**CHAPTER 1**

**INTRODUCTION**

**1.1. INTRODUCTION TO SYSTEM**

Generally many crimes seen by the public will not reach to the police due to many reasons like fear, Lack of time, Ignorance. Due to this reason many cases are not even reaching the police station. Though some cases are registered they are not investigated properly due to lack of evidences and Cooperation of the public. This system constitutes the last stage of violation recording cycle in traffic department. In this system the recorded violations are dispatched to police central server in real time.

**1.2. OBJECTIVE**

The aim of this project is to develop a city traffic violation management system which is easily accessible to the public and the traffic department and also helps the traffic police department in preventing violation activities.

This is a new feature which is made available to public for interaction with police indirectly. This system registers the complaints from people through online and is helpful to the police department in catching criminals. In this system any person can give any complaint anytime.

**1.3. SCOPE**

This project contains the functional requirement which is helpful for both public and traffic department in solving their problems.

**CHAPTER 2**

**LITERATURE SURVEY**

**2.1. .NET FRAMESWORK**

.NET Framework (pronounced dot net) is a software framework developed by Microsoft that runs primarily on Microsoft Windows. It includes a large class library named Framework Class Library (FCL) and provides language interoperability (each language can use code written in other languages) across several programming languages. Programs written for .NET Framework execute in a software environment (in contrast to a hardware environment) named Common Language Runtime (CLR), an application virtual machine that provides services such as security, memory management, and exception handling. (As such, computer code written using .NET Framework is called "managed code".) FCL and CLR together constitute .NET Framework.

FCL provides user interface, data access, database connectivity, cryptography, web application development, numeric algorithms, and network communications. Programmers produce software by combining their source code with .NET Framework and other libraries. The framework is intended to be used by most new applications created for the Windows platform. Microsoft also produces an integrated development environment largely for .NET software called Visual Studio.

.NET Framework led to a family of .NET platforms targeting mobile computing, embedded devices, alternative operating systems, and web browser plug-ins. A reduced version of the framework, .NET Compact Framework, is available on Windows CE platforms, including Windows Mobile devices such as smart phones. .NET Micro Framework is targeted at very resource-constrained embedded devices.

**2.2. C# LANGUAGE**

C# is an elegant and type-safe object-oriented language that enables developers to build a variety of secure and robust applications that run on the .NET Framework. You can use C# to create Windows client applications, XML Web services, distributed components, client-server applications, database applications, and much, much more. Visual C# provides an advanced code editor, convenient user interface designers, integrated debugger, and many other tools to make it easier to develop applications based on the C# language and the .NET Framework.

As an object-oriented language, C# supports the concepts of encapsulation, inheritance, and polymorphism. All variables and methods, including the Main method, the application's entry point, are encapsulated within class definitions. A class may inherit directly from one parent class, but it may implement any number of interfaces. Methods that override virtual methods in a parent class require the override keyword as a way to avoid accidental redefinition. In C#, a struct is like a lightweight class; it is a stack-allocated type that can implement interfaces but does not support inheritance.

**2.3. ASP.NET**

ASP.NET is an open-source server-side web application framework designed for web development to produce dynamic web pages. It was developed by Microsoft to allow programmers to build dynamic web sites, web applications and web services.

It was first released in January 2002 with version 1.0 of the .NET Framework, and is the successor to Microsoft's Active Server Pages (ASP) technology. ASP.NET is built on the Common Language Runtime (CLR), allowing programmers to write ASP.NET code using any supported .NET language. The ASP.NET SOAP extension framework allows ASP.NET components to process SOAP messages.

ASP.NET's successor is ASP.NET Core. It is a re-implementation of ASP.NET as a modular web framework, together with other frameworks like Entity Framework. The new framework uses the new open-source .NET Compiler Platform (codename "Roslyn") and is cross platform. ASP.NET MVC, ASP.NET Web API, and ASP.NET Web Pages (a platform using only Razor pages) have merged into a unified MVC.

**2.4. ADO.NET**

ADO.NET is a data access technology from the Microsoft .NET Framework that provides communication between relational and non-relational systems through a common set of components.ADO.NET is a set of computer software components that programmers can use to access data and data services from a database. It is a part of the base class library that is included with the Microsoft .NET Framework. It is commonly used by programmers to access and modify data stored in relational database systems, though it can also access data in non-relational data sources. ADO.NET is sometimes considered an evolution of ActiveX Data Objects (ADO) technology, but was changed so extensively that it can be considered an entirely new product.

ADO.NET is conceptually divided into consumers and data providers.The consumers are the applications that need access to the data, and the providers are the software components that implement the interface and thereby provide the data to the consumer.

Functionality exists in Visual Studio IDE to create specialized subclasses of the DataSet classes for a particular database schema, allowing convenient access to each field in the schema through strongly typed properties. This helps catch more programming errors at compile-time and enhances the IDE's Intellisense feature.

**2.5. TECHNOLOGICAL SURVEY**

**Reason for choosing C#:**

**Disadvantages of C Language:**

* C language has no run time checking mechanism.
* It does not support Object Oriented Programming features.
* It has no strict type checking.
* It does not support exception handling.

**Disadvantages of C++:**

* It is not pure object oriented programming language.
* It is a Platform dependent
* C++ does not give excellent graphics as compare to java.
* It is not case sensitive.
* C++ has less features as compared to Java& C#.
* It is not applicable in web environment.
* Does not provide very strong type-checking.
* C++ code is easily prone to errors related to data types, their conversions.
* Does not provide efficient means for garbage collection.
* No built in support for threads.

**2.6. MS-SQL SERVER**

Microsoft SQL Server is a relational database management system developed by Microsoft. As a database server, it is a software product with the primary function of storing and retrieving data as requested by other software applications—which may run either on the same computer or on another computer across a network (including the Internet).

Microsoft markets at least a dozen different editions of Microsoft SQL Server, aimed at different audiences and for workloads ranging from small single-machine applications to large Internet-facing applications with many concurrent users.

**Usage of MS-SQL SERVER**

* Scalability and Flexibility: Can handle embedded applications and massive data warehouses.
* High Availability: High speed master/slave replication configurations.
* Web and Data Warehouse Strengths.
* Management Ease

**2.7.Operating system**

**2.7.1. Windows 7**

Windows 7 is a personal computer operating system developed by Microsoft. It is a part of the Windows NT family of operating systems. Windows 7 was released to manufacturing on July 22, 2009, and became generally available on October 22, 2009, less than three years after the release of its predecessor, Windows Vista. Windows 7's server counterpart, Windows Server 2008 R2, was released at the same time.

Windows 7 was primarily intended to be an incremental upgrade to the operating system intending to address Windows Vista's poor critical reception while maintaining hardware and software compatibility. Windows 7 continued improvements on Windows Aero (the user interface introduced in Windows Vista) with the addition of a redesigned taskbar that allows applications to be "pinned" to it, and new window management features. Other new features were added to the operating system, including libraries, the new file sharing system Home Group, and support for multi touch input. A new "Action Center" interface was also added to provide an overview of system security and maintenance information, and tweaks were made to the User Account Control system to make it less intrusive. Windows 7 also shipped with updated versions of several stock applications, including Internet Explorer 8, Windows Media Player, and Windows Media Center.

**2.7.2. Windows 8**

Windows 8 is a personal computer operating system developed by Microsoft as part of the Windows NT family of operating systems. Development of Windows 8 started before the release of its predecessor, Windows 7, in 2009. It was announced at CES 2011, and followed by the release of three pre-release versions from September 2011 to May 2012. The operating system was released to manufacturing on August 1, 2012, and was released for general availability on October 26, 2012.

Windows 8 introduced major changes to the operating system's platform and user interface to improve its user experience on tablets, where Windows was now competing with mobile operating systems, including Android and iOS. In particular, these changes included a touch-optimized Windows shell based on Microsoft's "Metro" design language, the Start screen (which displays programs and dynamically updated content on a grid of tiles), a new platform for developing "apps" with an emphasis on touch screen input, integration with online services (including the ability to synchronize apps and settings between devices), and Windows Store, an online store for downloading and purchasing new software. Windows 8 added support for USB 3.0, Advanced Format hard drives, near field communications, and cloud computing. Additional security features were introduced, such as built-in antivirus software, integration with Microsoft Smart Screen phishing filtering service and support for UEFI Secure Boot on supported devices with UEFI firmware, to prevent malware from infecting the boot process.

**2.7.3. Windows 10**

Windows 10 is a personal computer operating system developed and released by Microsoft as part of the Windows NT family of operating systems. It was released on July 29, 2015. It is the first version of Windows that receives ongoing feature updates. Devices in enterprise environments can receive these updates at a slower pace, or use long-term support milestones that only receive critical updates, such as security patches, over their ten-year lifespan of extended support.

Windows 10 introduces what Microsoft described as "universal apps"; expanding on Metro-style apps, these apps can be designed to run across multiple Microsoft product families with nearly identical code‍—‌including PCs, tablets, smartphones, embedded systems, Xbox One, Surface Hub and Mixed Reality. The Windows user interface was revised to handle transitions between a mouse-oriented interface and a touch screen-optimized interface based on available input devices‍—‌particularly on 2-in-1 PCs; both interfaces include an updated Start menu which incorporates elements of Windows 7's traditional Start menu with the tiles of Windows 8. The first release of Windows 10 also introduces a virtual desktop system, a window and desktop management feature called Task View, the Microsoft Edge web browser, support for fingerprint and face recognition login, new security features for enterprise environments, and DirectX 12 and WDDM 2.0 to improve the operating system's graphics capabilities for games.

**2.8. Web Server**

**IIS (Internet Information Services)**

Internet Information Services (IIS, formerly Internet Information Server) is an extensible web server created by Microsoft for use with the Windows NT family.IIS supports HTTP, HTTP/2, HTTPS, FTP, FTPS, SMTP and NNTP. It has been an integral part of the Windows NT family since Windows NT 4.0, though it may be absent from some editions (e.g. Windows XP Home edition), and is not active by default.

IIS 7.0 has a modular architecture. Modules, also called extensions, can be added or removed individually so that only modules required for specific functionality have to be installed. IIS 7 includes native modules as part of the full installation. These modules are individual features that the server uses to process requests and include the following:

**Security modules**: Used to perform many tasks related to security in the request-processing pipeline, such as specifying authentication schemes, performing URL authorization, and filtering requests.

**Content modules**: Used to perform tasks related to content in the request-processing pipeline, such as processing requests for static files, returning a default page when a client does not specify a resource in a request, and listing the contents of a directory.

**Compression modules**: Used to perform tasks related to compression in the request-processing pipeline, such as compressing responses, applying Gzip compression transfer coding to responses, and performing pre-compression of static content.

**Caching modules**: Used to perform tasks related to caching in the request-processing pipeline, such as storing processed information in memory on the server and using cached content in subsequent requests for the same resource.

**Logging and Diagnostics modules**: Used to perform tasks related to logging and diagnostics in the request-processing pipeline, such as passing information and processing status to HTTP. sys for logging, reporting events, and tracking requests currently executing in worker processes.

**2.9. Web browser**

A web browser (commonly referred to as a browser) is a software application for retrieving, presenting and traversing information resources on the World Wide Web.

**2.9.1. Internet explorer**

Internet Explorer was one of the most widely used web browsers, attaining a peak of about 95% usage share during 2002 and 2003.[5] This came after Microsoft used bundling to win the first browser war against Netscape, which was the dominant browser in the 1990s. Its usage share has since declined with the launch of Firefox (2004) and Google Chrome (2008), and with the growing popularity of operating systems such as Android and iOS that do not run Internet Explorer.

Internet Explorer[a] (formerly Microsoft Internet Explorer[b] and Windows Internet Explorer,[c] commonly abbreviated IE or MSIE) is a in the Microsoft Windows line of operating systems, starting in 1995.

**2.9.2. Chrome**

Google Chrome is a freeware web browser developed by Google. It was first released in September 2008, for Microsoft Windows, and was later ported to Linux, macOS, iOS and Android. Google Chrome is also the main component of Chrome OS, where it serves as a platform for running web apps.

Google releases the majority of Chrome's source code as the Chromium open-source project.One component that is not open-source is the built-in Adobe Flash Player. Chrome used the WebKit layout engine until version 27. As of version 28, all Chrome ports except the iOS port use Blink, a fork of the WebKit engine.

**CHAPTER - 3**

**SYSTEM ANALYSIS**

**4. 1 Software Requirements Specification (SRS)**

This is also known as requirements engineering and is defined as the identification of the requirements of the system and the limitations within which the system will operate, develop or can evolve. This stage ensures that the software meets all the users' expectations. It ensures the delivery of quality software to the user at the end of the production process. On completion of the software specification, a requirements document will be produced and validated by all parties.

**4.2 Draw backs of Existing system**

Identifying the drawbacks of the existing system will lead to propose an efficient system and the drawbacks could be listed as below with respect to a manual file system maintenance.

* Possible human errors
* Overhead of manual labor for file maintenance
* Unsecured data
* Redundant and inconsistent data can exist
* Modifying the details can be cumbersome
* Maintaining the files is difficult.

**4.3 Analysis of proposed system**

This proposal is aimed at developing an application software for the purpose of easiness of handling the entire process of system by facilitating many of the advantageous features as mentioned below.

* A system with no human errors
* Strength and strain of manual labor can be reduced
* High security
* Data redundancy can be avoided to some extent
* Data consistency
* Easy to handle
* Easy data updating
* Easy record keeping
* Backup data can be easily generated

**4.4. Feasibility study**

The feasibility of the project is analyzed in this phase and business proposal is put forth with a very general plan for the project and some cost estimates. During system analysis the feasibility study of the proposed system is to be carried out. This is to ensure that the proposed system is not a burden to the company.

For feasibility analysis, some understanding of the major requirements for the system is essential.

Three key considerations involved in the feasibility analysis are

* Operational Feasibility
* Economical Feasibility
* Motivational Feasibility
* Schedule Feasibility

**4.4.1. Operational Feasibility**

Operational feasibility is the ability to utilize, support and perform the necessary tasks of a system or program. It includes everyone who creates, operates or uses the system. To be operationally feasible, the system must fulfill a need required by the business.

**4.4.2. Economical Feasibility**

This study is carried out to check the economic impact that the system will have on the organization. The amount of fund that the company can pour into the research and development of the system is limited. The expenditures must be justified. Thus the developed system as well within the budget and this was achieved because most of thetechnologies used are freely available. Only the customized products had to be purchased.

**4.4.3. Motivational Feasibility**

Motivation has been identified as a crucial factor in software productivity and software failure. However previous work suggests that conventional approaches to motivation which are based on reward and recognition are not appropriate for software engineering. The evidence suggests that the technical context of software engineers' work is important to their motivation (e.g. the technical challenge and complexity of their work and the development tools they use).

**4.4.4. Schedule Feasibility**

Schedule Feasibility is defined as the probability of a project to be completed within its scheduled time limits, by a planned due date. If a project has a high probability to be completed on-time, then its schedule feasibility is appraised as high. If a work to be accomplished at a project does not fit the timeframes demanded by its customers, then a schedule is unfeasible.

**4.5 General Requirements**

A SRS (Software Requirements Specification) is a complete description of the behavior of the system to be developed. It includes a set of general requirements that forms the use cases which describe all of the interactions that the users will have with the software. Use cases are also known as functional requirements. In addition to use cases, the SRS also contains non-functional (or supplementary) requirements. Non-functional requirements are requirements which impose constraints on the design or implementation (such as performance engineering requirements, quality standards, or design constraints).

**4.6. Functional Requirements**

This section outlines the use cases for each of the active readers separately.

* Public(User)
* Traffic Department(Admin)
* **Public(User)**
  1. **Registration** : the public has to register this module in order to access the system properties. By giving personal and valid authorize id and password.
  2. **Login** : module is used by the authorize public to enter into the system
  3. **Complaint**: General public can send their complaints online to traffic police department by this system.
  4. **Status** : After sending complaints public can check their status in online.
  5. **Suggestion**: Public can give their suggestion through online which will be helpful for traffic department to handle crimes easily.
  6. **Check fine**: this module is used to check fine details which is registered by the department for the violation done.
  7. **Online payment gateway:** this module is used to pay the fine for the violation done by vehicle through oline.
  8. **View fine history:** The history of fine payment details are viewed by the public .
* **Traffic dept.(Admin)** 
  1. **Login** : authorize admin enters into the system through valid id and password.
  2. **Registration of Officers:** The admin will add all the details of the traffic department officers by giving authorize id and password to handle the cases which has been lodged by public.
  3. **Assign officers:** The job will be assigned by the department to the concern officers to process the work.
  4. **Status update:** The status of the crime is updated by the assigned officers.
  5. **View suggestion:** The suggestion given by the public will be viewed by admin.
  6. **History of cases:** this module gives the detail information of the violation recorded form past to current. So that it will be helpful for future case study for the cases.
  7. **View public details:** this module gives the details of public who have registered to the application.

**4.7 Non-Functional Requirements**

Non-functional requirements as the name itself suggests, are those requirements which are not directly concerned with specific functions delivered by the system.

The key non-functional requirements are as follows:

* **Portability:** this project can be installed on all necessary platforms, and the platforms on which it is expected to run.
* **Efficiency:** this project utilizes scarce resources like CPU cycles, disk space, memory, bandwidth, etc.
* **Reliability:** this project has the capability to maintain its performance over time.
* **Scalability:** This Software is scalable which has the ability to handle a wide variety of system configuration sizes.
* **Usability:** Base-of-use requirements address the factors that constitute the capacity of the project lo be understood, learned, and used by its intended users.
* **Integrity:** This project has the integrity requirement which defines the security attributes of the system, restricting access to features or data to certain users and protecting the privacy of data entered into the software.
* **Performance:** The project specifies the performance constraints i.e the timing characteristics of the software.

**4. 8 Hardware Requirement**

Processor Dual core

Processor Speed 2.2 GHZ

Hard Disk 80 GB

Main Memory 2 GB

Display Type SVGA Color Monitor

**4. 9 Software Requirement**

Development Tool (IDE) Microsoft Visual Studio 2012

Language C#.NET

Server Side Script (Front end) ASP.NET

Database (Back End) MS-SQL SEVER

Web Server IIS (Internet Information Services)

Operating System Windows 7 ,8 , 10

Web browser Internet Explorer, Chrome etc.

**CHAPTER - 4**

**SYSTEM DESIGN**

**5.1 INTRODUTION**

System design is the process, which involves conceiving planning and carrying out the plan by generating the necessary reports and inputs. In other words design phase acts as a bridge between the software requirement specification and implementation phase, which satisfies those requirements. System Design is the transformation of the analysis model into a system design model.

The design of a system is correct if a system built precisely according to the requirements of that system. Design should be clearly verifiable, complete and traceable. The goal is to divide the problem into manageably small modules that can be solved separately. The different modules have to cooperate and communicate together to solve the problem. The complete project is broken down into different identifiable modules. Each module can be understood separately. All the modules at last are combined to get the solution of the complete system.

**5.2 DATAFLOW DIAGRAM**

A data flow diagram (DFD) is a graphical representation of the "flow" of data through an [information system](https://en.wikipedia.org/wiki/Information_system), modeling its process aspects. A DFD is often used as a preliminary step to create an overview of the system without going into great detail, which can later be elaborated. DFDs can also be used for the [visualization](https://en.wikipedia.org/wiki/Data_visualization) of [data processing](https://en.wikipedia.org/wiki/Data_processing) (structured design).

A DFD shows what kind of information will be input to and output from the system, how the data will advance through the system, and where the data will be stored. It does not show information about the timing of process or information about whether processes will operate in sequence or in parallel unlike a [flowchart](https://en.wikipedia.org/wiki/Flowchart) which also shows this information.

**Context Diagram**

Reject/ accept

Accepts/Rejects

Updated complaint status

username/password

Public

Traffic

Dept.

Register complaint details

**Level -0**

**Data Flow Diagram of Admin – Level -1**

confirms info

Events\_request\_tb

**Admin**

vehiclePopulation\_tb

Suggestion\_tb

Register\_tb

Stores info

iinvalid

valid

Retrieve info

Stores info

Assigncase\_tb

fine\_tb

Stores info

**Data Flow Diagram of Public – Level -2**

**Public**

suggestion\_tb

complaint\_tb

Fineinfo\_tb

payment\_tb

check

fetch details

adds info

Sends info

store info

Stores info

**5.3 USECASE DIAGRAM**

A use case diagram at its simplest is a representation of a user's interaction with the system that shows the relationship between the user and the different [use cases](https://en.wikipedia.org/wiki/Use_case) in which the user is involved. A use case diagram can identify the different types of users of a system and the different use cases and will often be accompanied by other types of diagrams as well.

**Admin**

**Officer**

**Public**

**5.4 ENTITY RELATIONSHIP MODEL**

An entity-relationship model (ERM) is a theoretical and conceptual way of showing data relationships in software development. ERM is a database modeling technique that generates an abstract diagram or visual representation of a system’s data that can be helpful in designing a relational database. These diagrams are known as entity-relationship diagrams, ER diagrams or ERDs.

registration

suggestion

complaintform

AssignCase

Assign to

fineDetails

adds

check

adds

adds

payment

**CHAPTER - 5**

**IMPLEMENTATION**

The goals of the implementation phase is to translate the design of the system produce during the phase ,into coded form in a given programming language, which can then be executed by a computer performing the computation specified by the design the coding phase affects both testing and maintenance profoundly. Well written code can reduce the testing and maintains cost.

A crucial phase in the system lifecycle is the successful implementation of the system design. Implementation simply means converting the system designs into operation. Implementation is the process of bringing the developed system into operational use and providing it to the user.

This stage is considered to be most crucial stage in the development of a successful system since a new system is developed and the users are get information in effective manner

Implementation is a stage in which the design is converted into working system that is it is the stage of the project where theoretical design is turned into a working system .The implementation involves careful planning, investing of the current system and its constraint on implementation, design of methods to achieve the changeover.

The Project is implemented in different phases as follows

* First phase includes table design for database module.
* Second phase includes coding for modules.
* Third phase includes the integration of modules.
* Fourth phase includes connection establishment between the front end and back end.
* Fifth phase includes error handling and message generator.
* First phase includes table design for database module.
* Second phase includes coding for modules.
* Third phase includes the integration of modules.
* Fourth phase includes connection establishment between the front end and back end.
* Fifth phase includes error handling and message generator.

The coding was done with the following characteristics in mind

* Code efficiency
* Memory efficiency
* Response time
* Security
* Maintainability
* Efficient and consistent logic

**CHAPTER - 6**

**SYSTEM TESTING**

Software testing is an investigation conducted to provide stakeholders with information about the quality of the product or service under test. Software testing can also provide an objective, independent view of the software to allow the business to appreciate and understand the risks of software implementation. Test techniques include, but are not limited to, the process of executing a program or application with the intent of finding software bugs (errors or other defects).

Software testing is the process of evaluation a software item to detect differences between given input and expected output. Also to assess the feature of A software item. Testing assesses the quality of the product. Software testing is a process that should be done during the development process. In other words software testing is a verification and validation process.

**Verification**

Verification is the process to make sure the product satisfies the conditions imposed at the start of the development phase. In other words, to make sure the product behaves the way we want it to.

**Validation**

Validation is the process to make sure the product satisfies the specified requirements at the end of the development phase. In other words, to make sure the product is built as per customer requirements.

**Basics Of Software Testing**

There are two basics of software testing: blackbox testing and whitebox testing.

**Black box Testing**

Black box testing is a testing technique that ignores the internal mechanism of the system and focuses on the output generated against any input and execution of the system. It is also called functional testing.

**White box Testing**

White box testing is a testing technique that takes into account the internal mechanism of a system. It is also called structural testing and glass box testing.

Black box testing is often used for validation and white box testing is often used for verification.

**7.1 TYPES OF TESTING**

* Unit Testing
* Integration Testing
* Functional Testing
* System Testing
* Stress Testing
* Performance Testing
* Usability Testing
* Acceptance Testing
* Regression Testing
* Beta Testing

**7.2 UNIT TESTING**

Unit testing is the testing of an individual unit or group of related units. It falls under the class of white box testing. It is often done by the programmer to test that the unit he/she has implemented is producing expected output against given input.

**7.3 INTEGRATION TESTING**

Integration testing is testing in which a group of components are combined to produce output. Also, the interaction between software and hardware is tested in integration testing if software and hardware components have any relation. It may fall under both white box testing and black box testing.

**Functional Testing**

Functional testing is the testing to ensure that the specified functionality required in the system requirements works. It falls under the class of black box testing.

**System Testing**

System testing is the testing to ensure that by putting the software in different environments (e.g., Operating Systems) it still works. System testing is done with full system implementation and environment. It falls under the class of black box testing.

**Stress Testing**

Stress testing is the testing to evaluate how system behaves under unfavorable conditions. Testing is conducted at beyond limits of the specifications. It falls under the class of black box testing.

**Performance Testing**

Performance testing is the testing to assess the speed and effectiveness of the system and to make sure it is generating results within a specified time as in performance requirements. It falls under the class of black box testing.

**Usability Testing**

Usability testing is performed to the perspective of the client, to evaluate how the GUI is user-friendly? How easily can the client learn? After learning how to use, how proficiently can the client perform? How pleasing is it to use its design? This falls under the class of black box testing.

**7.4 ACCEPTENCE TESTING**

Acceptance testing is often done by the customer to ensure that the delivered product meets the requirements and works as the customer expected. It falls under the class of black box testing.

**Regression Testing**

Regression testing is the testing after modification of a system, component, or a group of related units to ensure that the modification is working correctly and is not damaging or imposing other modules to produce unexpected results. It falls under the class of black box testing.

**Beta Testing**

Beta testing is the testing which is done by end users, a team outside development, or publicly releasing full pre-version of the product which is known as beta version. The aim of beta testing is to cover unexpected errors. It falls under the class of black box testing. A validation from specification is uncovered and a deficiency created.

Deviation or errors discovered at this step in this project is corrected prior to completion of the project with the help of user by negotiating to establish a method for resolving deficiencies. Thus the proposed system under consideration has been tested by using validation testing and found to be working satisfactorily.

**7.5 TEST CASES**

**Login form**

|  |  |  |  |
| --- | --- | --- | --- |
| **SL.NO** | **Test Case** | **Excepted Result** | **Test Result** |
| 1 | Enter valid username and password of users & click on login button | System should display main window | Successful |
| 2 | Enter invalid users | System should not display main window | unsuccessful |

**Registrations info**

|  |  |  |  |
| --- | --- | --- | --- |
| **SL.NO** | **Test Case** | **Excepted Result** | **Test Result** |
| 1 | Enter valid details of public and click button | system should validate and allocate details | Successful |
| 2 | Enter invalid details | System should not allocate public details | unsuccessful |

**complaint info**

|  |  |  |  |
| --- | --- | --- | --- |
| **SL.NO** | **Test Case** | **Excepted Result** | **Test Result** |
| 1 | Enter valid details of complaint and click button | system should validate and allocate complaint details | Successful |
| 2 | Enter invalid details | System should not allocate complaint details | unsuccessful |

**Fine info**

|  |  |  |  |
| --- | --- | --- | --- |
| **SL.NO** | **Test Case** | **Excepted Result** | **Test Result** |
| 1 | Enter valid details of fine and click button | system should validate and allocate fine details | Successful |
| 2 | Enter invalid details | System should not allocate fine details | unsuccessful |

**officer info**

|  |  |  |  |
| --- | --- | --- | --- |
| **SL.NO** | **Test Case** | **Excepted Result** | **Test Result** |
| 1 | Enter valid details of officer and click button | system should validate and allocate officer details | Successful |
| 2 | Enter invalid details | System should not allocate officer details | unsuccessful |

**payment info**

|  |  |  |  |
| --- | --- | --- | --- |
| **SL.NO** | **Test Case** | **Excepted Result** | **Test Result** |
| 1 | Enter valid details of payment and click button | system should validate and allocate payment details | Successful |
| 2 | Enter invalid details | System should not allocate payment details | unsuccessful |

**CHAPTER - 7**

**SNAPSHOTS**

**CHAPTER - 8**

**CONCLUSION**

The **traffic violation recording system** is a web-based application focused primarily for traffic departments and public for handling vehicle violation crime information. This system helps in proper communication with them in handling managing crime details.

In order to make this work computerized we designed a crime information system which will handle all these works and provide solution for information sharing between various traffic police stations. It is user friendly, and has required options, which can be utilized by the user to perform the desired operations.

**CHAPTER - 10**

**FUTURE ENHANANCEMENTS**

Every application has its own merits and demerits. The project has covered almost all the requirements. Further requirements and improvements can easily be done since the coding is mainly structured or modular in nature. Changing the existing modules or adding new modules can append improvements. Further enhancements can be made to the application, so that the mobile app functions very attractive and useful in future than the present one.

**CHAPTER - 11**

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