This can lead to Paperless Processing without the Need for Verification with Attached IDs.

Again a Similar Option to OTP Verification is the Offline-eKyc Aadhar Method again This can lead to Paperless Processing while maintaining security. Though Possession of (Crypto Token Based) Digital Signatures by Each and Every Individual is a Far Sight in Today's Scenario However, In Future users may have an option to Digitally Sign the Document (as Per Rules Outlined in IT Act 2000) for KYC Verification Purposes. Furthermore, In Near Future a Mobile Friendly version of this WebApp can also be Made Available where Users Can Enter and Capture their Details and Photographs through Mobile and Mobile Camera.

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