

Digitalized Gram Panchayat Web Application Using Data Analytics

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Abstract Now a day's Smart city mission is to drive economic growth and improve the quality of people by enabling local area development. Digital Gram Panchayat services help villagers to get easy information about the government services provided by the government for the welfare of the villagers. In this website all the work of the panchayat will be done in a digital way and the user can get every information online. Digital Gram Panchayat Service is a system which helps government servants by reducing their workload and also helps other peoples who seek the services of government.

Keywords - economic growth, city mission, villagers, panchayat, government, Digital Gram Panchayat

I. INTRODUCTION

The objective of this project is to reach government service in a digital way. In this online service, the public can see the list of government services in their cell phone and they are able to get information about call register documents and may apply for online services. With the help of this project better communication may be developed between government service providers and the public and in this way, it is helpful in information distribution. Panchayat staff will accept this application and verify and send this application to head office from where application will be approved. And the users can see the information of all the processes in the option of application status. At present all the services are done offline or in paper medium in that the villagers have to go for all the information in the Panchayat office and they face many difficulties. Enough line method the users may not know the application status in a proper way. They face many difficulties and they are unable to know where their application is posted in a proper way or not. With the help of digital Gram Panchayat services, the users may fill a form in an online way so they can see all the application status in their mobile in an easy way. That is all the information about whether the application is approved or rejected. The users can get easily information and they don't have to go Panchayat office many times. And panchayat offices also do their work in an easy way and they also have no loads of file or paper. The details of all the schemes will be shared on the website and by clicking in particular the user may fill the form.

The digital platform aims to bring out the local voices by empowering the local communities to showcase and share local social, cultural and economic practices, stories and

challenges. Moreover, the web-platform would act as a repository of local content for national and global audience and vice versa with a bottom-up content thrust. Additionally, the portal would act as a multipurpose information and communication platform to showcase local content, culture, best practices, advocate local issues, e-Commerce to the Panchayat Villages. Digital Panchayat is a platform for panchayat representatives to connect with rest of the world.

II RELATED SYSTEM

India's digital story is one of an ICT - led development by use of technology that is affordable, inclusive and transformative. 'Digital India' programmes aims at transforming India into a digitally empowered society and knowledge-based economy by ensuring ease of access, digital inclusion and participation. The strength of digital infrastructure and digital services has already proved its resilience during the pandemic times. India is among the top countries that have experienced the fast digital adoption. This has been achieved due to a focused approach of the Government and the implementation of innovative initiatives. These initiatives have not only eased the life of citizens but have also created a favorable ecosystem for startups, industries and electronics manufacturing with an aim to make India an "Amenabar" nation. Following are the major initiatives and the achievements during this year.

Digital Infrastructure

i. Digital Identity: Aadhaar

- Aadhaar is world's largest digital identity programme that provides biometric and demographic based unique digital identity that can be authenticated anytime, anywhere

and also eliminates duplicate & fake identities. It provides an identity infrastructure for delivery of various social welfare programmes. As on 31st November, 2022, 129.41 crore [Live] Aadhaar has been issued.

- For providing convenient Aadhaar enrolment and update services to the people, UIDAI has started 88 Aadhaar Savitendra's (ASKs) in 72 cities across the country.

- UIDAI has launched Face Authentication modality by which an Aadhaar number holder's identity can be verified with Aadhaar authentication. Presently, 21 Entities have been permitted to use Face authentication in production environment. The total number of Face

Authentication transaction since 15th October 2021 to 30th November 2022 is 1.15 crore.

Digital Delivery of Services

i. Common Services Centres (CSCs): CSCs are the world's largest digital service delivery network, with wide reach in rural areas up to Gram Panchayat & Block level. These information and communication technology enabled kiosks with broadband connectivity has been providing various governments, private and social services to the citizens. As on date,

5.49 lakh CSCs are functional (including urban & rural) out of which, 4.37 lakh CSCs are functional at Gram Panchayat level.

ii. Meri Pechan, a National Single Sign-On (NSSO) was launched on July 4, 2022 by the Hon'ble Prime Minister, is a user authentication service wherein single set of credentials can provide access to multiple online applications or services. Currently, 5057 services of various Ministries/States integrated with NSSO.

iii. MyScheme was launched on July 4, 2022 by the Hon'ble Prime Minister, is a schemes eMarketplace, where citizens can discover eligible schemes based on his/her demography. More than 180 schemes of the 27 Central and State/UT Governments across 13 diverse categories have been hosted.

iv. DigiLocker has provided a dedicated cloud-based platform as a personal space to residents for storage, sharing, verification of documents & certificates, thus it is helping in eliminating use of physical documents. Over 13.5 crore users are registered with DigiLocker and over 562 crore documents are accessible via DigiLocker.

v. UMANG (Unified Mobile Application for New-age Governance) has been developed as a unified platform to deliver major Government services through Mobile. So far, 1,658 services from Central/State Govt. along with 20,197 Bharat Bill Payment Services (BBPS) have been on-boarded on UMANG.

vi. India Stack Global has been initiated to showcase the India Stack and its building blocks globally. At present,

12 key projects/platforms namely Aadhaar, UPI, Co-Win, API Setu, DigiLocker, AarogyaSetu, GeM, UMANG, Diksha, E-Sanjeevani, E-Hospital, and E-Office are made available at the portal of India Stack Global available in all UN languages.

vii. API Setu: MeitY had notified the 'Policy on Open Application Programming Interfaces (APIs)' in 2015. The policy intended to promote efficient sharing of data among data owners and inter-and-intra Governmental agencies to achieve the objective of interoperable systems in order to deliver services in an integrated manner. Hence, API Set project intends to facilitate implementation of this policy. The portal has published around 2,118 APIs provided by many Central and State Government departments on NDH gateway. Currently, there are 1047 Publishers and 330 Consumers.

viii. eSign provides easy, efficient, and secure signing of electronic documents by an Aadhaar holder. so far, 34.41 crore eSigns have been issued. Out of these, e- Sign issued by CDAC (i.e. under e-Hastakshar project) is 8.22 crore.

ix. National AI Portal has been developed to provide all information related to Artificial Intelligence to all stakeholders at a single place and promote awareness and communication on AI in the country. As on 31 October 2022, it has published 1520 articles, 799 news, 262 videos, 114 research reports and 120 government initiatives, all related to AI.

x. Aeroyacht: It is a mobile application launched by the Government of India on 2nd April, 2020, to aid the COVID-19 efforts of the Government. The App works based on contact tracing method and helps the Government in identifying, monitoring and mitigating the spread of COVID-19 across the country. The App is now transformed into National Health App, bringing a whole plethora of digital health services powered by Ayushman Bharat Digital Mission (ABDM). Using AarogyaSetu, citizens can now register for Ayushman Bharat Health Account (i.e., Digital Health ID) and leverage it for interaction with participating healthcare providers.

xi. GST Prime: GST-Prime is a product to help the tax administrators to analyze and monitor the tax collection and compliance within their jurisdiction. GST-Prime improves the GST compliance, increase the tax collection, increase the tax base, detect the tax evasion and fraud and predict the effect of policy change.

xii. e-Taal 3.0 (Electronic Transaction Aggregation & Analysis Layer): eTaal provides a real-time aggregated view of volume of eServices being delivered across different agencies of the Central, State and local Governments in India. eTaal dashboard displays the number of 'end-to-end electronic transactions' as the indicator for measuring the performance of G2C, G2B and B2C e-Services. Since, Jan, 2022 to 7th Dec, 2022, around 13,897 crore e-transactions

has been recorded and 20 additional e-Services have been integrated with platform. Making the total of 4033 eServices integrated.

xiii. Vehicle Location Tracking System (VLTS) is designed to track and monitor public vehicles with the help of GPS-based tracking devices which gets fitted in Vehicles. The System also has a provision to send panic alert which triggers emergency response procedure to support passenger in distress with the help of effective monitoring using Command Control Centre.

xiv. eChallan: A comprehensive traffic management solution using a mobile-based app and complimentary web application which is Integrated with CCTV/ ANPR (Automatic Number Plate Reading) Cameras, RLVD/OSVD (Red Light/ Over Speed Violation) Devices, Later Guns etc for issuance of challan/ notices.

xv. Electronic Human Resource Management System (eHRMS): eHRMS application is responsible for the maintenance of employee record in electronic form, from hiring to retiring. The project includes scanning/digitization of service book to capture the legacy data and provision of numerous online services through various modules; namely Service Book, Leave, LTC, Personal Information, Reimbursements, Advances, Tour, Helpdesk, etc

xvi. ServicePlus: It is a Meta Data Based e-Service Delivery Framework which helps in making all Government services accessible to the common man in his locality through common service delivery outlets. Presently, the framework is successfully running in 33 States/UTs facilitating more than 2,791 Services of Central, State and Local Government.

xvii. Open Government Data (OGD 2.0): The OGD Platform (<https://data.gov.in>) has been set-up to provide proactive access to Government owned shareable data, along with its usage information in open/machine readable format, periodically, within the framework of various related policies, rules and acts of the Government. From 1st January 2022 to 7th December 2022, OGD platform have 66,000 dataset resources, 876 catalogs contributed by 571 Ministry/Departments, over, 210 Visualizations created, 44,704 Application Programming Interfaces (APIs) created. Till date, datasets have 32.22 lakh times viewed and 94.7 lakh times downloaded on OGD Platform.

xviii. Global Indices (E-Government Development Index): MeitY is the nodal ministry for E- Government Development Index (EGDI) along with two-line Ministries/ Departments viz. Department of Higher Education and Department of School Education and Literacy (DHE and DoSEL). The EGDI is a composite measure of three important dimensions of e-government, namely: Online Service Index, Telecommunication Infrastructure Index and the Human Capital Index. The latest E-Government Development Index (EGDI) 2022 edition indicates the e-

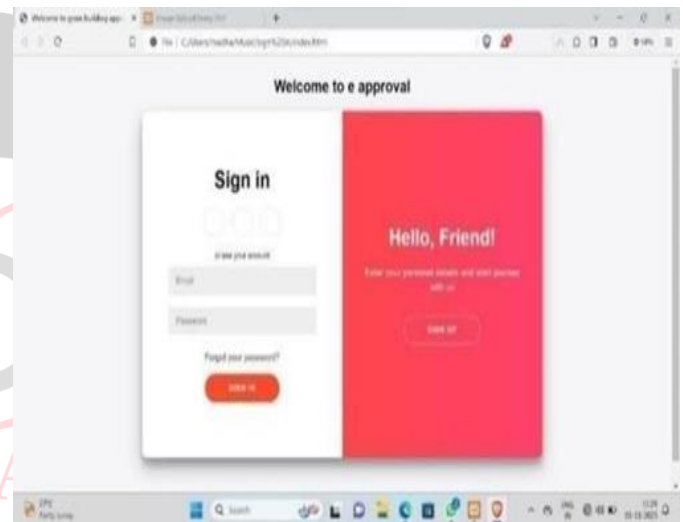
government development status of all 193 United Nations Member States. India has ranked 105th in EGDI 2022.

III. PROPOSED SYSTEM

Create a user-friendly online portal where citizens can submit building permission applications. This portal should guide applicants through the process, ensuring they provide all necessary information and documents. Implement an automated system that verifies the completeness and authenticity of submitted documents, reducing the burden on Gram Panchayats. Develop a public-facing dashboard that allows citizens to track the progress of their applications in real-time, enhancing transparency. Set up an automated notification system that keeps applicants informed at every stage of the process, reducing the need for manual follow-up. Create a centralized database of approved norms and regulations by Gram Panchayats to ensure consistent adherence.

IV. METHODOLOGY

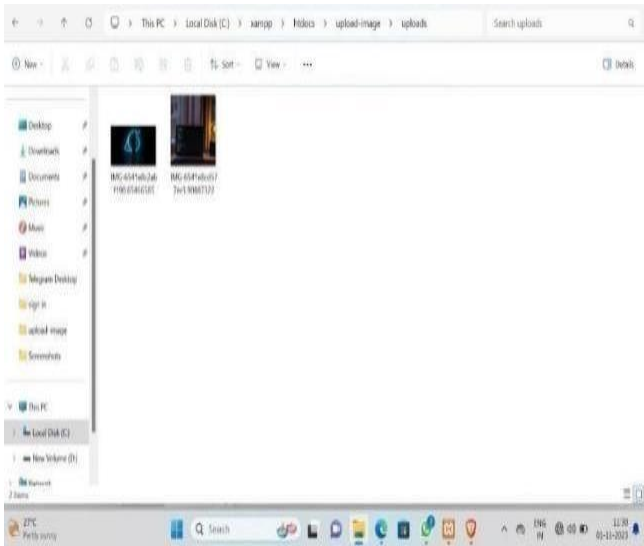
1. Home Page, User Registration and Login:



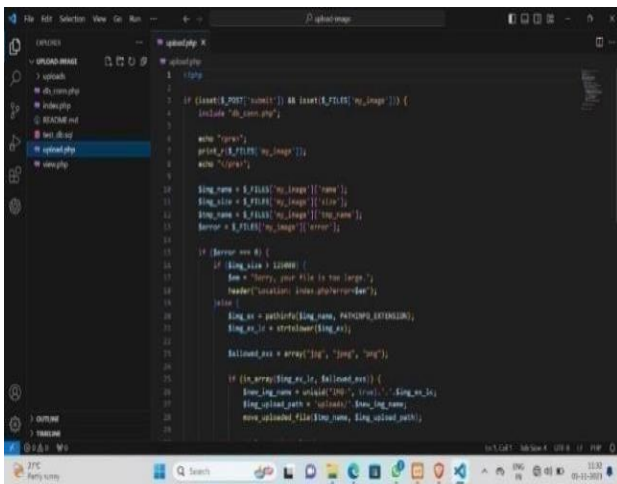
2. Choose File and Upload Documents File:



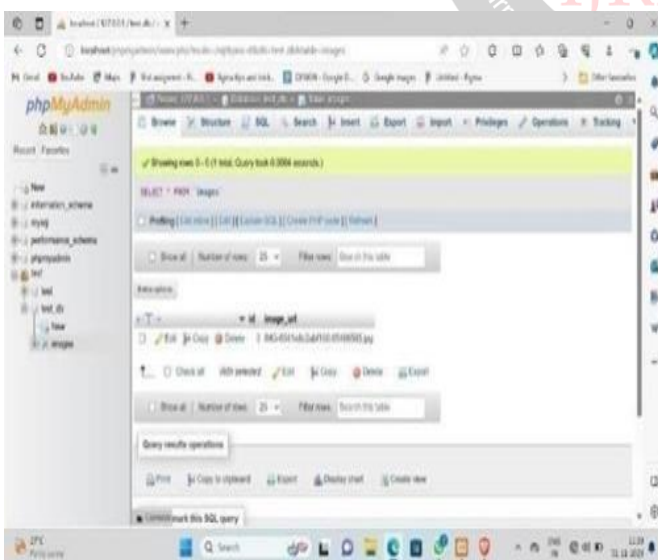
3. Selection the File:



4. Coding Page:



5. Database Page:



V.SYSTEM ARCHITECTURE

Villages will get the information about government services and related documents digitally from gram panchayat. The other objective of digital gram panchayat

service is to reduce paper consumption and also the workload of servants of gram panchayat. The Transparency of communication between gram panchayat and service users. Villages & gram Sevak work under and get information on their account. This is to reduce the time of villagers who visits the panchayat office frequently to get the information about scheme /services

This system provides ID and password for the villager. Account history provides information about the services that are previously submitted by the villagers. Both analysis and evaluation results confirm that the proposed web base system can provide an effective solution for submitting the services/schemes that are useful for the villagers in online mode. Data flow diagram for admin shows admin system work. Admin have their own Id password after entering into window admin add scheme and all related information about the scheme will appear on the web page of user and gram Sevak from that they all get information about scheme and related documents Admin update the detail of scheme as per requirement. Admin can see user details and staff details too. By this admin control the staff's activities.

Request processed by the gram Sevak appear in the admin window, after styding document and ground level report by the officer, admin approved the application and any case of mistake admin have right to reject the application or request.

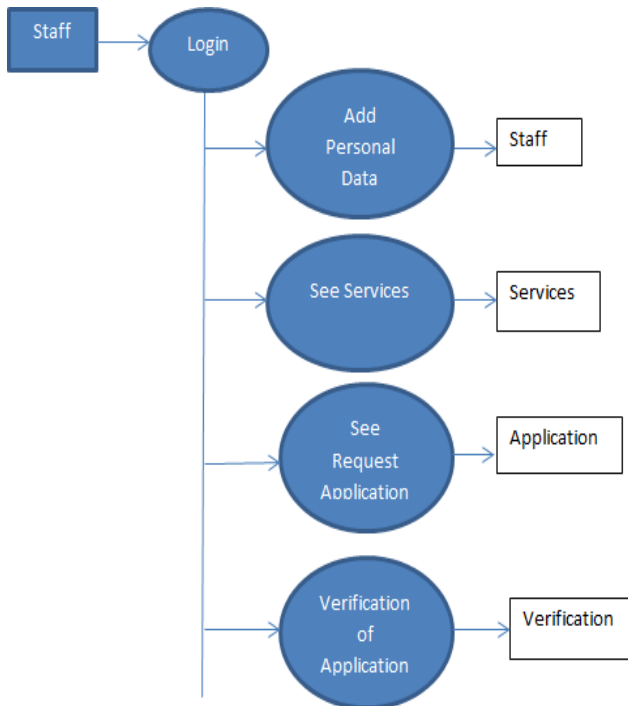
User id concept is very useful. Users or villagers will get its id by registering name and personal data at the system after registering the information user id and password generated. Through this id and password users can login in the user window and see all schemes or service lists provided by the government to them. In this window they can see the information of required documents and details which will be submitted. By this they were informed that they are eligible or not for provided services. If a user is eligible for the service they can apply in a digital way without any inconvenience and upload required documents. This way is more secure than the offline process of applying for any services.

Data Flow diagram

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scheme and related documents Admin update the detail of scheme as per requirement. Admin can see user details and staff details too.



VI. CONCLUSION

This web-based application will be helpful to the villagers of that village; it will bring transparency, accountability, and efficiency in administration. Document and their related record will be available on this application. It helps to make administration more accountable as well as more transparent. The above survey and proposed system will help the Gram panchayat system to work efficiently. This system provides ID and password for the villager. Account history provides information about the services that are previously submitted by the villagers. Both analysis and evaluation results confirm that the proposed web base system can provide an effective solution for submitting the services/schemes that are useful for the villagers in online mode. This will help to minimize corruption in the system, and also save the effort and time of common man and government officers.

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