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CYBER CRIME REPORTING SYSTEM

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Abstract— Online FIR System is the Computerization of present manual system of Police Stations. There are many flaws and shortcomings in the present system. The present system is a manual system. In case of present manual system all the record is kept in documented form and stored in various types of registers. The manual system has no proper system for record storage and storing the information about crimes and criminals. The present system of police is not automated. The documentation of criminal records is done manually. Case files are dumped in heaps while some are kept on shelves. These important documents quickly get dusty and because of lack of proper storage, some criminal documents are seriously damaged. With this kind of situation, it becomes highly difficult and even impossible to track down known criminal, access past criminal history of a suspect and know the status of some concluded cases. In police stations all the file work is done by the staff, so burden of work leads to the criminal's information to be delayed. There are also problems of record storage, updating, backup and recovery and redundancy of data. To overcome the problems in present system we design such a computerized information system, which is free of all the flaws, present in the manual system of the institute. As computer is one of the leading technologies nowadays, so we propose a computer-based system that will fulfill the requirements of the police stations easily and will be the solution to the problems faced by Police stations. It will facilitate both the user as well as administrative staff of the Police Stations. Computerized system provides accuracy, security, and reduced redundancy, reduction of work load, backup facilities and faster information retrieval.

1. INTRODUCTION

Cyber Crime is an illegal act, committed using a computer network especially the internet. It is the subset of computer crime. It is just not about the hackers, but also using "Internet as a tool of the cyber-crime". The top 5 cyber-crimes listed by the survey are 1 Phishing scam 2. Hacking 3. Cyber Terrorism 4. Spoof 5. Cyber stalking and so, we develop a model that is capable of showing investigation update, provides security, Proper backup and data recovery. Reporting System is the application which allows you to register the complaint online. The new feature added to our application corresponding to the existing system is, voice recording, where in the recorded speech is further translated to text and forwarded to the higher authorities. And also, a new element to register the complaint in their regional language i.e., Hindi and English. It provides the time saving, data security, integrity, proper backup and recovery of the data. After a detailed study of the current system, it is a good time to propose a new system which is based on a computer. As computer is one of the leading technologies now a days, so we propose a computer-based system that will fulfill the requirements of the Police Stations of KPK easily and will be the solution to the problems faced to the Police department. The proposed system is aimed to remove all the drawbacks and limitations of existing system and making it more responsive to the users and management needs.

2. IMPLEMENTATION

The main aim and objective of the project is to that the people can register their complaint through online without reaching out the police station physically. And the main moto is to develop an easy and convenient way to register the complaint. And can be used by anyone with an ease. The design is a solution, the translation of requirements into center ways of meeting. The design is actually the process of analyzing, organizing and developing a database model that accurately reflects the organization functioning in the real world and implementing that model by creating a database requires an appropriate methodology Accessibility refers to the design of products, devices, services, or environments for people with disabilities. The basic advantage of computerized system is its

accuracy. A man is vulnerable to mistake where computer software is free. Similarly, the consistency of the records and transactions make a computer more advantageous over manual system. An optimization model is formulated to determine the offloading decision dynamically at run time

2.1 PhP

PHP started out as a small open-source project that evolved as more and more people found out how useful it was. Rasmus Lerdorf unleashed the first version of PHP way back in 1994. PHP is a recursive acronym for "PHP: Hypertext Preprocessor". PHP is a server-side scripting language that is embedded in HTML. It is used to manage dynamic content, databases, session tracking, even build entire e-commerce sites. It is integrated with a number of popular databases, including MySQL, PostgreSQL, Oracle, Sybase, Informix, and Microsoft SQL Server. PHP is pleasingly zippy in its execution, especially when compiled as an Apache module on the Unix side. The MySQL server, once started, executes even very complex queries with huge result sets in record-setting time. PHP supports a large number of major protocols such as POP3, IMAP, and LDAP. PHP4 added support for Java and distributed object architectures (COM and CORBA), making n-tier development a possibility for the first time. PHP is forgiving: PHP language tries to be as forgiving as possible. PHP Syntax is C-Like.

2.2 Java Script

JavaScript (JS) is a light-weight object-oriented programming language which is used by several websites for scripting the webpages. It is an interpreted, full-fledged programming language that enables dynamic interactivity on websites when applied to an HTML document. It was introduced in the year 1995 for adding programs to the webpages in the Netscape Navigator browser. Since then, it has been adopted by all other graphical web browsers. With JavaScript, users can build modern web applications to interact directly without reloading the page every time. The traditional website uses JS to provide several forms of interactivity and simplicity. Although, JavaScript has no connectivity with the Java programming language. The name was suggested and provided in the times when Java was gaining popularity in the market. In addition to web browsers, databases such as CouchDB and MongoDB uses JavaScript as their scripting and query language.

There are the following features of JavaScript:

1. All popular web browsers support JavaScript as they provide built-in execution environments.
2. JavaScript follows the syntax and structure of the C programming language. Thus, it is a structured programming language.
3. JavaScript is a weakly typed language, where certain types are implicitly cast (depending on the operation).
4. JavaScript is an object-oriented programming language that uses prototypes rather than using classes for inheritance.
5. It is a light-weighted and interpreted language.
6. It is a case-sensitive language.
7. JavaScript is supportable in several operating systems including, Windows, macOS.
8. It provides good control to the users over the web browsers.

2.3 MySQL:

MySQL is an open-source Relational Database Model System (RDBMS) that follows Structured query language (SQL) as its syntax and is licensed under GNU, it is publicly available to everyone. MySQL is used by around 80% of existing business applications including big companies like Facebook, Netflix, Google, Amazon as its Database System for storing most of their data.[10]

2.3 Front End:

Frontend technology is very important as it is the user interface which actually a user will see on the client-side, to make it simple we have used basic technologies on the frontend like HTML, CSS, and JavaScript so that the user can view and interact with that data.[14]

HTML is the backbone of websites; it acts as the skeleton of any web application the latest version of HTML is HTML5 published in October 2014 by W3 recommendations.

CSS controls the style of the page which makes the components of the website look clear and easily accessible to the user without any problem on any device.

JavaScript enables event-driven tasks and makes the page dynamic, to improve the user experience when used various events like a mouse click, scroll, etc.

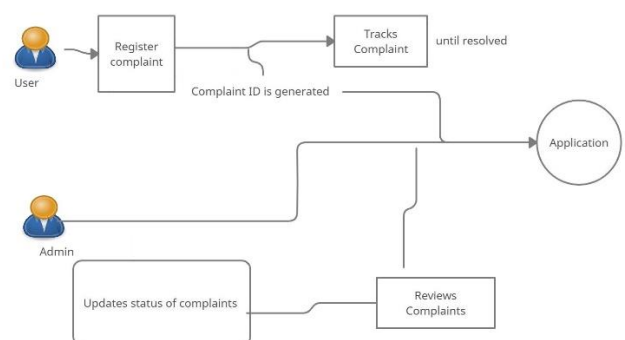
The goal of frontend technology is to provide easy access to the tool without any problem.[11]

3. WORKING MODEL:

The proposed system is aimed to remove all the drawbacks and limitations of existing system and making it more responsive to the users and management needs. In the proposed system, we have tried our best to meet all the objectives of the Police Department. The major objectives of the proposed system are to provide the faster means of Crime Compliant Report. It will reduce the time consumed in preparation of reports and to get benefit from the latest technology of computers. The proposed system includes the following features:

1. To provide a secure system to users
2. Complaint registration
3. Online FIR System
4. Giving Feedback to users.

An optimization model is formulated to determine the offloading decision dynamically at run time



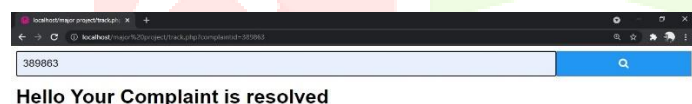
When you register the file in your regional language through text or speech mode respective complaint ID is generated. This generated complaint ID can be further used for the future reference. You can check the status whether the complaint is updated or not.

The Microsoft Cognitive Services Speech SDK for JavaScript is the JavaScript version of the Microsoft Cognitive Services Speech SDK. An in-depth description of feature set, functionality, supported platforms The speech-to-text service defaults to using the Universal language model. This model was trained using Microsoft-owned data and is deployed in the cloud. It's optimal for conversational and dictation scenarios. When using speech-to-text for recognition and transcription in a unique environment, you can create and train custom acoustic, language, and pronunciation models. Customization is helpful for addressing ambient noise or industry-specific vocabulary.

NMT departs from phrase-based statistical approaches that use separately engineered subcomponents. Neural machine translation (NMT) is not a drastic step beyond what has been traditionally done in statistical machine translation (SMT). Its main departure is the use of vector representations ("embeddings", "continuous space representations") for words and internal states. The structure of the models is simpler than phrase-based models. There is no separate language model, translation model, and reordering model, but just a single sequence model that predicts one word at a time. However, this sequence prediction is conditioned on the entire source sentence and the entire already produced target sequence. NMT models use deep learning and representation learning

4. OUTPUT

User can register the complaint against any Cybercrime using this website. Even a person with minimal knowledge on computer can access the website and register the complaint using Speech-to-text format. This is a very simple format of Cybercrime reporting system. After registering a complaint also, the user can track the status of the complaint using the complaint id generated from the website. This website can be a good solution for decreasing the "CYBER CRIMES"



5. SUMMARY

A cyber crime reporting System is used by the public to report various kinds of hackings, online frauds, internet scams, online extortions etc... there are many websites that have been developed accordingly with the latest technologies and trends for reporting the cyber crimes but for a person with "no" and "minimal" knowledge on computer cannot afford or access these websites. For the feasibility of user, we developed this cybercrime reporting system.

A person can report his cybercrime against all the odds in this website even if he has a minimal knowledge on the computer using the simple format complaint form text in the website. also, the person can use Speech-to-text for recording his complaint with voice enabled recording system that is inbuilt in the website the person can use up to 10 international languages and 3 local languages to record the complaint

To Deploy this tool as a web application, the server must meet supported requirements as mentioned in Implementation, the source code and working link of this project will be released on https://github.com/ASairam/Cybercrime_reporting_system

6. CONCLUSION

The project titled as "Cyber Crime Reporting System" is a web-based application. This software provides facility for reporting online crimes, complaints, missing persons, show criminal details. This software is developed with scalability in mind. Additional modules can be easily added when necessary. The software is developed with modular approach. All modules in the system have been tested with valid data and invalid data and everything work successfully. Thus, the system has fulfilled all the objectives identified and is able to replace the existing system. The project has been completed successfully with the maximum satisfaction of the organization. The constraints are met and overcome successfully. The system is designed as like it was decided in the design phase. The project gives good idea on developing a full-fledged application satisfying the user requirements. The system is very flexible and versatile. This software has a user-friendly screen that enables the user to use without any inconvenience. Validation checks induced have greatly reduced errors. Provisions have been made to upgrade the software. The application has been tested with live data and has provided a successful result. Hence the software has proven to work efficiently.

7. FUTURE SCOPE

Tracking System are very flexible and can be integrated with various technologies. Therefore, many significant improvements can be made to the project. Currently, the existing features are not much advanced, but we can improve this project by approaching the ideas shown below in future.

1. Multi File Support

We can improve the support of tracking to more different types of files in future by creating token injection algorithms for various types of files.

2. Threat Level Integration

We can use machine learning and AI algorithms in future to learn about the attacker's behavior and their level of threat, and warn the user accordingly to take necessary actions.

3. Multi-Platform Support

This application can be developed in many other forms like desktop application, mobile application for android or iOS, so users can get better experience with more features and good performance rather than just using a web application.

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