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System Requirement Specification
On
Text Processor For Identification Of Offences

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1. Introduction

1.1 Purpose

The purpose of this document is to present a detailed description of the Text processor for identification of offence. It will explain the purpose and features of the system, the interfaces of the system, what the system will do, the constraints under which it must operate and what kind of system interactions take place.

1.2 Document Conventions

- IEEE 8301998 standard for writing SRS document.
- Font Family – Times New Roman
- Font size – 14
- Any heading or priority content is highlighted for the user by bold text

1.3 Intended Audience and Reading Suggestions

- Intended audience for this document are the development team, testing team and end-users of the product.
- Rest of this SRS contains Description of the product, Interface Requirements, System features and other Non-functional Requirements.
- Reading suggestions for the development team is in sequence in which this document is made whereas Testers are suggested to pay attention to System features and other Non-functional Requirements.

1.4 Product Scope

The IPC sections generation according to the offence software is aimed to simplify a tedious process. The application is used to track the offence of the accused in a systematic manner automatically. The development of the application reduces the inefficiency in this process. So, before developing the tool it is necessary to determine the time factor, integrity and security of the system. Once these things are satisfied, then the next step is to determine the operating system and language can be used for developing the tool. Many systems and applications have been planned to be developed in this regard to automatically solve the legal problems and would reduce the pending cases in the country' judiciary system, but almost none of them has been practically implemented till now the whole requirements and none application is present like this till now.

1.5 References

- IEEE 8301998 standard for writing SRS document
- Wikipedia
- Software Engineering by Level Up Tutorials(youtube)
- Github

2. Overall Description

2.1 Product Perspective

The project is a Text processor for identification of offence with the main objective of avoiding the wastage of time and this process is generally carried on by several and tedious processes, which makes a question mark on our legal process. Using this automatic IPC Sections generator for the legal process will also do the work of faith regenerator of the legal process of the country.

2.2 User Classes and Characteristics

User class 1: Authority
Characteristics: These are the people working as police personnels and are responsible to fill chargesheets.

2.3 Operating Environment

Processor	Intel Core i7,i5 and i3
RAM	4 GB(64-bit operating system)
Hard Disk Capacity	256 GB(at least excluding data size)
Input Devices	Mouse, Keyboard and Microphone

2.4 Design and Implementation Constraints

It must have a smooth and uninterrupted Internet Connection. Apart from this there are no such design and implementation constraints exist. Developers must focus on platform independent property of the software and must build the website in a similar manner.

2.5 Assumptions and Dependencies

While accessing the software we assume that the system is in working condition throughout with an internet connection. Also, we assume that the charge-sheets filled by the authorities are in legal language. Keeping an account of the number of offences being coming on a daily basis, and deciding the IPC sections according to the charge-sheet charged on the basis of FIR correctly.

3. External Interface Requirements

3.1 User Interfaces

- **Welcome Screen:** This is just for people to know about the software and making them choose between the category which they are a part of, either charge-sheet filling and the database where the names of frequently committing crime persons name will be stored. .
- **Login Screen/ Signup Screen:** Users already registered will have to provide their username and password and new users will be redirected to a fill details page.
- **Sections details page:** New users will have have get here all information regarding all the IPC sections.
- **Update menu page:** The registered authority will have access to this page where they will have to update and fill the chargesheets always here.

3.2 Hardware Interfaces

Hardware versions- can be internal devices or external devices; allow specialized software programs to integrate speech output. Depending on the software program used to read the screen and play the notes material. Processor required is either of Intel Core i7,i5 and i3, RAM should be of at least 4 GB (32-bit or 64-bit operating system), Hard Disk Capacity should be minimum 256 GB excluding data size, and input devices are Mouse, Keyboard and Microphone.

3.3 Software Interfaces

3.3.1 Django :

Django is a high-level Python Web framework that encourages rapid development and clean, pragmatic design. Built by experienced developers, it takes care of much of the hassle of Web development, so you can focus on writing your app without needing to reinvent the wheel. It's free and open source.

3.3.2 MySQL

MySQL is a relational database organizes data into one or more data tables in which data types may be related to each other; these relations help structure the data. SQL is a language programmers use to create, modify and extract data from the relational database, as well as control user access to the database. In addition to relational databases and SQL, an RDBMS like MySQL works with an operating system to implement a relational database in a computer's storage system, manages users, allows for network access and facilitates testing database integrity and creation of backups

We use MySQL to keep all the records of the IPC sections, authorities and the criminals. It is very easy to operate and also easy to use.

3.3.3 NLP:

Natural Language Processing, usually shortened as NLP, is a branch of artificial intelligence that deals with the interaction between computers and humans using the natural language.The ultimate objective of NLP is to read, decipher, understand, and make sense of the human languages in a manner that is valuable. Most NLP techniques rely on machine learning to derive meaning from human languages.

3.4 Communications Interfaces

Text processor for identification of offence uses HTTP protocol (HyperText Transfer Protocol) and it makes use of HTTP GET, POST, PUT, DELETE methods for different CRUD operations in MySQL.

4. System Features

4.1 Signup feature

4.1.1 Description and Priority

New users have to get them registered for accessing the software. It is the beginning of the process and the authorities and offenders data are stored separately.

4.1.2 Stimulus/Response Sequences

The user on choosing the signup button is redirected to a page where he has to fill all the required details to get himself registered.

4.1.3 Functional Requirements

The user must provide a valid email id and mobile number and should also provide a unique password to ensure the safety of his choices. The user must have a functional pc or laptop and an internet connection to access the same.

4.1.4 Functional Requirements

The authority should have the photograph or details of the offenders going to be charged along within its login credentials.

4.2 Choosing feature for authorities

4.2.1 Functional Requirements

The user should have his login credentials.

4.3 Feature for Authorities

4.3.1 Description and Priority

The names of criminals who commit crimes frequently will be saved separately.

4.3.2 Stimulus/Response Sequences

The authority on logging in through the login page have chooses from the option given on the screen.

4.3.3 Functional Requirements

The customer should have his login credentials.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

In this software, the authorities must register themselves in order to access the software. Also, the authorities need to register themselves in order to use this software. Without correct user id and password, the authorities cannot access the software. All the authorities details and offenders details are stored in two different collections of a database.

5.2 Software Quality Attributes

5.2.1 Usability

Text processor for identification of offences software could be easily accessed by authorities once they register.

5.2.2 Reliability

Authorities and offenders details are stored in a DB, so if an error occurs, the user will not suffer from this event. For this reason, it is important to keep the data consistent.

5.2.3 Availability

The application will have a stable state which we offer to the users.

5.2.4 Security

No personal information other than authority will be shared with or sold to any other third party companies.

5.2.5 Maintainability

Our design will be flexible. Any new functionality needed for the project could be easily integrated as this software has a layered structure.

5.2.6 Portability

Text processor for identification of offences software is portable on any platform that can access web-based applications.

6. Other Requirements

- **HTTP:** The Hypertext Transfer Protocol (HTTP) is an application layer protocol for distributed, collaborative, hypermedia information systems. HTTP is the foundation of data communication for the World Wide Web, where hypertext documents include hyperlinks to other resources that the user can easily access, for example by a mouse click or by tapping the screen in a web browser.
- **Spyder:** Spyder, the Scientific Python Development Environment, is a free integrated development environment (IDE) that is included with Anaconda. It includes editing, interactive testing, debugging, and introspection features.