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# Protection From Domestic Violence

**Janu Sree S[1], Saranya R B[2], Harikrishnan S R[3]**
Student, MCA, CHMM College for Advanced Studies, Trivandrum, India[1]
Assistant Professor, CHMM College for Advanced Studies, Trivandrum, India[2]
Associate Professor, MCA, CHMM College for Advanced Studies, Trivandrum, India[3]

**Abstract:** *Women's safety is a critical social issue worldwide. Despite their respected place is society, women face harassment, molestation, assault and violence daily. This project aims to create a digital platform to help victims of domestic violence by providing safety, support, and access to important resources. Privacy and security are key features, ensuring that users' identities are protected. The platform will allow anonymous reporting and consultations with professionals. To develop this platform, we will gather requirements through surveys and interviews with survivors, support organizations, and law enforcement. Using agile methods, we will design, develop, and test the platform, integrating third-party APIs for emergency services and resources. The platform will undergo rigorous testing to ensure it is reliable, secure, and easy to use. It will also include educational materials to help users recognize signs of domestic violence and understand the importance of seeking help. To address this a web application is being developed to provide quick assistance to women in danger. It will send a message to guardians /emergency contacts with a few clicks and include helpline service details. Additionally, a geofencing feature will automatically trigger an alert message if a woman leaves a set virtual boundary helping in cases of kidnapping where the victim may not be able to send a panic message*

**Keywords:** Women's Safety, Digital Platform, Anonymous Reporting, Geofencing, Emergency Services

## I. INTRODUCTION

Women's safety is a critical global issue. Despite technological advancements, women continue to face harassment, molestation, assault, and violence daily. Improving women's conditions is essential for societal welfare, as they have long been respected members of society but still endure significant harm. Statistics reveal that approximately 35% of women experience physical or sexual violence at some point in their lives. This project incorporates various ideas and methodologies from multiple authors who have reviewed and enhanced existing applications with updated technologies to reduce violence against women. We aim to develop a web application that operates around the clock, offering immediate assistance by sending alerts to guardians or emergency contacts with just a few clicks. The app will also provide quick access to helpline services. Additionally, to address situations like kidnapping where victims cannot manually send alerts, we are implementing a geofencing feature.

## II. LITERATURE SURVEY

Women's safety remains a pressing global issue, with women facing harassment, assault, and violence daily despite their respected societal roles. Studies indicate that around 35% of women experience physical or sexual violence in their lifetimes, underscoring the need for effective intervention systems. Current support mechanisms, such as hotlines and shelters, have limitations, prompting the exploration of digital solutions. Recent research highlights the potential of digital platforms to offer immediate assistance and support, with privacy and security being critical components. These platforms can provide anonymous reporting and consultations with professionals, addressing the barriers faced by victims seeking help. Utilizing agile methodologies in development allows for iterative design and user-centered solutions, while integrating third-party APIs enhances functionality by connecting users to emergency services and resources. Additionally, incorporating geofencing technology can trigger automatic alerts if users leave a predefined virtual boundary, a crucial feature for situations like kidnapping where manual alerts might be impossible. Privacy and security concerns are paramount, as highlighted by research on maintaining confidentiality and securing sensitive data in digital communications. The development of this web application aims to create a reliable, secure, and user-friendly

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platform that not only assists women in immediate danger but also educates users on recognizing signs of domestic violence and the importance of seeking help. Rigorous testing will ensure the platform's effectiveness, making it a valuable tool in the fight against domestic violence and supporting women's safety

## III. WORKING OF PROPOSED SYSTEM

The web application is built using the ASP.NET programming language, designed to ensure quick access to its features, which aligns with our objective. It consolidates various helpline services into a single platform, enabling women to receive faster assistance during emergencies. Users (women) can register by entering their essential information, after which they can input details for guardians or emergency contacts, including names and mobile numbers. The application allows users to update, add, or remove these contacts as needed. All provided information is securely stored, and only authenticated users (women) can modify guardian or emergency contact details. Additionally, we are developing a new feature to enhance women's safety in collaboration with police services. The project begins by identifying potential end-users and their demographics to better understand who will benefit from the service. This involves analysing various groups to tailor the application's features and functionality to their needs. Additionally, it is crucial to determine the price points that respondents are willing to pay for mental health assistance services that address daily challenges. This helps in setting a price that aligns with user expectations while ensuring accessibility. Furthermore, understanding end-user preferences regarding web-based applications is essential. This includes gathering insights on features, usability, and design elements that users find most valuable in a digital platform dedicated to mental health support.

## IV. TECHNOLOGY USED

### Visual Studio 2022

Visual Studio 2022 is the latest major release of Microsoft's integrated development environment (IDE), designed to streamline and enhance the software development process. This version brings several significant improvements and new features that cater to a wide range of development needs. One of its most notable advancements is the 64-bit architecture, which allows for better performance and the ability to handle larger projects and solutions more efficiently. This change addresses limitations of previous versions and ensures a smoother and more responsive development experience, even with complex applications. Visual Studio 2022 features a modernized user interface that improves accessibility and usability. The new design incorporates a more intuitive layout and enhanced code editing tools, such as improved IntelliSense and code completion features. The IDE also introduces better integration with Git and other version control systems, facilitating streamlined collaboration and version management. Enhanced debugging tools, including advanced diagnostics and performance profiling, help developers identify and resolve issues more effectively. Another key feature of Visual Studio 2022 is its support for a wide range of programming languages and frameworks, including .NET 6, which supports cross-platform development. This flexibility allows developers to build applications for various platforms, from web and desktop to mobile and cloud environments. Additionally, the IDE includes robust tools for containerization and cloud development, making it easier to deploy and manage applications in cloud environments. Visual Studio 2022 also emphasizes productivity with features such as code refactoring, live share for collaborative development, and improved project management capabilities. Overall, this latest release of Visual Studio enhances the development experience by providing a powerful, versatile, and efficient environment for building modern software applications.

### ASP. Net

ASP.NET is a powerful framework developed by Microsoft for building dynamic web applications and services. As part of the .NET platform, it enables developers to create robust, scalable, and high-performance web solutions. ASP.NET supports various programming languages, including C# and VB.NET, allowing for flexibility and efficiency in development. One of the key features of ASP.NET is its support for web forms, MVC (Model-View-Controller), and Web API frameworks. Web Forms offer a traditional drag-and-drop approach for building web applications with a rich set of controls and event-driven programming. In contrast, ASP.NET MVC provides a more structured approach to application design by separating the application into model, view, and controller components, facilitating better

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organization and testability. ASP.NET Web API, on the other hand, is optimized for building RESTful services and APIs, which are essential for modern web and mobile applications.ASP.NET Core, a cross-platform version of the framework, further extends its capabilities by enabling development on Windows, Linux, and macOS. This modern iteration is lightweight, high-performance, and designed to handle contemporary web demands. It includes built-in support for dependency injection, modular architecture, and a unified approach to handling both MVC and Web API components. Security is another crucial aspect of ASP.NET, with features such as built-in authentication and authorization mechanisms, data protection, and secure communication protocols. These ensure that applications are safeguarded against common web vulnerabilities and threats.Overall, ASP.NET provides a comprehensive, versatile platform for web development, offering various tools and frameworks to meet the needs of different types of applications, from enterprise-level solutions to small web projects. Its integration with the broader .NET ecosystem and continuous updates ensure it remains a relevant and powerful choice for modern web development.

**C#.Net**

C# (pronounced C-sharp) is a versatile, high-level programming language developed by Microsoft as part of the .NET framework. It is designed for ease of use and efficiency, offering a rich set of features that make it suitable for a wide range of application development tasks, including web, desktop, mobile, and cloud-based applications. C# is an object-oriented language, which means it uses objects and classes to structure code, promoting modularity, reusability, and maintainability. It supports key object-oriented principles such as encapsulation, inheritance, and polymorphism, allowing developers to create complex systems with well-organized code. The language is strongly typed, which helps catch errors during compilation, ensuring more robust and reliable code. One of C#'s standout features is its integration with the .NET framework, which provides a comprehensive library of classes, functions, and tools for building applications. The .NET framework includes the Common Language Runtime (CLR), which manages memory, handles exceptions, and performs other runtime services, enhancing the performance and stability of C# applications. Additionally, the .NET framework supports a wide range of libraries for tasks such as database access, web services, and user interface design, streamlining the development process. C# also supports modern programming paradigms and features, including asynchronous programming with `async` and `await` keywords, which simplify the development of scalable and responsive applications. Language enhancements in recent versions have introduced features like pattern matching, records, and improved type inference, further improving code clarity and productivity. The language is supported by various development environments, with Microsoft Visual Studio being the most prominent. Visual Studio offers a comprehensive suite of tools for C# development, including advanced debugging, profiling, and code analysis capabilities. C#'s versatility extends beyond traditional application development. It is also used in game development with Unity, a popular game engine, and in building cross-platform applications with .NET Core. This cross-platform capability allows developers to create applications that run on Windows, macOS, and Linux, broadening the reach of C#-based solutions. Overall, C# is a powerful and flexible language that combines ease of use with advanced features, making it a popular choice for developers working on a wide range of projects. Its integration with the .NET ecosystem and ongoing updates ensure it remains a relevant and effective tool for modern software development.

## V. DATABASE DESIGN

The most critical element in developing software systems is database design. At the top of the hierarchy lies the database, which consists of interrelated files used for real-time processing. It stores essential data for solving problems and supports concurrent access by multiple users. The primary goal of database design is to ensure that data access is easy, cost-effective, and adaptable to user needs. Database design involves defining and specifying the structure of the data used in client/server systems. Business objects, which represent the information visible to system users, must be organized within a normalized database. A Database Management System (DBMS) plays a key role in protecting and organizing data separately from other resources such as hardware, software, and programs. Unlike other data management tools, a DBMS provides unique components and capabilities. Its importance lies in the distinction between the logical view of data, as perceived by applications, and the physical storage of data on direct access storage devices.

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complaint

| Field Name | Data Type | Size | Constraint | Description |
|---|---|---|---|---|
| dcompid | int | 4 | Primary key | Complaint ID |
| senderid | varchar | 20 | Foreign key | Sender ID |
| receiverid | varchar | 20 | Foreign key | Receiver ID |
| sub | varchar | 20 | NOT NULL | Subject |
| msg | varchar | 50 | NOT NULL | Message |
| date1 | varchar | 20 | NOT NULL | Sending Date |
| reply | varchar | 50 | NOT NULL | Reply |
| date2 | varchar | 20 | NOT NULL | Reply Date |

Login

| Field Name | DataType | Size | Constraint | Description |
|---|---|---|---|---|
| uid | int | 4 | PrimaryKey | User identification number |
| username | varchar | 25 | NOTNULL | Username |
| password | varchar | 15 | NOTNULL | Password |
| status | int | 4 | NOTNULL | Type of user |

Advocate

| Field Name | DataType | Size | Constraint | Description |
|---|---|---|---|---|
| adid | int | 4 | Primary Key | Advocate Identification |
| adcode | varchar | 20 | NOT NULL | Advocate Code |
| name | varchar | 20 | NOT NULL | Advocate Name |
| email | varchar | 30 | NOT NULL | Advocate Email ID |
| username | varchar | 20 | Foreign Key | Advocate username |
| pwd | varchar | 20 | NOT NULL | Advocate Password |
| adtype | varchar | 100 | NOT NULL | Advocate profession |
| mob | varchar | 10 | NOT NULL | Advocate contact |
| dob | varchar | 20 | NOT NULL | Advocate date of Birth |
| address | varchar | 100 | NOT NULL | Advocate address |
| certificate | varchar | Max | NOT NULL | Certificate upload |
| status | int | 2 | NOT NULL | Status |

## VI. IMPLEMENTATION

Implementation is the process of turning a system's theoretical design into a practical, functioning reality. This crucial phase involves several steps, starting with translating the design into operational software and ensuring it performs effectively in a real-world setting. The implementation plan provides a comprehensive outline, including an overview of the system, key tasks, resource requirements, and specific site needs. Developed during the design phase and updated throughout development, this plan guides the deployment process. There are three main types of implementations: replacing a manual system with a computerized one, which requires data conversion and user training; upgrading from an existing computer system to a new one, which can be complex and time-consuming; and modifying an existing application on the same system, typically involving fewer changes. Preparing for implementation involves setting clear objectives, allocating necessary resources, assigning responsibilities, and defining success criteria. Key tasks include overall planning, providing user training, updating documentation, conducting site surveys, assembling the implementation team, converting data, and preparing facilities. Implementation strategies typically involve either a

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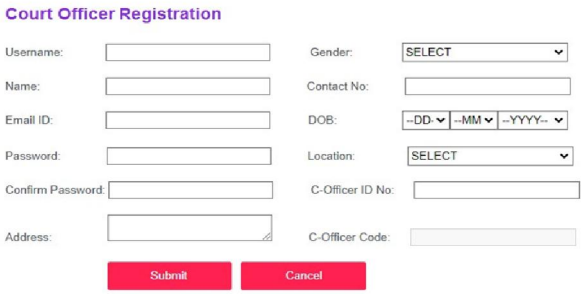
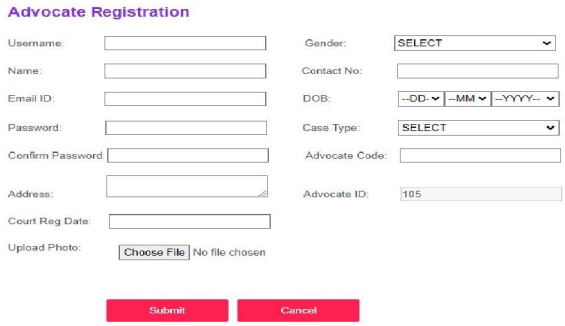
parallel run, where both old and new systems operate simultaneously to compare results and ensure continuity, or a pilot run, where the new system is gradually introduced in phases to identify and address issues incrementally. Each strategy has its advantages, with the parallel run offering a fallback option and the pilot run allowing for controlled and gradual deployment.

## VII. RESULT

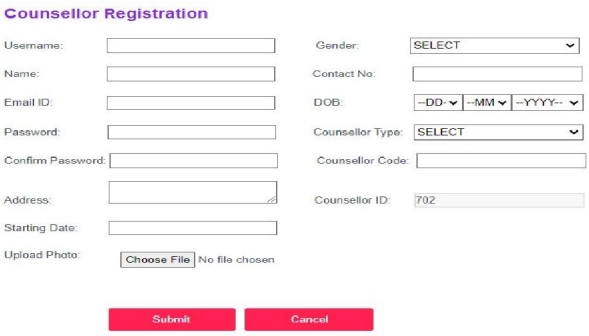
Court officer Registration




Advocate Registration




Counsellor Registration



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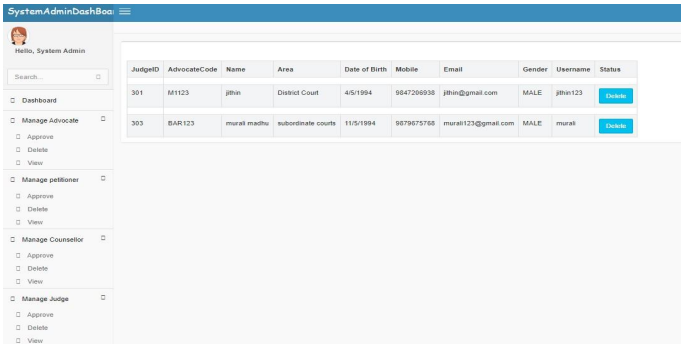
Admin adding Judge




## VIII. CONCLUSION

The project titled "Protection Against Domestic Violence System" has been successfully completed. Developed with meticulous attention to detail, the system is both error-free and efficient, significantly reducing time consumption. This project provided valuable insights and practical experience in various areas, including web page design using HTML and CSS, the use of responsive templates, web application design, and database management with SQL Server. The system ensures robust security and offered a comprehensive understanding of the project development phases and the software development life cycle. We also learned effective methods for testing different project features. Existing literature highlights issues such as inadequate infrastructure and manpower in the judiciary, which contribute to delays in case processing due to inefficient resource use and duplicative work. These problems can only be fully addressed by analyzing real-time data from the moment a case is filed, as it progresses through the system and interacts with various stakeholders, including lawyers, registry officials, judges, and court staff. Our project addresses these issues by automating the judiciary system and improving overall efficiency.

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