# Incentives-Based Onboarding System for Legal Service Providers on eMarketplace

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# 1.INTRODUCTION

India's traditional legal system, while anchored in deep constitutional values and historical precedence, is often tangled in structural inefficiencies, delayed processes, and barriers hindering the average citizen's access to justice. Persistent issues such as mounting case backlogs now exceeding five crore pending cases frequent procedural adjournments, and a shortage of judges critically undermine the timely delivery of justice. For marginalized and economically weaker communities, these obstacles are compounded by high legal costs, limited outreach for free legal aid, and the complexity of legal procedures and language, resulting in only a tiny fraction of those eligible for aid actually receiving it. The increasing demand for transparency, accountability, and equitable access highlighted by reports such as the India Justice Report 2025 has made it evident that the conventional court-centric model requires urgent and innovative reform. The advent of technology-driven solutions, particularly the digital transformation of legal services through eMarketplaces, represents a promising response to these challenges. These platforms are specifically designed to onboard, verify, and incentivize advocates, arbitrators, mediators, notaries, and document writers, creating a transparent and efficient ecosystem for both service providers and citizens. By leveraging digital infrastructure, eMarketplaces offer citizens a way to find, compare, and engage with legal professionals seamlessly and securely regardless of their location or background. They streamline document management, enable real-time consultations, and foster trust via transparent feedback and rating systems. For legal professionals, these platforms offer incentives that reward excellence, build reputations, and encourage continued participation, helping to address both the quantitative shortfall and qualitative demands of India's legal ecosystem. Research shows that digital legal platforms have dramatically improved the reach and efficiency of legal services. Online marketplaces connect clients with lawyers from the comfort of their homes, allowing for document sharing, video consultations, and case management completely online. These platforms offer several advantages, including time savings, cost effectiveness, broader access to legal expertise, and a heightened layer of trust through features such as verified profiles and review systems.
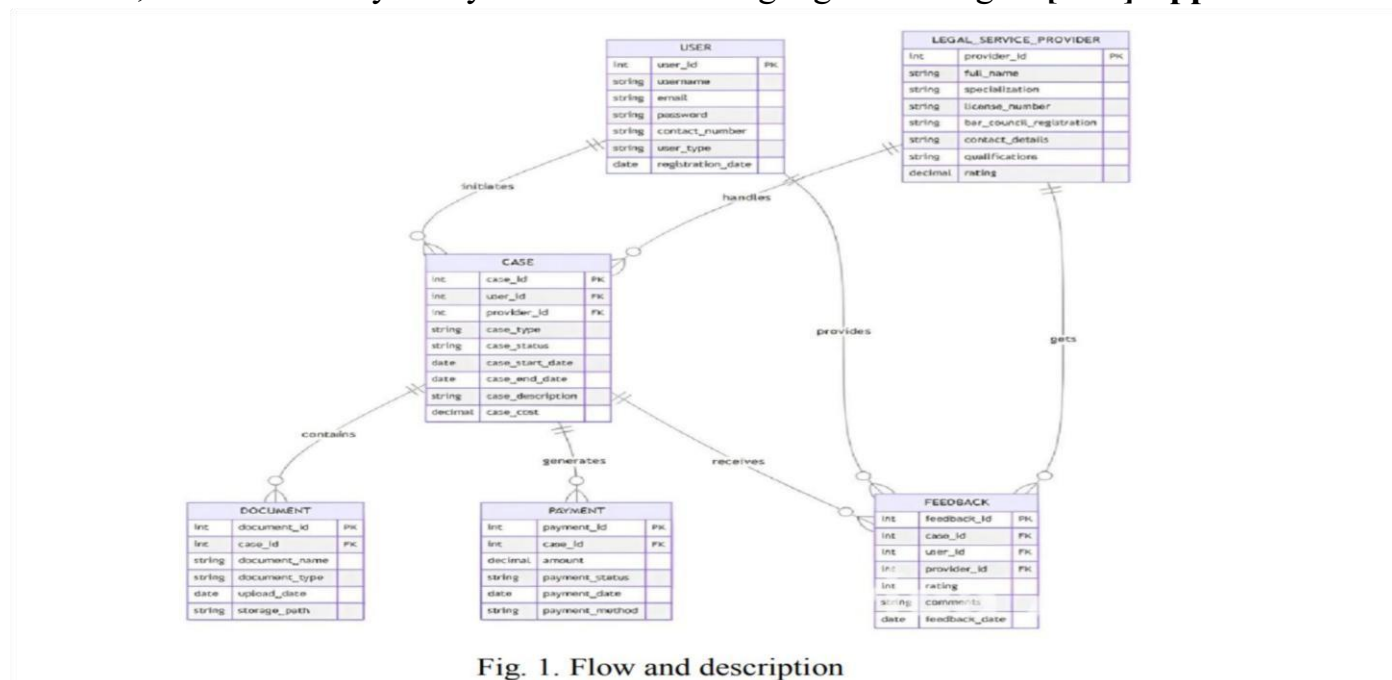
# 2. LITERATURE SURVEY

## 2.1 Overview of Related Systems

Existing platforms like Legal Connect and Legal Service India provide searchable lists or management for legal service engagement. However, these platforms lack robust rating systems, advanced service categorization, and comprehensive provider information, reducing effectiveness in fostering trust and accountability.

**[10] Nyaya Shastra: E-Platform for Legal Providers, IJARSCT, 2024**Aryan Singh, Khushi Aggarwal, Rajesh Kumar, Department of Computer Science and Engineering, Dronacharya College of Engineering, Gurugram, Haryana.

This innovative digital platform aims to revolutionize the legal service landscape in India by addressing the critical need for equitable access to justice, particularly for marginalized and socioeconomically disadvantaged communities. By leveraging advanced technologies such as artificial intelligence, machine learning, and web-based automation, the platform seeks to centralize and simplify legal access for citizens across the nation. The research explores the systematic design and implementation of this solution, examining its architecture, key use cases, technical foundations, and social implications. The primary goal is to create a userfriendly legal marketplace that facilitates seamless interactions between service seekers and legal professionals, featuring tools like case tracking, automated document handling, and realtime progress monitoring. This work not only outlines the platform's theoretical basis and functional components but also provides a comprehensive literature review and future research directions, ultimately envisioning a scalable legal ecosystem that fosters trust and efficiency. Access to legal services in India remains a significant challenge for many citizens due to factors such as lack of transparency, high costs, and limited reach of qualified legal professionals. The legal sector is witnessing a digital transformation, with several platforms emerging to bridge these gaps and make legal assistance more accessible, affordable, and efficient. However, the onboarding and active participation of diverse legal service providers - such as advocates, arbitrators, mediators, notaries, and document writers - on digital platforms remain limited. This research paper proposes "Nyaya Shastra" an innovative emarketplace platform designed to incentivize and streamline the onboarding of legal service providers, thereby enhancing transparency and accessibility for citizens across India. Navigating the legal system in India poses significant challenges for a substantial portion of the population, with high legal consultation costs and a lack of localized, relevant resources hindering effective access to legal rights. These issues are compounded by systemic opacity and a limited number of verified legal professionals available to meet diverse regional and legal needs. In response, this project aims to transform legal service delivery through a digitalfirst framework, grounded in the belief that legal aid should be a fundamental right rather than a privilege, and that technology can serve as a vital link between citizens and their constitutional entitlements. The research introduces a centralized legal services marketplace that unites advocates, notaries, arbitrators, and legal writers under one transparent digital

platform. By promoting user empowerment through self-help legal tools and well-organized services, the initiative seeks to reduce service opacity, lower legal costs, and create an efficient, inclusive, and trustworthy ecosystem for addressing legal challenges. **[10.1] Approach**

**USER**

| int | user_id | PK |
| --- | --- | --- |
| string | username | |
| string | email | |
| string | password | |
| string | contact_number | |
| string | user_type | |
| date | registration_date | |

**LEGAL_SERVICE_PROVIDER**

| int | provider_id | PK |
| --- | --- | --- |
| string | full_name | |
| string | specialization | |
| string | license_number | |
| string | bar_council_registration | |
| string | contact_details | |
| string | qualifications | |
| decimal | rating | |

**CASE**

| int | case_id | PK |
| --- | --- | --- |
| int | user_id | FK |
| int | provider_id | FK |
| string | case_type | |
| string | case_status | |
| date | case_start_date | |
| date | case_end_date | |
| string | case_description | |
| decimal | case_cost | |

**DOCUMENT**

| int | document_id | PK |
| --- | --- | --- |
| int | case_id | FK |
| string | document_name | |
| string | document_type | |
| date | upload_date | |
| string | storage_path | |

**PAYMENT**

| int | payment_id | PK |
| --- | --- | --- |
| int | case_id | FK |
| decimal | amount | |
| string | payment_status | |
| date | payment_date | |
| string | payment_method | |

**FEEDBACK**

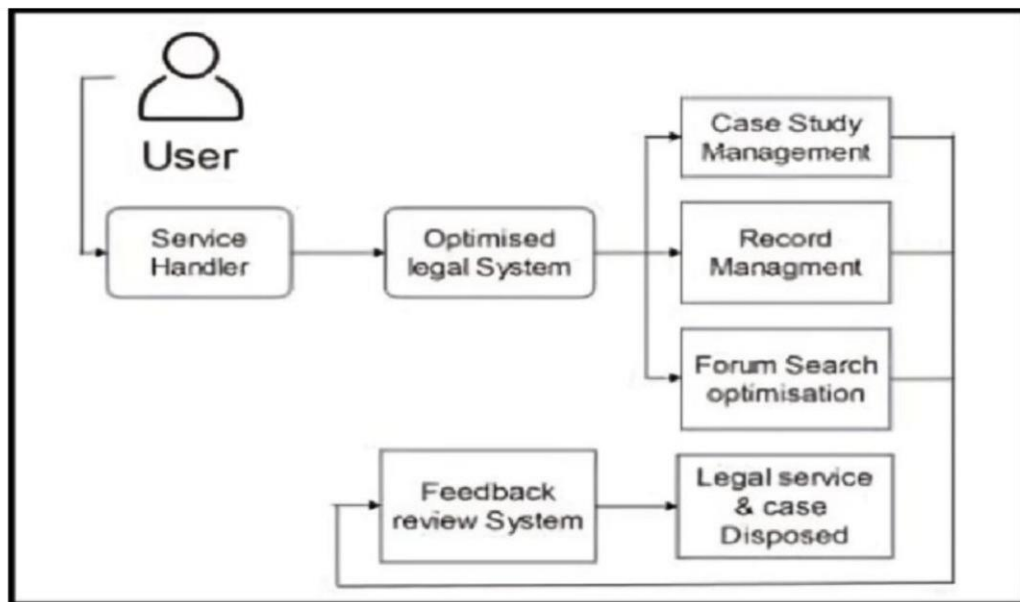| int | feedback_id | PK |
| --- | --- | --- |
| int | case_id | FK |
| int | user_id | FK |
| int | provider_id | FK |
| int | rating | |
| string | comments | |
| date | feedback_date | |

Fig. 1. Flow and description

The approach adopted by Nyaya Shastra is methodical and rooted in both technological feasibility and social responsiveness. The platform is designed to be centralized, responsive, and scalable, ensuring that it can serve users from all socio-economic backgrounds across India. It operates as a digital ecosystem where clients and legal service providers can interact in a seamless, efficient, and secure manner. At the core of the approach is a matching algorithm that connects clients with suitable legal professionals based on a variety of factors, including service category, geographic proximity, experience, and ratings. Legal service providers benefit from visibility and certification, while clients gain from transparent pricing, traceable service delivery, and real-time feedback loops. The project also places heavy emphasis on inclusivity by incorporating multi-language support and mobile accessibility. It bridges the digital divide by providing interactive learning tools, educational content, and user-friendly templates that allow even legally uninitiated users to navigate the system effectively. Moreover, through incentivization strategies and performance metrics, Nyaya Shastra ensures service quality while building trust between users and professionals in an often-mistrusted domain.

## [10.2] User flow Diagram

It begins with the client interface, a responsive dashboard through which users can register, search, and communicate with legal professionals. Behind this lies the application logic layer, where service matching, user authentication, and feedback mechanisms are processed using a blend of API endpoints and middleware logic. The backend further connects to a database that stores user profiles, case histories, legal document templates, and professional ratings, all of which are indexed for quick retrieval. A dedicated admin panel monitors service quality,

manages incentives, and processes onboarding verification for new service providers. Additionally, the platform architecture supports a notification system for case updates and deadlines.



The data is encrypted end-to-end, ensuring confidentiality, and compliance with Indian data protection guidelines is built into the system's governance model. The integration of AI modules adds a layer of intelligence by offering legal document classification, standard form generation, and adaptive user help all of which contribute to making the platform not just reactive, but proactive in assisting users.

**[12] Karnale, P.R., Chavan, S.R., Chougale, A.B., Patil, A.A., Jamadar, S.S. (2023), "Incentives based Design for onboarding Legal Service Providers for Extending Legal Services to Citizens in India," IJSREM** Piyush Karnale, Srishti Chavan, Amulya Chougale, Ansh Patil, Computer Science and Engineering, Sanjay Godhwat Institute.

Online platforms have emerged as a promising solution for providing access to legal services for citizens in India. So, here's another onboard platform which will provide people with legal service options at their fingertip. The eMarket Place platform is a novel solution to bridge the gap between the demand and supply of legal services in India. The law-and-order system seems to be in an unorganized manner. To overcome the law related drawbacks, the project focuses to develop an onboard platform like arbitrators, notaries, document writers, advocates, etc. The development will focus on a platform wherein the description of various legal service providers will be provided to the citizens of India who are not aware of the proper documents, laws and other legal services and hence may end up having more trouble in their lives. This is to promote efficient delivery of services. Also, since this is an onboard platform to be developed there are various other factors to be taken into consideration like that of the dashboard for the legal service providers, the rating and feedback system and the information that is to be provided at the end-user's site. The project will use various resources available
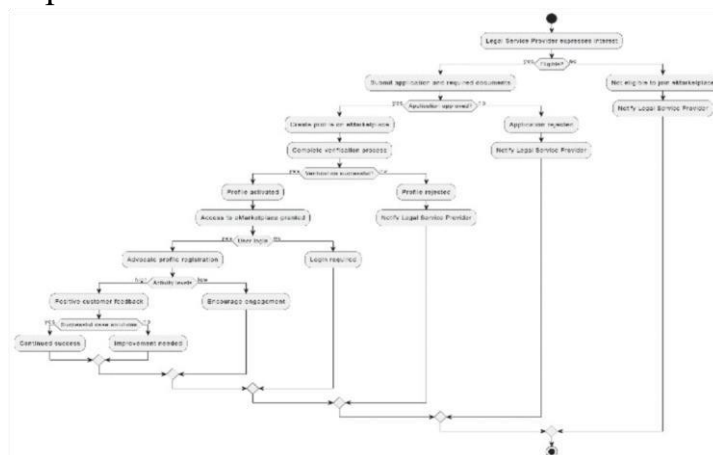
and also ensure that this will promote people with the best possible solution thereby helping the law-and-order sector.

## [12.1] Project Scope

Legal Service Provider Onboarding: Creation of simple user registration/verification procedures for Legal Service Providers like advocates, arbitrators, mediators, notaries and document writers. Service Categorization and Listings: Providers should implement a mechanism of categorizing their available legal services. They will be able to create details listing for their services by doing this. Citizen Access and User Authentication: This will allow citizens to sign up for specific legal service provider's account, do a search for same service providers of their interest and interact with legal service providers using secure authentications. Feedback and Rating Mechanism: Develop an interactive mechanism whereby citizens can offer feedback and rate based on their encounters with legal service providers. Legal Education and Resource Centre: Create a section for legal education where some of these issues are addressed in terms of information, articles, and materials targeting Legal Service Providers as well as citizens.

## [12.2] Methodology

Requirement Analysis: Carry out in-depth interviews and survey legal service providers, citizens, and administrators to ensure that they provide detailed requisite information. Specify the goals for the platform, its functions, and capabilities. Market Research and Feasibility Study: Analyse the Indian legal services market by considering major industry patterns, competitors, and potential risks. Undertake a feasibility study to gauge the feasibility and impact of the proposed platform.



**[Fig 12.2.1] Flow Diagram**

System Architecture Design: Create an advanced system architecture with elements such as the user interface, server side, databases, and outside connections. Draw flow diagrams, ER diagrams, or DFD diagrams to depict how information flows within the system Incentive System Integration: Develop an integrated incentive plan, setting evaluation and reward parameters of Legal Service Providers. Intertwining incentives is indeed an influential push for Legal Service Providers towards active involvement resulting into unmatched service delivery.

In this instance, it aspires towards a world where legal specialists are available within each to all citizens; disregarding distances and administrative hurdles. This allows people to work safely and conveniently with lawyers, which ultimately ensures that their rights and interests are properly protected.
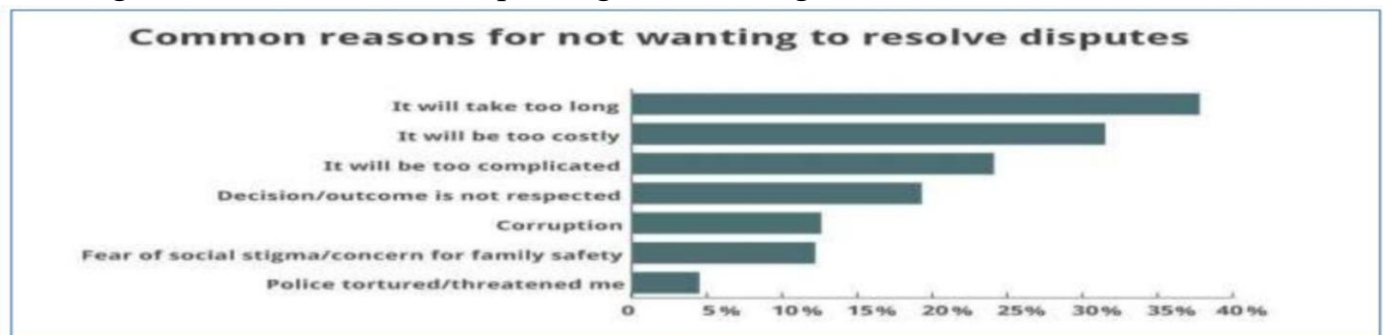
**[15] LEGAL SAHYOG HUB: JETIR2406832, "Incentives Based Design For Onboarding Legal Service Providers," JETIR.org **** Dr. Yakutat Tayyebi1, Anuj Banke, Anshita Balodiya, Gourav choudhary, Ananya Dey, Asst. Prof (CSE) Prestige Institute of Engineering Management & Research, Indore, M.P., India.

Legal Sahyog Hub is an e-platform created to assist people and organizations in completing their legal work quickly and affordably. Everybody knows that dealing with the legal system or any other legal concern can be complicated and time-consuming, and everyone would prefer to concentrate on other areas of their lives and businesses rather than the legal issues. Legal issues, however, are extremely important and should never be ignored. When a right is violated, access to justice is of fundamental importance for the injured individual and it is an essential component of the system of protection and enforcement of human rights. We understand the needs of people and its clients as well as criticality of the legal matters and thus it has established itself in such a way that the clients' matters or cases are kept at a pedestal which garners all importance and dedication from its Advocates. Researchers have explores the integration of legal services with e-governance in India, focusing on the Indian judicial system. Presented at ICACCI 2015, the case study highlights the potential of digital platforms to enhance accessibility, efficiency, and transparency in legal services, ultimately aiming to improve the delivery of justice to citizens [1]. The foundational tenet of the company is that "common people must have access to justice" and that "rich people should not be the only ones who can access justice". "Equal access to justice" would mean that different groups in a society would have similar chances of obtaining similar resolutions to similar kinds of civil justice problems [2]. If people had equal access to justice, a society's institutions of remedy would work to equalize how they handled their civil justice problems and to ensure that similar problems were resolved similarly, even when different kinds of people-whether rich or poor, men or women, of any race or ethnicity experienced. Gupta and Verma's paper, presented at the 2017 IEEE International Conference on Internet of Things (iThings), provides a comprehensive review and analysis of e-marketplaces for legal services. The study examines the evolving landscape of digital platforms that facilitate the provision of legal services, emphasizing their potential to enhance accessibility, cost-efficiency, and user experience. The authors discuss various models and frameworks of e-marketplaces, assessing their impact on the legal profession and clients. They also highlight the challenges and opportunities associated with the adoption of these platforms, including regulatory issues, technological barriers, and the need for robust security measures [3]. Naik and Gopinath propose a blockchain-based framework for enhancing legal services in India, presented at the 2018 IEEE CNS conference. Their framework aims to improve security, transparency, and efficiency in legal processes by leveraging blockchain technology, addressing issues such as data integrity, fraud prevention, and streamlined access to legal records [4]. Bajpai and Agarwal's study,
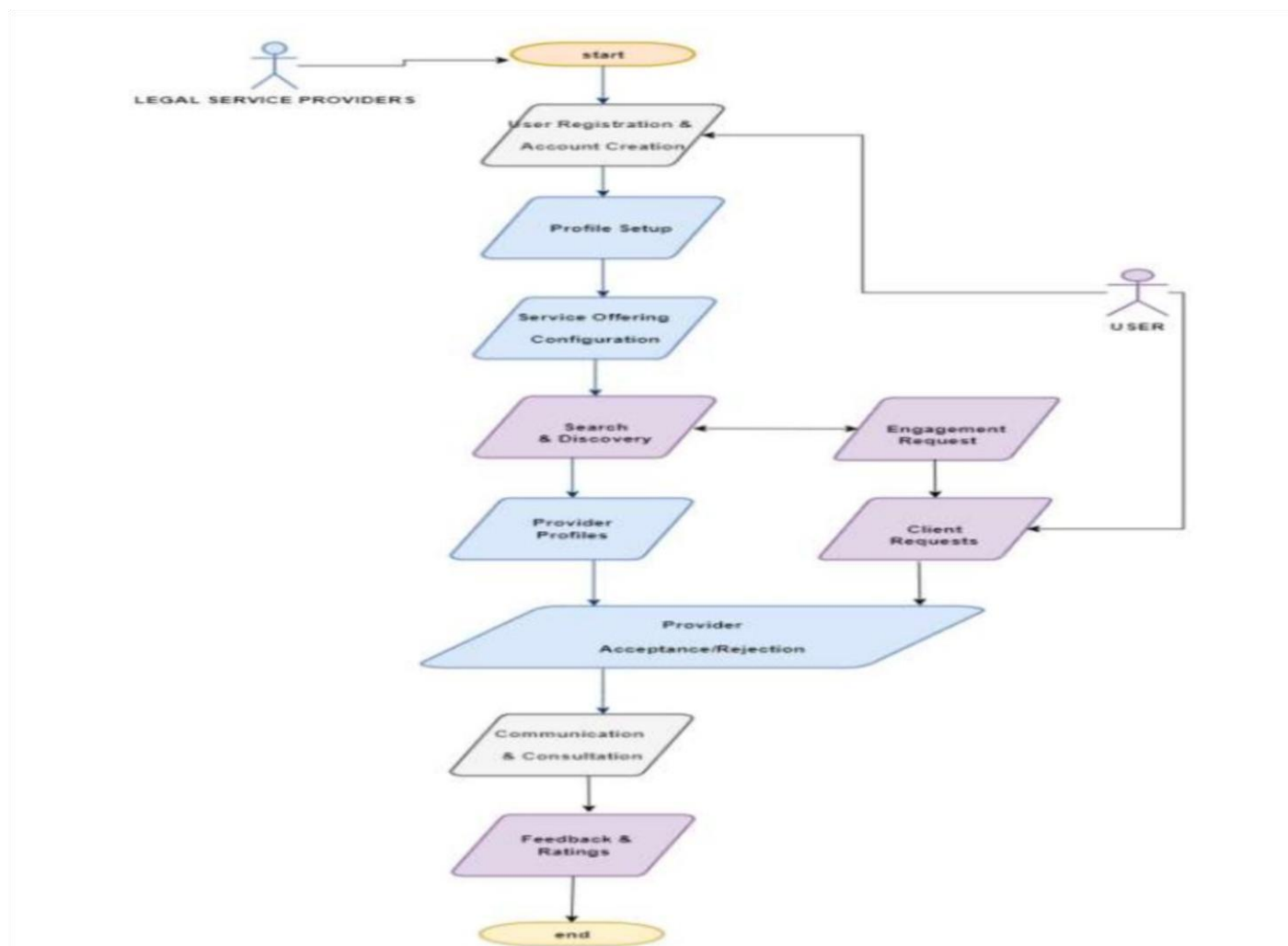
explores how digital platforms improve accessibility to legal services in India. The research focuses on the effectiveness of Indian e-marketplaces in making legal assistance more reachable and user-friendly for citizens, highlighting significant improvements in service delivery and user engagement [5]. There are several online legal consulting services available in India. Dependability and safety, however, are never constants. Internet fraud is a major problem in many countries since millions of individuals have fallen victim to a wide range of online frauds, many of which are carried out fully or partially online.

## [15.1] Challenges

Gupta and Kumar's paper, reviews the landscape of online legal services in India, focusing on user engagement. The study evaluates various digital platforms offering legal services, assessing their effectiveness in improving access to legal assistance.



Key insights include enhanced user convenience and satisfaction, while also identifying challenges such as technological adoption, quality assurance, and the need for regulatory frameworks to ensure reliable and efficient service delivery. Researchers, explores strategies for enhancing user experience in legal service e-marketplaces. The study focuses on improving interface design, customer support, and personalized services to increase user satisfaction and engagement. Key recommendations include leveraging advanced technologies like AI and machine learning for better service delivery, ensuring user-friendly interfaces, and providing comprehensive support to address user concerns effectively. The study discusses the integration of technology in legal services, highlighting advancements such as AI, blockchain, and digital platforms. It explores their impact on efficiency, accessibility, and regulatory compliance within the legal sector. The paper also outlines potential challenges and opportunities for adopting Legal Tech solutions to enhance legal service delivery in India.

**[Fig 15.1.2] Architecture [15.2] References**

[1]   Kumar and P. S. Srinivasan, "Legal services and e-governance: A case study of the Indian judicial system," in Proc. 2015 Int. Conf. on Advances in Computing, Communications and Informatics (ICACCI), Kochi, India, 2015, pp. 1125-1130.

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[3]   R. Gupta and A. Verma, "E-marketplace for legal services: A review and analysis," in Proc. 2017 IEEE Int. Conf. on Internet of Things (iThings) and IEEE Green Computing and Communications (GreenCom) and IEEE Cyber, Physical and Social Computing (CPSCom) and IEEE Smart Data (Smart Data), Exeter, UK, 2017, pp. 1145-1150.

[4]   S. Naik and M. Gopinath, "A blockchain-based framework for legal services in India," in Proc. 2018 IEEE Conf. on Communications and Network Security (CNS), Beijing, China, 2018, pp. 1-6.

[5]  J. N. Bajpai and K. Agarwal, "Improving accessibility to legal services through digital platforms: A study of Indian e-marketplaces," in Proc. 2018 Int. Conf. on Computational Techniques, Electronics and Mechanical Systems (CTEMS), Belgaum, India, 2018, pp. 7984.

**[18] Legal Bharat Incentive, Legalbharat, 2025 ** Aayush tirole, Bhole Shankar Sharma, Ankit Chauhan, Computer Science and Engineering, Sri Aurobindo Institute of technology.

This project aims to develop a comprehensive online marketplace that effectively attracts and onboards legal service providers, such as advocates, arbitrators, mediators, notaries, and document writers, to offer their services to citizens in India. The primary objective is to create a user-friendly platform that incentives these professionals to join and actively participate, ultimately expanding access to legal services for the Indian population. Develop an effective platform to attract and onboard a diverse range of legal services providers, such as advocates, arbitrators, mediators, notaries, and document writers. Creating a user-friendly online marketplace where citizens can easily access and connect with qualified legal professionals. Design an Incentive structure to encourage legal service providers to join the platform and offer their services. Make legal services more accessible to citizens in India, especially those in remote areas.

## [18.1] Literature Review

**Gamification and User Engagement:** Miller et al. (2016) emphasize the importance of gamification in enhancing user engagement in mobile health applications. Their findings suggest that incorporating game design elements can motivate users to participate more actively in services. This principle can be applied to legal service platforms by integrating gamified features that reward legal providers for onboarding, participation, and user engagement. For instance, offering points or badges for completing profiles or receiving positive.

**Citizen Science and Community Involvement:** Kobori et al. (2015) discuss the concept of citizen science, which encourages community involvement in research and data collection. This model can be awarded for legal services by engaging citizens in the onboarding process of legal service providers. By allowing citizens to review and enhance rate services, the platform can create a feedback loop that enhances provider credibility and encourages quality service delivery.

**Knowledge Gaps and Future Research Directions:** Despite the rich insights provided by existing studies, several knowledge gap remain. Firstly, there is limited research specifically focusing on the legal sector's unique challenges and requirements in the onboarding process. Future research should explore the specific motivations and barriers faced by legal service providers in India with engaging digital platforms. Moreover, while gamification has been identified as a potential incentive, empirical studies testing its effectiveness in the legal services context are scare. Investigating the impact of gamified elements on the onboarding experience and ongoing engagement of

legal providers would be valuable. Lastly, the role of cultural factors in the acceptance and usability of emarketplaces for legal services in India warrants further exploration. Understanding regional differences in attitudes towards online legal services can be help tailor onboarding systems to diverse populations.

## 3. Software Requirements

- **Frontend (Client-Side): -** HTML5, JavaScript, Angular.js.

- **Backend (Server-Side): -**Node**.**js, Authentication Authorization.

- **Database: -**MongoDB (NoSQL)**.**

- **Cloud & Deployment: -**AWS / Microsoft Azure / Google Cloud, Docker**.**

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