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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Project Work Synopsis VI – Sem 2024-2025

PROJECT GROUP:

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PROJECT DETAILS:

Title:	ResolveIT: AI-Powered Mediation for Efficient and Fair Dispute Resolution
Domain:	Artificial Intelligence and Machine Learning
Company/Industry if applicable:	Industry

For office use only:

Group ID:	
Guide:	Geetha R
Status:	**Accepted / To be modified / Rejected**

Signature of the Project Co-Ordinator

Title: Resolve IT

Abstract

Mediation is a structured and cost-effective dispute resolution process that serves as an alternative to litigation. This project introduces an AI-powered mediation platform designed to streamline conflict resolution through automated document processing, structured mediation workflows, and secure mediator selection. The platform provides multilingual support, a user-friendly dashboard, and predictive analytics to enhance mediation efficiency. By eliminating complex legal procedures and making mediation more accessible, this system reduces court congestion and promotes quicker, fairer resolutions. The platform aims to simplify dispute resolution by offering a digital, automated, and data-driven approach to mediation.

Introduction

Mediation is widely recognized as a preferred method for resolving disputes outside the courtroom. However, lack of awareness, complex legal documentation, and limited access to mediators create barriers to adoption. Many individuals and businesses struggle to navigate the mediation process, often opting for litigation instead. This project proposes a technology-driven mediation platform that automates case management, enables structured mediator selection, and provides legal document assistance. By leveraging custom-built AI models and the system ensures an efficient, accessible, and fair mediation process.

Key Features of the Mediation Project:

Our AI-powered mediation platform is designed to streamline dispute resolution by integrating automation, structured workflows, and AI-driven decision-making. Below are the key features that make this platform effective, efficient, and accessible:

1. AI-Powered Chatbot for Legal Assistance: Provides real-time guidance on mediation procedures, eligibility, and case preparation using AI-driven models.

2. Automated Document Processing: Summarizes and verifies legal documents, extracting key points to help users prepare for mediation efficiently.

3. AI-Based Mediator Selection System: Uses AI algorithms to match disputing parties with the most suitable mediator based on case type and expertise.

4. User-Centric Dashboard for Case Management: Enables users to track case progress, submit documents, and securely communicate with mediators.

5. Multilingual Support for Inclusive Mediation: Provides translation and speech-to-text features, making mediation accessible in multiple regional languages.

6. Court vs. Mediation Comparison Tool: Compares mediation with litigation in terms of cost and time, encouraging early dispute resolution.

Existing System and their Drawbacks

Mediation has traditionally been used as an alternative to litigation, helping individuals and businesses resolve disputes amicably. However, existing mediation systems suffer from manual processes, inefficiencies, and limited accessibility, making them less attractive. The current mediation landscape can be categorized into the following:

1. Traditional In-Person Mediation:

In this approach, disputing parties meet physically at mediation centers, courts, or private legal firms where a certified mediator facilitates discussions. While this system ensures face-to-face communication, it comes with several challenges:

- **Time-Consuming Process:** Scheduling in-person meetings leads to long resolution times.
- **Limited Accessibility:** Rural and underprivileged individuals struggle to access mediators.
- **High Costs:** Lawyers and mediators charge significant fees, discouraging users from choosing mediation.

2. Court-Annexed Mediation Centers:

Some legal systems mandate pre-litigation mediation, where cases are directed to a mediation center before entering the court. While this initiative aims to reduce court congestion, it has limitations:

- **Overburdened Mediation Centers:** High caseloads result in long waiting periods.
- **Paper-Based Documentation:** Many court-based mediation systems rely on manual paperwork, causing inefficiencies.
- **Lack of Digital Case Tracking:** Users find it difficult to follow up on case status, leading to frustration.

3. Online Dispute Resolution (ODR) Platforms:

A few platforms provide online mediation services, allowing disputes to be resolved digitally. Some well-known ODR platforms include **Sama, Presolv360, and Modria**. However, they face challenges such as:

- **Lack of AI Automation:** Mediator selection and legal document processing remain **manual** or **partially automated**.
- **Limited Language Support:** Many platforms primarily support English, making mediation inaccessible to regional language speakers.
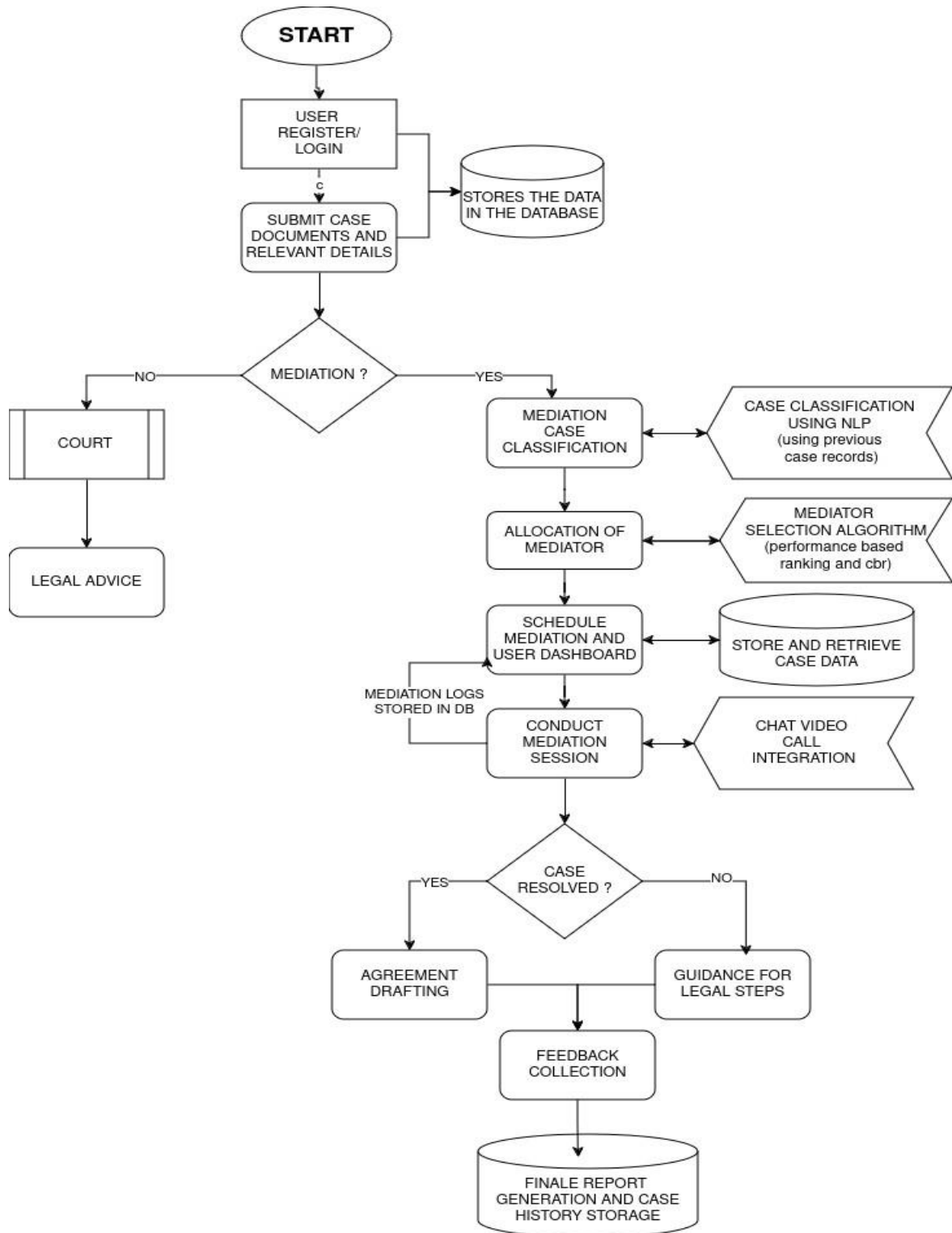
Problem Statement

"Traditional mediation for civil disputes is often slow and biased. Our AI-driven platform automates case classification, matches mediators intelligently, and predicts mediation outcomes using ML. AI also assists in document generation and case history structuring, making dispute resolution faster and more efficient."

Objectives

- Develop a user-friendly platform to educate individuals and businesses about mediation, ensuring they understand its benefits and applications in resolving disputes.
- Provide step-by-step guidance on initiating and navigating the mediation process, simplifying legal complexities and making it easier for users to participate.
- Ensure access to verified and experienced mediators who can facilitate fair and unbiased dispute resolution, enhancing trust in the system.
- Implement AI-driven assistance to streamline case categorization and mediator matching, improving efficiency and reducing manual intervention.
- Maintain data privacy and security for all involved parties, ensuring confidentiality and compliance with legal standards.
- Offer multilingual support to make mediation accessible across diverse communities, breaking language barriers and increasing inclusivity.
- Promote awareness and adoption of mediation as an effective alternative to litigation through campaigns, partnerships, and digital outreach.

Block Diagrams/Architecture

Modules/Component Description

1. User Registration/Login:

- Enables users to register or log in using secure authentication methods.
- Manages user roles (individual, business, mediator) and session handling.

2. Case Submission:

- Allows users to upload case-related documents and provide dispute details.
- Ensures data security and validation before submission to the system.

3. Database Management:

- Stores user profiles, case details, mediator information, and session logs.
- Ensures secure and structured data handling using relational databases.

4. Mediation Decision Module:

- Analyzes case details and determines if mediation is the best resolution approach.
- Suggests alternative legal procedures if mediation is unsuitable.

5. Case Classification:

- Uses NLP techniques to analyze and categorize cases based on historical data.
- Helps in assigning appropriate mediators based on case type.

6. Mediator Allocation:

- Selects the best mediator using a ranking algorithm considering expertise, success rate, and availability.
- Uses Case-Based Reasoning (CBR) to match similar past cases.

7. User Dashboard & Scheduling:

- Provides an intuitive dashboard to track case progress and status updates.
- Allows users and mediators to schedule and manage mediation sessions.

8. Chat & Video Call Integration:

- Enables secure, real-time communication between disputing parties and the mediator.
- Supports text-based chat, video conferencing, and document sharing.

9. Mediation Session Module:

- Facilitates structured mediation discussions and logs key interactions.
- Ensures compliance with mediation protocols and best practices.

10. Resolution Decision Module:

- Determines if a dispute is successfully resolved or requires further legal action.

- Provides recommendations based on mediation outcomes.

11. Agreement Drafting:

- Automatically generates legally binding agreements upon successful mediation.

- Formats agreements in compliance with legal requirements.

12. Legal Guidance:

- Offers guidance on further legal steps if mediation fails.

- Connects users with legal professionals if necessary.

13. Feedback Collection:

- Gathers feedback from users and mediators to enhance system performance.

- Helps in improving the mediator selection and dispute resolution process.

14. Final Report Generation:

- Generates case summary reports for record-keeping and future reference.

- Provides insights into mediation success rates and trends.

Expected Outcomes

Model should be able to:

- Increased awareness and adoption of mediation as a preferred method for dispute resolution, reducing the burden on courts and legal systems.

- A seamless and structured mediation process that simplifies dispute resolution for individuals and businesses, making it more accessible and efficient.

- Faster resolution of conflicts through AI-driven mediator matching and process automation, minimizing delays and legal complexities.

- Enhanced trust and reliability in the mediation process by ensuring secure, confidential, and unbiased proceedings for all parties involved.

- Greater inclusivity by providing multilingual support, enabling individuals from diverse backgrounds to access mediation services effortlessly.

- Improved accessibility to verified mediators, ensuring fair dispute resolution and promoting alternative dispute mechanisms nationwide.

- A scalable and sustainable mediation platform that can be adopted by legal institutions, businesses, and community organizations for long-term impact.

Applications

- **Legal Dispute Resolution:** The platform can be used by individuals and businesses to resolve civil disputes such as property conflicts, tenant-landlord disagreements, and contractual issues without going to court.

- **Corporate Conflict Management:** Companies can use the system for internal dispute resolution between employees, management, and stakeholders, ensuring a structured mediation process.

- **Community Mediation:** The platform can help resolve disputes within local communities, neighbourhoods, and housing societies, promoting harmony and reducing legal intervention.

- **Government and Public Sector Use:** Government agencies can leverage the system to mediate disputes related to public grievances, labor issues, and regulatory matters.

- **Consumer Dispute Resolution:** Businesses can use the platform to address consumer complaints efficiently, improving customer satisfaction and reducing legal battles.

- **Educational Institutions:** Universities and schools can implement the platform to resolve conflicts among students, faculty, and administrative staff, fostering a positive academic environment.

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